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论文集

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Profile

Pioneer of Acupuncture in the United States: Outstanding Contributions of Dr. David P.J. Hung (Hong Borong) and the American Acupuncture Association

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Abstract

This paper reviews the significant journey of Dr. David P.J. Hung (Hong Borong) and the pioneers of the American Acupuncture Association in promoting acupuncture legislation in the United States. In the early 1970s, acupuncture faced numerous obstacles in America, with acupuncturists' qualifications not legally recognized. Dr. Hung and his colleagues demonstrated extraordinary courage and wisdom in successfully advocating for the New York State Acupuncturist Independent Practice Act. On August 9, 1975, New York passed this landmark legislation, marking a milestone in American acupuncture history. This act not only made New York the first state to recognize acupuncturists' independent practice rights but also set a precedent for other states and countries pursuing acupuncture legislation. Dr. Hung also actively participated in founding the World Federation of Acupuncture-Moxibustion Societies (WFAS) and successfully organized two international acupuncture conferences in 1993 and 1996, bringing American acupuncture to the world stage. His contributions have been widely recognized, including being named Honorary Lifetime President of WFAS and receiving the Ellis Island Medal of Honor. This year marks the 50th anniversary of the act's passage. As a pioneer of American acupuncture, Dr. Hung's spirit, achievements, and dedication have earned the deepest respect and admiration from the acupuncture community.

Keywords— Acupuncture, Legalization, Dr. David P.J. Hung

Acupuncture, a treasured gem of Traditional Chinese Medicine (TCM), has undergone a challenging yet glorious journey in its spread to the world. In the early 1970s, the development of acupuncture in the United States faced numerous obstacles. Acupuncturists' qualifications were not legally recognized, and acupuncture was rejected by mainstream medical circles. Against this historical backdrop, Dr. David P.J. Hung (Hong Borong) and the pioneers of the American Acupuncture Association, with extraordinary courage and wisdom, successfully advocated for the legislation of independent practice rights for acupuncturists in New York State. This laid a solid foundation for the legalization, independence, and popularization of acupuncture in the United States.

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1 Pioneering the Way: The Difficult Beginnings of Acupuncture in the U.S.

Dr. David P.J. Hung (Hong Borong) was born into a family of Western medical doctors in Taiwan, where his father was a surgeon. However, from a young age, he was deeply fascinated by the miraculous effects of acupuncture. He firmly believed that acupuncture could complement modern medicine and unleash its unique therapeutic value. Unfortunately, acupuncture had long been neglected in the Western medical system and lacked recognition and application. By the late 1960s, acupuncture was mainly popular in China, Japan, Korea, and parts of Southeast Asia, while the Western world knew very little about it.

In 1968, after practicing medicine in Japan for over a decade, Dr. Hong toured Southeast Asia and found that acupuncturists there were generally marginalized, poorly compensated, and practicing under harsh conditions without proper systems. In 1970, he extended his observations to South and North America, eventually choosing to settle in New York City, a global center of economy, culture, education, and healthcare.

Chinese immigration to America had spanned over a century, from early Chinese railroad workers to later waves of immigrants. Chinese communities and Chinatowns often had herbal medicine shops offering TCM services, sometimes including acupuncture, but acupuncture treatment remained confined within Chinese communities. In 1970, as in most countries, acupuncture in America was an obscure term, confined to Chinatowns of major cities, barely known to the broader society, let alone recognized professionally or legislated.

It wasn't until The New York Times journalist James Reston reported his personal acupuncture treatment experience in China in 1971, and President Nixon's groundbreaking visit to China in 1972, where his medical team observed acupuncture anesthesia demonstrations, that acupuncture finally captured the attention of American mainstream society, sparking the first wave of the "acupuncture fever" in the U.S.

In July 1972, Dr. Hong accepted an invitation from Dr. Benson, a Western physician, to join the establishment of New York's first large-scale acupuncture treatment center at 73rd Street and Lexington Avenue. Through extensive television, newspaper, and radio coverage, and significant English-language advertising, the center caused a sensation, igniting the first major spark of America's acupuncture boom. Within the first month, the center received over 2,000 patients from across the country, with appointments booked six months out. This success prompted acupuncture professionals in various states to establish acupuncture treatment centers, marking the official start of America's acupuncture industry.

However, the success was short-lived. As acupuncture's popularity began to challenge the Western medical establishment, certain medical groups and professionals argued that terms like "practice" and "treatment" were legally reserved for licensed Western medical doctors, and that acupuncturists, who had no such licenses, were illegally practicing medicine. They petitioned multiple state health departments to crack down on "illegal practice" by acupuncturists. By the end of 1972, New York's Department of Health issued orders demanding an immediate cessation of "illegal acupuncture practice," leading to widespread raids, closures, and arrests of acupuncture clinics and practitioners.

After only six months of operation, on November 8, 1972, the New York Acupuncture Treatment Center where Dr. Hong worked was served a court summons and ordered to shut down for "illegal medical practice" [1].

2 Breaking Barriers: The Struggle for Legalization

At that time, the acupuncture community was in a state of panic. Most acupuncturists either ceased practice or fled to other states. Despite the peril, Dr. Hong moved to Washington D.C. and South Carolina, where he continued practicing and successfully lobbied for South Carolina's first acupuncture regulations, which allowed acupuncturists to practice under the supervision of Western physicians within just two to three months.

Meanwhile, Dr. Hong, along with fellow Chinese acupuncturists Fang Yulin and others organized the remaining dozens of acupuncturists in New York to establish the "New York Association for the Advancement of Chinese Acupuncture" (renamed the American Acupuncture Association in 1977). They invited Mr. Wang Pei, Executive Director of the Chinese-American Planning Council, as an advisor to spearhead the community's self-rescue efforts and officially launched the fight for acupuncture legislation in New York State.

Dr. Hong realized that to change the situation in New York, legal advocacy was essential. He and his colleagues bravely committed themselves to the arduous, multi-year battle for legislative recognition of acupuncture.

At the time, advocating for acupuncture legislation in the U.S. was pioneering work. It required legal expertise, lobbying of lawmakers and government officials, financial resources, and relentless efforts. Dr. Hong and his colleagues, with Mr. Wang's guidance, first hired a legislative attorney to draft the proposal for independent acupuncture practice in New York. They tirelessly negotiated with legislators, led acupuncturists, patients, and supporters to testify at numerous hearings, demonstrating acupuncture's efficacy and emphasizing the necessity of independent practice rights.

Having experienced South Carolina's legislation, which allowed acupuncture only under Western medical supervision, and witnessing the subsequent suppression of acupuncturists there, Dr. Hong was adamant that New York's legislation must grant acupuncturists full independence, rejecting any compromise that would subordinate acupuncture under Western medicine.

Despite opposition from Western medical groups and even some acupuncturists who were willing to accept subordinate roles under Western doctors, Dr. Hong stood his ground. He insisted that New York's acupuncture law must guarantee complete independent practice rights for acupuncturists. He was one of the pivotal figures who championed and insisted on the independent practice rights of acupuncturist during the promotion of this act.

He spared no effort in both strategic planning and raising funds for expensive legal fees, enduring countless hours of meetings, phone calls, and correspondence.

Thanks to the unwavering dedication of Dr. Hong and the American Acupuncture Association pioneers, they ultimately succeeded. The core components of the legislation included: (1) Legalizing acupuncture as an independent healthcare profession, allowing licensed acupuncturists to practice independently without being subordinate to Western doctors; and (2) establishing a licensing system that ensured professional standards and qualifications.

After years of relentless efforts, on August 9, 1975, the New York State Senate and Assembly passed Senate Bill 6866—the legislative proposal first initiated and continuously advocated by Dr. Hong. Governor Hugh Carey signed it into law, marking the successful passage of the New York State Acupuncturist Independent Practice Act. The New York Times later referred to it as the "Original Acupuncture Law." In recognition of his contribution, the Governor presented Dr. Hong with the pen used to sign the bill. Dr. Hong also became the first licensed Chinese acupuncturist in New York State [2].

This landmark victory transformed New York into the largest and most influential state to recognize the independent practice rights of acupuncturists in the U.S., legitimizing their practice and ending the threat of “illegal practice” accusations.

3 A Far-Reaching Legacy: The Impact of Legislative Success

The successful passage of New York’s Acupuncturist Independent Practice Act, spearheaded by Dr. Hong and the American Acupuncture Association pioneers, marked a monumental achievement in the history of acupuncture in the United States. This breakthrough set a precedent and model for other states and countries pursuing acupuncture legislation.

Before New York’s law, states like California had passed acupuncture-related bills, but these only permitted practice under the supervision of Western doctors. Acupuncturists in these states were issued certificates (Certified Acupuncturists) rather than licenses (Licensed Acupuncturists), limiting their professional autonomy. Nevada had granted independent practice licenses, but as a small state, its influence was minimal. In contrast, New York’s law served as a powerful catalyst, significantly impacting acupuncture’s recognition and development across America.

The success in New York triggered a domino effect. In the ensuing years, it inspired California and other states to amend their laws to grant acupuncturists independent practice rights. Influenced by this legislation, Canada and other countries also passed similar laws, acknowledging acupuncture as an independent profession [3].

This legislative milestone accelerated the development of acupuncture in the U.S. The number of acupuncturists soared, clinics proliferated nationwide, and patient demand surged. Acupuncture gradually began to be integrated into the health insurance system, slowly becoming an essential part of mainstream healthcare. Today, over 50,000 people in the U.S. are engaged in acupuncture-related professions, with more than 30,000 licensed acupuncturists.

4 Founding WFAS: Global Advocacy for Acupuncture

Dr. Hong not only advanced acupuncture in the U.S. but also played a pivotal role in its global promotion. The passage of New York’s Independent Practice Act significantly influenced the preparatory meetings of the World Federation of Acupuncture-Moxibustion Societies (WFAS) between 1984 and 1986. During the second preparatory meeting in Hong Kong in July 1985, the legitimacy of non-Western medical practitioners performing acupuncture sparked heated debate. Western medical representatives insisted that only licensed physicians should be allowed to practice acupuncture.

Dr. Lu Zhijun from China and Dr. K. Takagi from Japan, who chaired the meeting, countered this argument by citing New York’s decade-long successful implementation of independent acupuncture practice, proving that non-MD acupuncturists were fully capable. Ultimately, WFAS adopted the principle that acupuncture qualification should be based on relevant expertise, regardless of whether the practitioner held a medical degree. New York’s legislation became a crucial reference in this decision [4].

Under Dr. Hong’s leadership, the American Acupuncture Association became a founding member of WFAS.

Over the past 38 years, Dr. Hong has served as an Executive Member, Vice President, President, and currently, Honorary Lifetime President of WFAS [5].

5 Hosting Two Landmark International Acupuncture Academic Conferences: Bringing American Acupuncture to the World Stage

In 1993, while serving as Vice President of WFAS and President of the American Acupuncture Association, Dr. David P.J. Hung (Hong Borong) organized an International Acupuncture Symposium at the Sheraton Hotel in New York City. Over 500 acupuncture professionals from around the world attended. Dr. Hong also invited decision-makers from the U.S. National Institutes of Health (NIH) to the conference, presenting substantial evidence to persuade them to recognize the efficacy of acupuncture. This directly contributed to the U.S. Food and Drug Administration (FDA) reclassifying acupuncture needles from “experimental devices” to Class II “medical devices” in March 1996 [6]. This reclassification paved the way for acupuncture treatments to be included in health insurance coverage and gradually integrated into the American healthcare system.

From September 20 to 22, 1996, under Dr. Hong’s leadership, the American Acupuncture Association and WFAS, co-sponsored by the World Health Organization (WHO), hosted the 4th World Conference of Acupuncture-Moxibustion at the New York Hilton Hotel in Manhattan. Nearly 1,300 acupuncture professionals from 45 countries and regions participated. U.S. President Bill Clinton even sent a congratulatory message to the conference. This grand event marked a historic milestone and greatly elevated acupuncture’s academic standing and public profile in the United States.

6 Great Contributions and Numerous Honors: A Legacy Well-Deserved

Dr. Hong’s outstanding achievements in promoting acupuncture have been widely recognized. In 1993, he received the “Outstanding Leadership Achievement Award” from the Chinese Academy of Medical Sciences. In 1997, he was awarded the “Decade of Distinguished Contribution Award” by WFAS and named “Acupuncturist of the Year” at the World Traditional Medicine Congress. In 2007, he received WFAS’s “Outstanding Contribution to Medical Development Award.” In November 2013, he was conferred the highest honorary title of “Honorary Lifetime President” by WFAS. On December 2, 2017, at the 9th WFAS General Assembly, Dr. Hong was honored with WFAS’s highest award—the “Tiansheng Bronze Man Award.” His contributions to the promotion and development of acupuncture in the U.S. and globally are indelible.

In recognition of his outstanding achievements and contributions to American society, Dr. Hong was awarded the prestigious “Ellis Island Medal of Honor” in 2014. His name has been recorded in the U.S. Congressional Record.

Dr. Hong was also the chief editor of the English version of the 30-episode “Chinese Acupuncture” instructional video series, published in 1991. This pioneering and authoritative educational series has long been a standard teaching material for acupuncture schools in the United States and worldwide.

7 A Healer's Benevolent Heart: Unwavering Dedication for Over Half a Century

For more than 50 years, until his official retirement at the age of 90, Dr. Hong tirelessly traveled between his clinics in Manhattan, Flushing, and Rochester, New York. With his superb acupuncture skills and extensive clinical experience, he relieved the ailments of countless patients and contributed immensely to American society.

He is not only the Honorary Lifetime President of WFAS but also the Honorary Lifetime President of the American Acupuncture Association. For 38 years since the establishment of WFAS, he and the American Acupuncture Association have consistently participated in WFAS's international academic conferences held across various countries.

From spearheading the passage of the New York State Acupuncturist Independent Practice Act in the early 1970s to the present day, Dr. Hong continues to dedicate himself to the advancement of acupuncture in both the United States and the world.

Even at the venerable age of 94, Dr. Hong, in his capacity as Honorary Lifetime President, continues to lead efforts with the American Acupuncture Association to elevate the professional status of acupuncturists in the United States, striving to fully integrate acupuncturists as providers within the Medicare system.

8 Conclusion

Through years of relentless effort, Dr. David P.J. Hung (Hong Borong) and the pioneers of the American Acupuncture Association were the first to successfully promote the legalization, independence, and popularization of acupuncture in the United States. They have also been dedicated to integrating acupuncture into the American health insurance system. Their contributions not only transformed the trajectory of acupuncture's development in America but also had a profound impact on the global promotion of acupuncture.

This year, on August 9, marks the 50th anniversary of the passage of the New York State Acupuncturist Independent Practice Act, a monumental milestone initiated and championed by Dr. Hong and the American Acupuncture Association pioneers. This is a day that deserves special commemoration by the American acupuncture community. Dr. Hong, as one of the trailblazers of acupuncture in America, has left an extraordinary legacy. His spirit, achievements, and dedication have earned the deepest respect and admiration of acupuncturists and future generations alike.

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 Professional Guideline

Interpretation of the World Federation of Acupuncture-Moxibustion Societies Standard Technical benchmark of Acupuncture and Moxibustion — Toujiu

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Abstract

Toujiu is a new moxibustion technology innovated and developed based on the ancient theory of heavy moxibustion, which has the effect of dredging meridians and mediating qi and blood. On the basis of inheriting the traditional moxibustion concept of "moxibustion must be thoroughly achieved", by optimizing the regulation of moxibustion amount and heat penetration, it constructs a new moxibustion mode with both scientific standardization and clinical practice. Led by Professor Gao Xiyan of Henan University of Traditional Chinese Medicine, the WFAS 006.3-2023 "Technical benchmark of Acupuncture and Moxibustion — Toujiu" standard was issued by the World Federation of Acupuncture-Moxibustion Associations on October 9, 2023, after the decision of many experts in the professional field, several rounds of discussion and demonstration. This article will briefly introduce the theoretical basis, definition, significance and main content of the standard development of "Technical benchmark of Acupuncture and Moxibustion — Toujiu", and clarify the technical parameters covered by the operation specification, such as moxibustion material selection, moxibustion dosage gradient, time threshold, reaction after moxibustion, course of treatment, precautions, contraindications and warning of faint moxibustion. The verification process of treatment parameters of Toujiu technology and the innovation of supporting equipment are described. Through the interpretation of the content, it is expected to provide standardization and guidance for clinicians to operate Toujiu technology.

Keywords— acupuncture; toujiu; code of practice; interpretation

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 Review

Research Status of Autologous Blood Concentrates and Their Prospects in Clinical Acupuncture Applications

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Abstract

Autologous blood concentrate is a new therapeutic approach developed from autologous blood therapy. High concentrations of platelets, white blood cells, fibrin, and growth factors are extracted from patients' own blood by centrifugation to promote tissue repair and regeneration. With advancements in extraction and concentration techniques, various forms have emerged, including platelet-rich plasma (PRP), platelet-rich fibrin (PRF), and concentrated growth factors (CGF). These forms are widely applied in fields such as orthopedics, rheumatology, dermatology, and plastic surgery, demonstrating excellent biocompatibility and safety, and reducing risks of infection and immune rejection, aligning well with the trend towards personalized medicine. This paper aims to elucidate the current state of development in autologous blood concentrates and its application prospects in clinical acupuncture and moxibustion, to increase awareness and promotion among clinicians, providing a theoretical basis for its further optimization and clinical research.

Keywords— platelet-rich plasma; platelet-rich fibrin; concentrated growth factor; research progress; review

1 Introduction

Autologous blood therapy is a treatment method that involves drawing a small amount of venous blood from a patient and injecting it into the subcutaneous tissue, specific acupuncture points, or gluteal muscles to stimulate a nonspecific immune response, enhance the phagocytic activity of white blood cells, and thereby boost immunity and regulate immune balance. The origins of autologous blood therapy can be traced back to the Ming Dynasty in Li Shizhen's "Compendium of Materia Medica," which records: "Salty taste, neutral, toxic, mainly treating emaciated patients with dry skin and flaking, or those bitten by mad dogs with impending fever, by pricking and drinking the heated blood [1]." This indicates that ancient practitioners had precedents for treating diseases with autologous blood. Modern autologous blood therapy began to develop significantly after the mid-20th century. Soviet scientists used intramuscular autologous blood injections to treat hemoptysis from tuberculosis, and this therapy was later

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introduced to China. In the 1960s, Professor Rui Jin from Guangzhou University of Chinese Medicine used patients' own venous blood for acupuncture point injections to treat diseases, naming this method "Meridian Blood Injection Therapy (Autologous Blood Acupuncture Point Injection Therapy)" [2]. This therapy integrates bloodletting, needling, and point injection techniques, exerting effects of harmonizing yin and yang, and dredging meridians and collaterals [3]. It is reliable in its therapeutic effects, simple to perform, cost-effective, and free of toxic side effects, making it widely used in clinical acupuncture for dermatology, respiratory diseases, rheumatology, gynecology, and other fields [1].

With the deepening of medical research, autologous blood concentrates have emerged as a new therapeutic approach based on autologous blood therapy. By centrifuging a patient's whole blood, effective components such as platelets, white blood cells, and fibrin are extracted, containing a large number of growth factors and cytokines that promote the regeneration of soft and hard tissues. The evolution from autologous blood therapy to autologous blood concentrates represents not only an advancement in treatment methods but also a shift in medical philosophy—from stimulating immune function to directly utilizing the effective components in blood for treatment, including acupuncture point injections, local injections, and intra-articular injections. This shift marks a significant progress in regenerative medicine. Beyond its applications in various fields of modern medicine, autologous blood concentrates, through acupuncture point injection therapy in clinical acupuncture, have shown efficacy in treating numerous diseases, opening new possibilities for their management. Therefore, this paper reviews the research status of autologous blood concentrates and their application prospects in clinical acupuncture.

2 Main Types and Development of Autologous Blood Concentrates

2.1 Platelet-Rich Plasma (PRP)

The development of platelet-rich plasma (PRP) originated from hematological research in the 1970s [4]. In 1984, scientists produced the first-generation platelet concentrate, PRP [5], with a platelet concentration more than four times that of whole blood, rich in platelet-derived growth factor (PDGF), transforming growth factor- β (TGF- β), interleukin-2 (IL-2), interleukin-8 (IL-8), vascular endothelial growth factor (VEGF), tumor necrosis factor- α (TNF- α), and insulin-like growth factor (IGF) [6]. PDGF, TGF- β , and VEGF play roles in accelerating tissue repair, stimulating cell proliferation, and promoting angiogenesis, laying the foundation for PRP's medical applications [7]. PRP was first used in dental and maxillofacial surgeries to reduce postoperative infections and accelerate healing. Its applications later expanded to orthopedics, sports injuries, and dermatology, showing significant effects in joint and tendon repairs, evolving from a surgical adjunct to a key tool in regenerative medicine [8]. PRP preparation techniques have matured, evolving from the initial two-step centrifugation to various new methods to optimize platelet extraction concentration and bioactivity [9]. Additionally, PRP classification systems have developed, with Ehrenfest et al. proposing types such as leukocyte-poor PRP (P-PRP), leukocyte-rich PRP (LR-PRP), and others based on platelet, leukocyte, and fibrin content to meet specific therapeutic needs [10]. However, the complex preparation process, high cost, and potential immune rejection or allergic reactions due to anticoagulants have limited its wider adoption [11].

2.2 Platelet-Rich Fibrin (PRF)

Platelet-rich fibrin (PRF), the second-generation platelet concentrate, was first prepared by French doctor Choukron in 2001 [12]. The conventional preparation method involves placing venous blood from healthy individuals into glass tubes without anticoagulants and centrifuging at 3000 r/min for 10 minutes [13]. After centrifugation, the blood separates into three layers: acellular platelet-poor plasma at the top, PRF rich in platelets and fibrin in the middle, and red blood cells at the bottom [14]. PRF is rich in leukocytes and platelets, featuring a robust fibrin network that serves as a cell growth scaffold and binds numerous cytokines and growth factors through chemical bonds, forming a sustained-release system to accelerate tissue repair and wound healing [15]. Leukocytes constitute 65% of the total blood volume in PRF, effectively modulating inflammatory responses [16]. Unlike PRP, PRF preparation requires no anticoagulants or activators; platelets and fibrin are activated during preparation, reducing immune rejection from exogenous substances [17]. Moreover, PRF is simple to prepare, cost-effective, and highly effective, finding wide use in oral and maxillofacial surgery and plastic surgery. However, its gel-like form limits its combination with other biomaterials, restricting some clinical applications.

Subsequently, Choukron and colleagues proposed an improved PRF (A-PRF) by reducing centrifugation speed and adjusting time, demonstrating that A-PRF contains more leukocytes and growth factors, offering clear advantages in tissue growth promotion [18]. With advancements in platelet concentrate biomaterials, Choukron invented injectable PRF (i-PRF) in 2014, widely applied in Europe [19]. Different centrifugation conditions affect i-PRF's growth factor release; Fujioka-Kobagashi et al. found that 1300 r centrifugation for 8 minutes releases more growth factors [20], while RJ Miron et al. showed that 700 r for 3 minutes results in more uniform platelet and leukocyte distribution in i-PRF, with scanning electron microscopy revealing a tighter fibrin network embedding activated platelets, leukocytes, and red blood cells [21]. Similar to PRF, i-PRF contains growth factors and cytokines in natural proportions, enabling slow release and efficacy. It can also combine with biomaterials for use in cartilage repair and trauma reduction, showcasing significant clinical potential [22].

2.3 Concentrated Growth Factors (CGF)

Concentrated growth factors (CGF), proposed by L. Sacco in 2006 as the third-generation platelet concentrate [23], are prepared by placing patient venous blood into anticoagulant-free collection tubes and using a CGF centrifuge (Silfradent Medifuge MF200) for programmed centrifugation with varying speeds and deceleration phases [24]. This process separates the blood into three layers: platelet-poor plasma at the top, CGF rich in platelets and growth factors in the middle, and red blood cells at the bottom [25]. Compared to PRF, CGF's improved centrifugation protocol yields a higher density of growth factor-fibrin polymers and more cytokines [26], with representative growth factors including PDGF-BB, IGF-1, TGF- β 1, bFGF, and VEGF [27]. CGF's three-dimensional fibrin network tightly encapsulates growth factors for slow release, promoting wound healing and exhibiting significant effects in cell proliferation, differentiation, migration, inflammation regulation, and angiogenesis [28, 29]. In recent years, CGF has been widely applied in oral surgery, plastic surgery, and dermatology.

3 Biological Effects and Mechanisms of Autologous Blood Concentrates

3.1 Platelet-Rich Plasma

3.1.1 Biological Effects

(1) Promoting tissue repair and regeneration. PRP contains a large number of growth factors that play crucial roles in cell proliferation, matrix formation, bone formation, and collagen synthesis, thereby accelerating tissue repair and regeneration [30]. (2) Providing a cellular scaffold. Activated platelets in PRP aggregate and form a fibrin matrix, serving as a tissue scaffold that attracts more cell migration and continuously releases various bioactive factors and adhesion proteins [31], initiating tissue repair, promoting new tissue formation, and reconstructing blood supply [32]. (3) Inhibiting inflammatory responses. The white blood cells in PRP have anti-infective properties, effectively reducing inflammation at the treatment site and providing a favorable microenvironment for tissue repair and regeneration [33].

3.1.2 Mechanisms of Action

PRP has been used clinically for over 35 years, with its mechanisms of action encompassing three main aspects: (1) Promoting cell proliferation and differentiation: PRP releases PDGF, VEGF, and other proliferation-promoting factors, effectively enhancing the proliferation and matrix synthesis of osteoblasts, fibroblasts, and chondrocytes while inhibiting osteoclast activity, aiding tissue repair and regeneration [34]. PRP contains endogenous superficial zone protein (SZP), promoting SZP secretion by synovial and articular cartilage cells [35]. It also promotes the proliferation and differentiation of bone marrow mesenchymal stem cells, providing necessary growth factors and proteins for femoral head repair, accelerating bone healing [36]. Platelet-derived growth factor BB in PRP promotes adipose-derived cell proliferation via JNK and ERK1/2 pathways for nerve regeneration [37]. Hepatocyte growth factor in PRP, by inhibiting E-selectin expression, promotes tissue cell regeneration and inhibits apoptosis [38]. (2) Promoting angiogenesis: High concentrations of VEGF and other pro-angiogenic factors in PRP activate the TGF- β 1/Smad3 pathway, stimulating endothelial cell proliferation and migration, improving local blood circulation, and enhancing tissue blood supply, particularly in cardiovascular and soft tissue injury healing [39]. (3) Anti-inflammatory effects: PRP is rich in anti-inflammatory cytokines [40], downregulating type II collagen expression induced by pro-inflammatory cytokines and significantly reducing increases in MMP-3 and COX-2 gene expression, inhibiting inflammatory factor expression [41]. VEGF in PRP inhibits adipogenesis via the ERK pathway of adipose-derived stem cells, reducing inflammation, and also inhibits NF- κ B activation [42].

3.2 Platelet-Rich Fibrin

3.2.1 Biological Effects

PRF's main components include platelets, fibrin, growth factors, and white blood cells. Its unique fibrin network structure tightly binds platelets and growth factors, achieving slow release and extending its duration of action. Biological effects include: (1) Promoting tissue

regeneration and repair: PRF, rich in platelets and white blood cells, releases various growth factors upon activation, with PDGF and TGF- β significantly promoting cell proliferation and differentiation. Studies show PRF effectively stimulates the proliferation and mineralization of human bone marrow mesenchymal stem cells, promoting bone tissue regeneration [43]. IGF-1 promotes mitosis, enhancing osteoblast activity and wound healing [44]. (2) Immune regulation and antibacterial properties: PRF activates white blood cells during processing, releasing inflammatory factors like IL-1 β , IL-6, and TNF- α to initially promote inflammation, later modulating white blood cells to an anti-inflammatory phenotype for immune control [45]. PRF exhibits antibacterial activity against some pathogens, further enhancing its value in wound care and regenerative medicine [46]. Additionally, PRF promotes macrophage polarization to the anti-inflammatory M2 type, reducing inflammation, accelerating healing, and lowering postoperative infection risks [47]. (3) Promoting angiogenesis: PRF's gradual release of growth factors and cytokines [48], particularly VEGF, significantly promotes neovascularization, providing essential nutrients and oxygen to damaged tissues, accelerating healing, and enhancing type I collagen and fibronectin synthesis [49]. (4) Providing a three-dimensional scaffold: The fibrin network serves as an excellent scaffold for cell adhesion and migration, aiding the attachment, proliferation, and differentiation of circulating stem cells and tissue cells, fixing growth factors for sustained release and maintaining a stable repair environment [50]. i-PRF, with more uniform leukocyte and platelet distribution than PRF and easier mixing with bone graft materials, features a tighter fibrin network embedding activated platelets, leukocytes, and red blood cells, enhancing its biological effects [11].

3.2.2 Mechanisms of Action

PRF's mechanisms rely on its fibrin network structure and rich growth factors: (1) Promoting tissue regeneration: PRF acts via ERK and Akt pathways, increasing osteoprotegerin expression to enhance osteoblast proliferation and differentiation, aiding new bone formation [51]. In rabbit articular cartilage defect repair, PRF upregulates the AMPK/Sox-9 pathway to promote chondrocyte proliferation. PRF regulates the Notch pathway to effectively promote periodontal ligament stem cell endothelial differentiation [52]. (2) Promoting wound healing: PRF contains over 100 bioactive molecules, with growth factors locked in its fibrin network for slow release, prolonging their action in wounds and significantly promoting healing [53]. PRF increases capillary numbers, accelerates blood supply, and supports nutrient and oxygen delivery to new tissues. It also reduces excessive fibrous tissue growth, preventing scar formation and improving healing quality [54]. (3) Inflammation control: Activated white blood cells in PRF release pro-inflammatory cytokines like IL-1 β , IL-6, and TNF- α , as well as anti-inflammatory IL-4, creating a bidirectionally regulated immune microenvironment. This immune modulation reduces postoperative infections and optimizes healing [55]. PRF lipids reduce IL-6 and CCL2 expression, inhibiting cytokine release and lowering inflammatory responses in bone marrow stromal cells and macrophages [56].

3.3 Concentrated Growth Factors

3.3.1 Biological Effects

CGF, obtained from peripheral blood using a specialized variable-speed centrifuge, fully activates platelet α -granules through acceleration and deceleration, producing an autologous blood

concentrate rich in high-concentration growth factors and CD34+ cells. Biological effects include: (1) Promoting tissue regeneration: CGF releases PDGF, TGF- β 1, and IGF-1, significantly increasing the proliferation rate of stem cells and osteoblasts, enhancing cell migration, and promoting tissue regeneration [57]. When used with dental pulp stem cells, CGF enhances dentin-like tissue formation and promotes pulp regeneration [58]. (2) Promoting angiogenesis: CGF significantly upregulates VEGF and other angiogenesis-related factors, promoting endothelial cell proliferation and lumen formation, enhancing neovascularization. CD34+ cells in CGF exhibit endothelial progenitor characteristics, directly participating in angiogenesis [29].

3.3.2 Mechanisms of Action

(1) Promoting cell proliferation and migration: CGF enhances the expression of dentin matrix protein and angiogenesis marker CD31, boosting the proliferation, migration, and differentiation of human dental pulp stem cells (hDPSCs) [59]. In nerve repair, CGF significantly increases Schwann cell expression of nerve growth factor (NGF) and glial cell line-derived neurotrophic factor (GDNF), accelerating functional recovery in rat sciatic nerve injuries [60]. CGF upregulates alkaline phosphatase (ALP) and osteocalcin expression, strengthening collagen synthesis, osteogenesis, and mineralization [61]. Via PI3K/AKT pathway activation, CGF stimulates AKT/Wnt/ β -catenin and YAP pathways, upregulating ALP, DSPP, DMP-1, and osteogenesis-related genes, promoting proliferation, migration, and differentiation of SCAPs, SC, hDPSCs, and human keratinocytes [62]. (2) Anti-inflammatory: CGF modulates macrophage polarization, shifting them from pro-inflammatory M1 to anti-inflammatory M2 types, reducing wound inflammation and enhancing tissue regeneration. It also lowers IL-8 in hDPSCs [63] and IL-6 and TNF- α in epidermal cells [64], exerting anti-inflammatory and immune-regulatory effects.

4 Clinical Applications of Autologous Blood Concentrates

4.1 Clinical Applications of Platelet-Rich Plasma

PRP has been applied across plastic surgery, sports medicine, oral and maxillofacial surgery, and gynecology to improve the healing of tendons, ligaments, and bones. Studies show PRP accelerates healing of injured tissues, reduces recovery time, and significantly enhances outcomes as an adjunct in rotator cuff repair surgeries [65]. In treating knee osteoarthritis in athletes, PRP's rich growth factors reduce joint inflammation and improve cartilage repair [66]. In dermatology, PRP promotes collagen synthesis, enhances skin elasticity, effectively improves facial wrinkles and fine lines, and, as an autologous product, reduces immune rejection risks [67]. In burn wound repair experiments, PRP groups outperformed silver sulfadiazine cream in healing time and inflammation rates [68]. PRP also promotes hair follicle regeneration, increasing hair density [69]. In oral and maxillofacial surgery, PRP aids post-extraction wound healing, bone regeneration around implants, and bone defect filling, releasing growth factors to promote osteoblast proliferation and angiogenesis, accelerating bone healing and increasing new bone formation rates [70]. In orthopedic surgeries, PRP serves as a biological scaffold and growth factor source, supporting osteoblast proliferation and differentiation while improving bone density [71]. It also reduces inflammation and pain, promoting tissue repair in osteoarthritis and joint injuries [72]. PRP growth factors enhance cell proliferation and migration via the NF- κ B pathway, regulating endometrial cell proliferation and apoptosis to improve endometrial thickness in patients with thin endometrium [73]. Combining PRP with other techniques has become a key strategy for enhancing treatment efficacy. Studies show that laser therapy, fat

grafting, and PRP combined treat post-traumatic scars better than single therapies [74]. PRP with conventional treatment reduced average healing time by 48% in athletes with anterior cruciate ligament ruptures [75]. However, challenges remain, including the lack of standardized PRP preparation, variations in growth factor content and activity from different methods, unclear dose-response and time-effect relationships with tissue regeneration, and the need for further research on potential systemic effects of local PRP use [76].

4.2 Clinical Applications of Platelet-Rich Fibrin

4.2.1 Clinical Applications of PRF

As a natural biological scaffold, PRF, rich in PDGF and VEGF, continuously promotes osteoblast and other regenerative cell proliferation. Its three-dimensional fibrin structure supports cell adhesion and migration, providing a long-term stable growth factor release platform for tissue repair [77]. Studies demonstrate PRF significantly improves probing depth and clinical attachment levels in treating bone defects in chronic periodontitis patients, increasing bone fill and accelerating periodontal tissue healing compared to traditional open flap debridement [78]. In sinus lift procedures, PRF promotes osteogenic differentiation of mesenchymal stem cells in the maxillary sinus floor, accelerating bone regeneration and tissue repair [79]. Post-inferior alveolar nerve transposition, PRF membranes wrapped around the displaced nerve accelerate recovery from nerve injury symptoms [80]. PRF also enhances human gingival fibroblast secretion of type I collagen and hyaluronic acid, accelerating gingival soft tissue repair and regeneration [81], and is effective in filling cavities after radicular cyst removal [82]. PRF combined with Bio-Oss bone powder outperforms Bio-Oss alone in guiding bone regeneration, enhancing bone volume and density [83]. In dermatology, PRF is widely used for chronic wounds, hair loss, and facial rejuvenation. In chronic wound repair, it promotes angiogenesis and reduces inflammation, with mechanical strength about half that of intact skin post-polymerization. In androgenetic alopecia, it stimulates hair follicle regeneration, increasing hair density and thickness [84]. In plastic surgery, PRF improves autologous fat graft survival rates and accelerates soft tissue repair while reducing postoperative pain and swelling [85].

4.2.2 Clinical Applications of i-PRF

i-PRF, a derivative of PRF, combines the fluidity of platelet-rich plasma with PRF's three-dimensional network, allowing direct injection into damaged sites and sustained release of growth factors to promote cell proliferation and tissue repair. Its main applications include oral restoration, joint disorders, and dermatology [86]. In dentistry, i-PRF significantly increases root coverage and gingival thickness, promoting periodontal tissue regeneration [87]. It also enhances bone fill rates and bone-implant contact around implants, accelerating early bone healing [88]. Combined with bone graft materials in sinus lift procedures, i-PRF significantly increases new bone formation and shortens healing time [89]. In bone grafting, i-PRF acts as a bioactive scaffold, improving bone density and implant stability while enhancing regeneration [90]. It is used in osteoarthritis and temporomandibular joint disorder management, outperforming hyaluronic acid in pain relief and joint mobility due to its cartilage regeneration and anti-inflammatory properties [91]. In dermatology, i-PRF with thermoresponsive hydroxybutyl chitosan improves wound healing, reduces patient pain, and lowers complications [92]. Combined with 2940 nm fractional laser, i-PRF treats androgenetic alopecia by promoting hair follicle growth, reducing sebum secretion, and lowering scalp inflammation, with significant

safety [93]. With CO2 fractional laser, it also treats alopecia areata [94]. Additionally, i-PRF exhibits significant antibacterial activity against biofilm-forming bacteria like *Staphylococcus aureus* and *Escherichia coli*, promoting wound healing and reducing postoperative infection risks [95].

4.3 Clinical Applications of Concentrated Growth Factors

CGF, rich in growth factors and stem cells, is widely used in regenerative medicine. In dentistry, it promotes dental pulp stem cell proliferation and migration, supporting pulp and periodontal tissue regeneration [96]. It outperforms conventional therapies in treating periodontal bone defects, significantly improving probing depth, clinical attachment levels, and hard tissue fill [97]. In facial plastic and cosmetic surgeries, CGF combined with autologous fat grafting significantly improves fat graft survival rates, promotes neovascularization, and enhances graft blood supply and quality [98]. CGF counteracts UVA-induced photoaging by inhibiting the P38MAPK/AP-1 pathway [99]. In regenerative orthopedics, CGF aids bone defect repair, with mineralized collagen combinations improving patient quality of life and accelerating postoperative bone regeneration [100]. It also enhances tissue regeneration post-surgery in osteoporotic patients and supports recovery from medication-related osteonecrosis of the jaw [98].

5 Prospects of Autologous Blood Concentrates in Clinical Acupuncture

The biomedical effects of autologous blood concentrates provide more clinical applications and treatment options in regenerative medicine fields such as immune restoration, nerve repair, sports injuries, and orthopedic diseases. The rapid rise of non-pharmacological therapies in recent years has become a significant component in various disease domains. As a key non-pharmacological method in clinical acupuncture, autologous blood point injection therapy is generally believed to work through the presence of trace elements, antibodies, hormones, and enzymes in the blood, which, upon injection into acupuncture points, provide sustained stimulation to the body's immune system, enhancing disease resistance, ensuring adequate qi, blood, and body fluids, and achieving harmony to produce anti-inflammatory, detumescent, and blood-activating effects. It has shown remarkable efficacy in treating certain diseases, such as chronic obstructive pulmonary disease (COPD) [94], asthma [95], allergic rhinitis [96], and dermatological conditions like acne [97], eczema [98], urticaria [99], and psoriasis [100] in the respiratory and skin systems.

Different types of autologous blood concentrates (PRP, i-PRF, CGF) are injected into local soft tissues or joint cavities, while autologous blood point injections primarily target meridian acupuncture points. The former extracts purer, safer platelets and platelet-rich fibrin from autologous blood using modern medical technology, with effective components four times higher than whole blood and minimal adverse reactions. The latter, injected into meridian points, not only targets local soft tissues and joint cavities but also leverages meridian and acupuncture point effects. Thus, the perfect integration of effective components with meridian points, and modern medical technology with traditional Chinese medicine meridian theory, forms a synergistic innovative Chinese medical autologous blood therapy (i-PRF-autologous blood point injection). This comprehensive approach, combining acupuncture point tissues, autologous blood concentrates, and meridian effects, provides nonspecific stimulation, promotes the release of more

immunoglobulins, enhances microcirculation, and boosts immunity, extending and developing the integration of traditional Chinese acupuncture and modern medicine.

6 Conclusion and Outlook

Since their discovery, autologous blood concentrates have demonstrated significant clinical potential in tissue repair and regeneration. The core of these technologies lies in utilizing high concentrations of platelets and growth factors to promote the healing and regeneration of soft and hard tissues. PRP, with its rich growth factors, was the earliest applied but its rapid release limits its duration, making it suitable for scenarios requiring quick responses, though exogenous anticoagulants may trigger immune rejection. PRF, with improved centrifugation, forms a gel structure with slow, sustained release, better suited for long-term tissue regeneration and repair, excelling in periodontal disease, bone defect treatment, and plastic surgery. i-PRF, derived from PRF, expands its applications with injectable properties while retaining PRF's effects. CGF, as a third-generation concentrate, achieves higher growth factor concentrations and stronger regenerative effects through specific centrifugation conditions, showing notable results in bone regeneration and cosmetic surgery.

The application prospects of autologous blood concentrates in regenerative medicine are broad, particularly in personalized medicine and tissue engineering. With advancements in biomaterial science and diverse clinical needs, these autologous preparations may be integrated into more drug delivery systems and therapies, such as combining with acupuncture point injections to infuse autologous blood concentrates into meridian points. This fusion leverages meridian point effects and produces comprehensive biological therapeutic outcomes, applicable in clinical acupuncture for dermatological, immunological, and arthritic conditions, further improving efficacy and prolonging action time. However, different types of autologous blood concentrates vary in release characteristics, biocompatibility, and pro-/anti-inflammatory effects, with no unified standards currently. Their application requires careful consideration of patient-specific conditions and factors during preparation and use to ensure safety and efficacy. A deeper understanding of their molecular mechanisms will optimize clinical applications and foundational research.

In summary, the continuous innovation and optimization of autologous blood concentrate technology not only enhance tissue repair outcomes but also provide a broad platform for multidisciplinary applications. The integration of Western and Chinese medicine in applying autologous blood concentrates to clinical acupuncture, while having numerous clinical reports on autologous blood point injections, lacks sufficient mechanistic studies. Further foundational research to explore these mechanisms is recommended, warranting future exploration and promotion.

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 Review

Clinical Research Progress on Acupuncture for Improving Vascular Dementia

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Abstract

VD (Vascular dementia) is a type of dementia caused by brain damage caused by cerebrovascular disease, and is the second leading cause of dementia after Alzheimer's disease, accounting for 20% to 30% of the total number of dementia in the elderly. It is mainly manifested as impairment of advanced cognitive functions such as memory, attention, executive function, and language, which seriously affects the quality of life of patients. Its pathogenesis is relatively complex, involving various cytotoxic mechanisms such as neuronal apoptosis, oxidative stress, neuroinflammation, autophagy dysfunction, and decoupling between blood vessels and neurons. At present, multiple clinical studies have confirmed that acupuncture combined with traditional Chinese medicine decoctions, Western medicine, electrotherapy and other treatment methods have significant therapeutic effects on vascular dementia, all of which are higher than the conventional drug group or treatment group, and have less pain and side effects. This article reviews the relevant literature on the mechanism of acupuncture combined with various traditional Chinese and Western medicine treatment methods for preventing and treating vascular dementia in the past 10 years, and summarizes the common problems found in the research, in order to provide a basis for future clinical prevention and treatment of vascular dementia.

Keywords— vascular dementia, acupuncture

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 Review

Acupuncture for insomnia among individuals with substance use disorder: A systematic review and meta-analysis

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Abstract

OBJECTIVE: To evaluate the efficacy and safety of acupuncture for treating insomnia among individuals with substance use disorder (SUD).

METHODS: The MEDLINE, Cochrane Library, Web of Science, Embase, China National Knowledge Infrastructure (CNKI), Science and Technology Journal Database (VIP), and Wanfang databases were searched from inception to December 2024 to identify relevant randomized controlled trials (RCTs) comparing needle acupuncture with sham acupuncture, conventional care, nonacupuncture active treatment, or waitlist control for patients with insomnia for SUD. No language restrictions were applied. The primary outcome was sleep quality, which was measured by the Pittsburgh Sleep Quality Index (PSQI) (lower scores indicate better sleep quality). The secondary outcomes included anxiety and depression, which were measured by the Hamilton Anxiety Rating Scale (HAMA) and Hamilton Depression Rating Scale (HAMD) (lower scores denote a better effect). The pooled effects were estimated using random effects models. The risk of bias was assessed with the RoB2 tool, and the certainty of the evidence was assessed using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) framework. We used trial sequential analysis (TSA) to assess the risk of false positive or false negative results. Funnel plots and Egger's regression tests were used to assess potential publication bias.

RESULTS: Seventeen RCTs with 1750 participants met the inclusion criteria. Sixteen of the RCTs had a moderate to high risk of bias. The pooled results showed that manual acupunc-

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ture (MA) yielded a better total PSQI score than sham acupuncture (mean difference (MD), -1.99 [95% CI, -2.73 to -1.25], $P < 0.00001$; minimal clinically important difference (MCID): -1.25), with moderate-certainty evidence. The results of TSA indicated that the sample size reached the required information volume and that no more trials were needed for confirmation. Electro-acupuncture had a significant beneficial effect on sleep disorders compared with no treatment (standardized mean difference (SMD), -2.86 [95% CI, -4.25 to -1.46], $P < 0.0001$), with low-certainty evidence. Subgroup analyses revealed that acupuncture interventions had a greater effect among individuals with opioid use disorder (OUD) (mean difference (MD), -1.93 [95% CI, -2.61 to -1.25], $P < 0.00001$) than on those with alcohol use disorder (MD, -1.49 [95% CI, -2.12 to -0.87], $P < 0.00001$) or new drug use disorder (MD, -3.94 [95% CI, -7.99 to 0.12], $P = 0.06$). There was insufficient evidence to suggest that acupuncture differs from Western medicine or psychosocial therapy in terms of improving sleep quality or that acupuncture has a greater effect on alleviating anxiety or depression in individuals with SUD.

CONCLUSION: Our systematic review and meta-analysis of 17 RCTs provides moderate certainty evidence that MA is more effective than sham acupuncture for improving sleep quality in individuals with SUD. Furthermore, the effect may be stronger among individuals with OUD. More research is needed to confirm these findings in the future, especially studies on the efficacy and cost-effectiveness of acupuncture across various subtypes of SUD.

REGISTRATION: This systematic review and meta-analysis was registered on PROSPERO (CRD420223195594).

Keywords— Acupuncture; substance dependence; substance use disorder; insomnia; sleep disorder; systematic review; meta-analysis

 Review

Evidence-Based Complementary and Alternative Medicine Guilu Erxian Jiao for Knee Osteoarthritis: A Systematic Review and Meta-analysis

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Abstract

Objective: Knee osteoarthritis is a chronic degenerative disease. It is mainly caused by the abrasion of cartilage or weakness of the muscles around the joint, resulting in pain, swelling, and even deformation of the knee joint. This systematic review and meta-analysis aims to investigate the efficacy and safety of Guilu Erxian Jiao (GEJ) in the treatment of knee osteoarthritis.

Materials and Methods: We searched the following databases: PubMed, MEDLINE, Embase, the Cochrane Central Register of Controlled (CENTRAL), Chinese Electronic Periodical Services (CEPS), China National Knowledge Infrastructure (CNKI), and ClinicalTrials.gov, from the inception of each source to December 20, 2020. The keywords included Guilu Erxian Jiao, Kuei-Lu-Erh-Hsien-Chiao, Guilu Erxian Decoction, Guilu Erxian Glue, and knee osteoarthritis.

Results: In this systematic review and meta-analysis, six studies were included. Compared to control, GEJ had better overall efficacy in the treatment of knee osteoarthritis (RR = 1.31; 95% CI = 1.09 - 1.57). The NNT is 5 (95% CI = 3 - 16). In addition, GEJ can also improve knee joint function (MD = 7.47; 95% CI = 5.14 - 9.80). There was no statistical difference in adverse reactions between GEJ group and control group (RD = -0.02; 95% CI = -0.08 - 0.05).

Conclusions: Our findings suggest that GEJ has positive effects on knee osteoarthritis, and there are no obvious side effects.

Keywords— Guilu Erxian Jiao, Knee Osteoarthritis, Systematic Review, Meta-analysis

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 Review

The effectiveness of moxibustion therapy for nonspecific chronic low back pain: a systematic review

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Abstract

Objectives: This study aims to evaluate the effectiveness of the moxibustion therapy for nonspecific chronic low back pain.

Methods: Eight databases (MEDLINE, CENTRAL, EMBASE, KISS, KMBASE, ScienceON, OASIS, CNKI) were searched from inception to February 2025. Randomized controlled trial studies using moxibustion therapy for nonspecific chronic low back pain were selected. Data from the selected studies were extracted using a formal extraction tool. Primary outcome measurements were pain intensity (NRS, VAS) and functional status/disability (ODI, JOA) due to nonspecific chronic low back pain. Secondary outcome measurements were RMDQ, KPS, ROM, GQLI. The Cochrane risk of bias tool was used to evaluate the risk of bias. For continuous data, the standardized mean difference was calculated with 95% confidence intervals in a random effects model. Heterogeneity between the selected studies was assessed using the forest plot and Chi-square test.

Results: 2,415 records were verified from the searched databases. After screening the records, 10 studies involving 710 participants were included in this systematic review and meta-analysis. Moxibustion therapy alone showed a significant effect on pain relief compared to standard treatment. Moxibustion therapy as an add-on treatment showed significant effects on pain relief and functional/disability scores. Combined Korean medicine treatment including moxibustion showed significant effects on functional/disability scores not only compared to physiotherapy but also to Korean herbal medicine. Moxibustion therapy as direct significantly improved pain and functional/disability scores compared to indirect moxibustion therapy. Moxibustion therapy on heat-sensitive points significantly improved pain

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and functional/disability scores compared to moxibustion therapy on tender points. Among the 10 studies, 5 studies reported 19 cases of mild adverse events.

Conclusions: This systematic review suggests that moxibustion therapy can be an alternative and add-on treatment for nonspecific low back pain. Moxibustion therapy has a significant effect on reducing pain and improving function. Additionally, moxibustion exhibits rare serious adverse events.

Keywords— Moxibustion therapy, Nonspecific chronic low back pain, Pain, Function and disability, Systematic review

 Review

Status of clinical research on acupuncture therapies for the treatment of pediatric allergic rhinitis: a scoping review

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Abstract

Objective: To provide an overview of the status and limitations of clinical research on acupuncture therapy for the treatment of pediatric AR using a scoping review design.

Methods: 7 common Chinese and English databases were comprehensively searched to collect clinical original studies and systematic reviews and meta-analyses (SRs/MAs) about acupuncture therapies for treating pediatric AR from the construction of each database to November 20, 2024. A scoping review approach was used to synthesize and analyze the collected data and evidence, including study type, participants, acupuncture interventions and control protocols, outcome indicators, safety, quality of evidence, and research gaps.

Results: A total of 173 studies were included, consisting of 130 randomized controlled trials (RCT), 23 clinical controlled trials, 16 case series, and 4 SRs/MAs. The participants of 2 studies originated from abroad, and the rest were from China. A sum of 18 acupuncture therapies were involved, with the most hotly researched being acupoint application. Controls were mostly western and Chinese medicines. The subjective outcome indicator of greatest interest was the overall effectiveness rate, and the objective outcome indicator was the level of immunoglobulin E. Minor adverse events were reported in a few studies. The quality of RCT evidence and synthetic evidence was generally low.

Conclusion: Acupuncture therapies are safe, effective, convenient, with excellent advantages for managing the condition in pediatric AR patients. However, existing clinical stud-

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ies also suffer from problems such as homogeneous study design, insufficient sample size, inadequate or unstandardized reporting of study details, and limited study perspective.

Keywords— allergic rhinitis, acupuncture therapies, pediatric patients, scoping review, clinical research

1 Introduction

Allergic rhinitis (AR) is a chronic, non-infectious nasal mucosal inflammation caused by allergen inhalation, presenting with nasal itching, congestion, sneezing, and rhinorrhea, driven by IgE-mediated, Th2-driven type 1 hypersensitivity [1, 2]. Globally, AR prevalence is rising, affecting approximately 25% of children and 35% of adolescents, with a lifetime prevalence of 19.93% [1, 2]. While not life-threatening, AR significantly impacts patients, potentially leading to complications like bronchial asthma, gastroesophageal reflux, adenoid facies in adulthood, and associations with attention-deficit hyperactivity disorder [3]. Pharmacological treatments, such as antihistamines and intranasal corticosteroids, offer rapid symptom relief but are prone to recurrence upon discontinuation [4, 5]. Randomized controlled trials (RCTs) and systematic reviews/meta-analyses (SRs/MAs) confirm acupuncture's efficacy in improving AR symptoms and psychological well-being, possibly via neuroimmune regulation, Th1/Th2 balance, and inflammatory cytokine modulation [4, 5]. Acupuncture is convenient and minimally painful, making it particularly suitable for pediatric patients, yet a systematic summary of evidence for its use in pediatric AR is lacking. This scoping review aims to systematically evaluate the clinical research status and limitations of acupuncture for pediatric AR, offering evidence-based support for clinical practice and guiding future research.

2 Materials and Methods

2.1 Literature Search

Databases including CNKI, VIP, Wanfang, Embase, PubMed, The Cochrane Library, and Web of Science were searched from inception to November 20, 2024, for clinical studies and SRs/MAs on acupuncture for pediatric AR, limited to Chinese and English languages. Subject and free-text term strategies were combined, supplemented by gray literature and reference lists.

2.2 Inclusion and Exclusion Criteria

1. **Study Design:** Included RCTs, clinical controlled trials (CCTs), cohort studies, and SRs/MAs; excluded guidelines, expert consensus, experimental studies, narrative reviews, duplicates, and incomplete data studies.
2. **Participants:** AR patients under 16 years, with no restrictions on gender, race, nationality, disease severity, or diagnostic criteria.
3. **Interventions:** Included traditional acupuncture and combined therapies; excluded controversial therapies like dry needling or transcutaneous electrical stimulation, with no limits on treatment parameters.
4. **Controls:** Allowed Western medicine, Chinese medicine, blank, or placebo controls.
5. **Outcomes:** Required clear efficacy evaluation and endpoint criteria.

2.3 Literature Screening

Two researchers independently screened studies. After deduplication, titles and abstracts were screened to exclude irrelevant studies, followed by full-text review of uncertain studies based on inclusion/exclusion criteria. Discrepancies were resolved by a third researcher through discussion.

2.4 Data Extraction

Data were extracted using a standardized form by two researchers independently, with cross-checking. Discrepancies were resolved by a third researcher to ensure consistency and accuracy.

2.5 Data Analysis and Reporting

Data were visualized with charts and tables, described via qualitative analysis. SPSS Modeler 18.0 was used for Apriori algorithm analysis of acupoint prescription associations (support $\geq 10\%$, confidence $\geq 80\%$, max antecedents 4) and network graph generation. Revman 5.4.1 assessed RCT risk of bias, AMSTAR 2 evaluated SR/MA methodological quality, and GRADE graded SR/MA evidence quality. Assessments were conducted independently by two researchers, with discrepancies resolved through discussion.

3 Results

3.1 Search Results

Of 1,488 records retrieved, 173 studies were included based on inclusion/exclusion criteria.

3.2 General Characteristics of Included Studies

The studies involved 16,260 cases, with 54 studies having over 100 participants and 30 participants per group being the most common. Participants were mainly school-aged children in China, with only two studies from abroad. Of 142 studies using diagnostic criteria, the Chinese Medical Association guidelines were most cited (71.33%) in modern medicine, and the State Administration of TCM standards were most common (28.26%) in TCM.

3.3 Interventions and Controls

Interventions included 18 acupuncture therapies, with acupoint application (43.79%), moxibustion (15.98%), and traditional acupuncture (14.20%) being the most common; 119 studies combined other therapies. A total of 75 acupoints were used, with Feishu (BL13), Dazhui (GV14), and Yingxiang (LI20) most frequent, and the Foot Taiyin Bladder Meridian most utilized. Western medicine controls (72.55%) predominantly used loratadine derivatives; Chinese medicine controls mainly used Yupingfeng San.

3.4 Outcome Measures and Safety Assessment

Studies included 58 outcome measures, used 580 times, primarily subjective. Total effective rate (92.90%) and rhinitis symptom scores (49.11%) were common subjective measures, while IgE levels (24.85%) were a frequent objective measure. Acupuncture outperformed controls in clinical efficacy and symptom improvement, but seven studies showed no significant difference in some objective measures. Minor adverse events were reported in 23 studies (13.61%).

3.5 Study Quality Assessment

Risk of bias assessment of 130 RCTs showed deficiencies in allocation concealment, blinding, and outcome reporting, with overall low quality. The four included SRs/MAs had poor methodological quality, with evidence graded as low to moderate, lacking high-quality evidence.

4 Discussion

4.1 Single Study Design and Insufficient Sample Size

RCTs are the gold standard for assessing clinical efficacy and safety but dominate acupuncture research for pediatric AR, with limited observational studies (e.g., cohort, case-control, cross-sectional) [6, 7]. Observational studies better capture real-world responses and diverse populations, aiding hypothesis generation. Over half of studies had fewer than 50 participants per group, with few reporting sample size calculations, risking insufficient statistical power.

4.2 Inadequate or Non-Standardized Reporting

Only three studies distinguished primary and secondary outcomes, with unclear focus. The total effective rate, the most common outcome, lacked standardized definitions across studies, a problem also noted in other acupuncture scoping reviews [8]. Inadequate reporting of intervention details, study design, and outcomes reduces evidence credibility. A standardized TCM AR core outcome set, informed by prior research, clinical experience, and Delphi methods, is needed [8].

4.3 Limited Research Perspectives

AR significantly impacts children's learning, recreation, and sleep, yet studies rarely assess quality of life or mental health [9]. Using rhinitis-specific quality-of-life scales and incorporating health economics indicators in real-world studies could evaluate cost-effectiveness, informing healthcare decisions.

4.4 Strengths and Limitations

This is the first scoping review of acupuncture for pediatric AR, systematically summarizing research status and gaps, providing valuable guidance for future studies and practice. Limitations include: 1) restriction to Chinese and English literature due to language and database constraints; 2) reliance on qualitative analysis, potentially influenced by subjectivity.

5 Conclusion

This review summarizes the research status of acupuncture for pediatric AR, covering study types, participants, interventions, controls, outcomes, safety, evidence quality, and gaps. Issues include single study designs, small sample sizes, inadequate reporting, and limited perspectives. Future research should establish high-standard TCM research systems, conducting high-quality, diverse, large-sample studies to advance acupuncture's potential in pediatric AR treatment.

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 Review

Effective Low-Level Laser Therapy Including Laser Acupuncture Treatment Conditions for Non-Specific Chronic Low Back Pain: A Systematic Review and Meta-Analysis

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Abstract

Objectives: Low-level laser therapy including laser acupuncture has been widely used for non-specific chronic low back pain in primary Korean medical clinics. However, there are no critically appraised data regarding which treatment conditions are most effective.

Methods: A systematic review and meta-analysis were conducted to determine effective treatment conditions using 12 databases (PubMed, Ovid, CENTRAL, KoreaMed, KMBASE, KISS, NDSL, KISTI, OASIS, CNKI, CiNii, and J-STAGE).

Results: There were 1,019 studies retrieved and 13 studies included in this review. It was determined that when the power output was ≥ 50 mW, the beam size was increased to ≥ 1 cm², the energy dose was increased to ≥ 4 J per point, the treatment interval was increased to ≥ 3 times a week, and the number of treatment sessions was increased to ≥ 10 treatments, these conditions appeared to increase treatment effectiveness.

Keywords— Laser therapy, Nonspecific chronic low back pain, Pain, Function and disability, Systematic review

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 Theoretical Exploration

Theoretical Exploration of Acupuncture Combined with Xingnao Yizhi Formula in the Treatment of Vascular Dementia

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Abstract

Objective: Vascular dementia (VaD) is the second leading cause of dementia after Alzheimer's disease, seriously affecting the quality of life of patients. Acupuncture combined with Traditional Chinese Medicine decoctions have significant therapeutic effects on VaD, among which the Kidney Tonifying, consciousness restoring, resuscitation inducing and Blood circulation Promoting method is the most widely used. This article reviews relevant literature from the past 5 years and explores the feasibility and mechanism of acupuncture combined with Xingnao Yizhi Fang in preventing and treating VaD, in order to provide a basis for future clinical prevention and treatment of this disease.

Methods: This study analyzes recent clinical research and theoretical foundations of TCM, focusing on the integration of acupuncture and the Xingnao Yizhi formula.

Results: The combination therapy shows promising results in improving cognitive function and alleviating symptoms, supported by preliminary mechanistic studies.

Conclusion: The integration of acupuncture with Xingnao Yizhi formula offers a potential approach for enhancing VaD management, warranting further research

Keywords— acupuncture; Xingnao Yizhi formula; BuShen Xingnao method; vascular dementia

1 Introduction

Vascular dementia (VaD) is a form of dementia caused by brain damage resulting from cerebrovascular disease, ranking as the second most common cause of dementia after Alzheimer's disease [1]. In Traditional Chinese Medicine (TCM), VaD is categorized under conditions such as "dementia," "forgetfulness," and "senile dementia." Numerous clinical studies have confirmed that acupuncture combined with TCM decoctions, electrotherapy, or Western medicine yields significant therapeutic effects, surpassing conventional Western medicine groups or control groups, with minimal pain and fewer side effects [2]. Among these, the combined use of

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TCM decoctions based on the "Kidney-Brain connection" theory—focusing on Kidney tonifying, consciousness restoring, and Blood circulation promoting—has been widely applied. This article reviews literature from the past five years to explore the feasibility and mechanisms of acupuncture combined with Xingnao Yizhi Fang in preventing and treating VaD, aiming to provide a foundation for future clinical interventions.

2 Pathophysiology of VaD: Qi Deficiency and Marrow Sea Insufficiency

The TCM classic **Ling Shu: Hai Lun** states, "The brain is the sea of marrow, where all marrows converge" [3]. Positioned as the highest and most noble organ, the brain serves as the residence of the Yuan Shen (original spirit), storing marrow and governing consciousness and intelligence. As noted in **Yi Can**, "When the brain marrow is pure, it is sharp; when impure, it becomes dull... thus enabling clarity and wisdom," suggesting that the brain thrives on a full marrow sea and clear orifices, free from obstruction or turbidity to maintain its normal function [4].

The brain's cognitive activities rely on the essence of the five Zang organs for nourishment and the clear Yang Qi of the six Fu organs for moistening. **Ling Shu: Jing Mai Lun** states, "At the beginning of human life, essence forms first, and with the formation of essence, the brain and marrow are born" [3]. The marrow sea's development depends on the transformation of Kidney essence, with its functional state determined early by the quality of Kidney essence, as articulated in **Zhongguo Guoyao Huibai**: "Abundant essence leads to abundant marrow, and abundant marrow fills the brain" [5]. This supports the concept of "Kidney generates brain." Additionally, the brain marrow relies on postnatal Qi and Blood nourishment, with the Spleen as the source of Qi and Blood production. The Spleen's ascending clear Yang ensures the brain's clear Yang Qi is supplemented, maintaining a pure marrow sea to fulfill its role as the "mansion of intelligence."

3 Research Progress on Acupuncture Combined with Kidney Tonifying and Consciousness Restoring Methods

VaD predominantly affects elderly patients, with Kidney essence deficiency and marrow sea insufficiency as its core pathology. It also shares a close relationship with stroke, as noted in **Su Wen: Tiao Jing Lun**: "Blood accumulates below, Qi gathers above, leading to chaos and forgetfulness" [6]. Chen Shiduo in **Bian Zheng Qi Wen: Dai Men** describes, "Liver depression invading the Spleen, Stomach decline producing phlegm... obstructing the heart orifice," advocating treatments to "relieve depression, dispel phlegm, strengthen the Stomach, and regulate Qi," highlighting the "phlegm turbidity obstructing orifices" mechanism in dementia [7]. Thus, treatment focuses on tonifying Kidney essence, restoring consciousness, and opening orifices. Tonifying the Kidney replenishes essence, fills the marrow sea, nourishes the brain, enhances vitality, sharpens thinking, improves hearing and vision, and strengthens memory. Strengthening the Spleen dispels phlegm, clears brain orifices, normalizes Qi and Blood circulation, and ensures optimal brain function, enhancing broad knowledge and memory.

3.1 Single Acupuncture Therapy for VaD

In clinical studies using acupuncture alone for VaD, most protocols supplement oral Western medication with acupuncture, primarily targeting head acupoints supplemented by non-local

meridian points to enhance brain motor nerve center excitability, improving cerebral blood circulation and neurological function. Lu Zhuanglan et al. [2] selected Baihui, Renzhong, Neiguan, Shenmen, Sishencong, Sanyinjiao, Taichong, and Hegu based on the "Yin meridians and Du meridian as primary, Yang meridians as secondary" theory for the treatment group, with Baihui, Shenting, Yintang, Taixi, Xuanzhong, and Sishencong as the control group. Post-treatment, both groups showed significant improvements in MMSE and MoCA scores, with the treatment group exhibiting greater enhancement and a total effective rate of 93

3.2 Acupuncture Combined with TCM Decoctions for VaD

Modern research highlights that herbs like Shu Di Huang (*Rehmannia glutinosa*) exhibit antioxidant, anti-inflammatory, and angiogenic effects, offering multi-target regulation for VaD patients with promising results [8]. Li Weiran's team [9] combined Tongtiao Xinshen needling with Wen Yang Bushen moxibustion, using Baihui, Sishencong, Shenting, Fengchi, Zhongchong, Yongquan, Shuigou, Taixi, Xuanzhong, Neiguan, and Shenmen, significantly improving cognitive function and daily living abilities, possibly by reducing NSE and AChE levels. Du Mingming et al. [10] identified marrow nourishment deficiency and Kidney essence insufficiency as VaD mechanisms, finding that combining Bumai Tongqiao Yinao decoction with Jin San Zhen effectively improved TCM symptoms, mental state, and cerebral hemodynamics, offering high therapeutic value for VaD treatment and rehabilitation.

3.3 Development of Xingnao Yizhi Formula Based on "Kidney-Brain Connection" and "BuShen Xingnao" Method

In VaD pathogenesis, the brain is the primary site, with marrow sea vacuity as the root cause and Kidney essence deficiency as the essence, while the Spleen (Pancreas) acts as the initial trigger. Chronic Qi deficiency and marrow sea insufficiency are the fundamental features, leading to the "Spleen-Brain-Kidney axis" pathology based on the "Kidney-Brain connection" theory. Building on Tang dynasty Sun Simiao's *Bei Ji Qian Jin Yao Fang* (Kai Xin San) and Zhang Xichun's *Yi Xue Zhong Zhong Can Xi Lu* (Zi Wan Yin), the "BuShen Xingnao" method and Xingnao Yizhi Fang were developed, comprising Renshen (*Panax ginseng*), Shu Di Huang (*Rehmannia glutinosa*), Gegen (*Pueraria lobata*), Bajitian (*Morinda officinalis*), Huai Shan Yao (*Dioscorea opposita*), Tiannanxing (*Arisaema consanguineum*), Chuanxiong (*Ligusticum chuanxiong*), and Bingpian (*Borneol*). Clinically, this formula supports Spleen, disperses essence, restores consciousness, opens orifices, and aids in dispelling phlegm and promoting Yin fluid distribution, effectively improving cognitive function in VaD patients [11].

4 Conclusion

In summary, acupuncture demonstrates significant efficacy in treating VaD, and its combination with TCM decoctions enhancing Kidney tonifying and consciousness restoring effects further improves outcomes. Previous research, including projects supported by the National Natural Science Foundation (81072775) and Sichuan Provincial Science and Technology Department (2015SZ0100), indicates that Xingnao Yizhi Fang can enhance learning and memory in animal models by modulating the PI-3K/AKT pathway, reducing A β -42, GSK-3 β , and P-Tau expression in the hippocampus [12]. However, whether this combined therapy offers superior cognitive

benefits for VaD patients and its precise mechanisms require further validation in ongoing funded projects.

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 Theoretical Exploration

Five States of Fire in Traditional Chinese Medicine

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Abstract

Traditional Chinese Medicine (TCM) conceptualizes "Fire" as a pathological state resulting from an imbalance of yin and yang, manifesting as heat syndromes that impact various bodily systems. This paper examines the five distinct states of Fire—Liver, Heart, Stomach, Lung, and Kidney Fire—as delineated in TCM, exploring their etiology, symptoms, diagnostic indicators (tongue and pulse findings), treatment protocols, and their equivalents in contemporary medicine. Fire, characterized by yang excess and yin deficiency, arises from external pathogens or overactive physiological functions, consuming qi and body fluids, and exhibiting upward movement that stirs wind. Symptoms range from fever and restlessness to specific organ-related manifestations, such as temporal pain in Liver Fire, epigastric burning in Stomach Fire, mouth ulcers in Heart Fire, cough in Lung Fire, and dizziness in Kidney Fire.

The study details how each Fire type corresponds to unique clinical presentations: Liver Fire with anger and red eyes, Stomach Fire with sour taste and gum swelling, Heart Fire with insomnia and flushed skin, Lung Fire with bloody sputum, and Kidney Fire with back pain and amenorrhea. Treatment involves specific acupuncture points (e.g., LIV 3 for Liver Fire, ST 44 for Stomach Fire) to restore balance. Tongue and pulse diagnostics further refine these syndromes, with red tongues and rapid pulses being common markers.

This analysis bridges TCM with modern medicine, proposing equivalents such as anxiety for Heart Fire, gastritis for Stomach Fire, and pneumonia for Lung Fire. It highlights the therapeutic potential of acupuncture, supported by points like GV 14, and underscores the prolonged recovery in dew deficiency cases. The paper argues that understanding these Fire syndromes facilitates the integration of TCM into current medical practice, offering a holistic approach to inflammation, infection, and allergic conditions. By correlating ancient TCM patterns with contemporary diagnoses, this work aims to enhance the accessibility of TCM and acupuncture for modern healthcare professionals, fostering a synthesis of traditional and scientific knowledge.

Keywords— Fever, Traditional, Chinese, Syndrome, Current Medicine

Both water and fire are very common and important substances in nature. Water is calm, cold in nature, and tends to moisturize. Fire is active, hot in nature, rises, and heats. The "water" and "fire" of Traditional Chinese Medicine (TCM) are analogized with the characteristics of water and fire in nature to explain the life activities and pathological phenomena of the human body and guide clinical syndrome differentiation and treatment [1].

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From the perspective of TCM theory, "Fire" is considered the result of an imbalance of yin and yang in the human body. The heat syndrome of yang excess and yin decrease occurs when someone is attacked by external pathogens or as a result of overactive body functions. Fire is a yang pathogenic factor. It consumes qi and body fluids. It is upward-moving. It stirs up the wind [1, 2].

Symptoms of fever include high fever, feeling restless, thirst, sweating, ulceration in the mouth and tongue, swelling and pain in gums, headache, and congestion in eyes. As pathological fever affects the brain, symptoms such as insomnia, mania, emotional excitement, and delirium may be observed [1, 2].

Pathogenic fevers usually cause fluid depletion. They can force fluids out of the body, leading to a lack of body fluids. Thirst may accompany the desire to take in fluids. When pathogenic fire affects the blood, it accelerates blood circulation and causes a very rapid pulse. In severe cases, blood is expelled from the veins, causing nosebleeds, bloody stools, hematuria, uterine bleeding, and menorrhagia. The heat of pathogenic fire can remain inside, forming carbuncles, boils, furuncles, and ulcers [1, 2].

Effect of fever factor on tissues: especially in the skin, vasodilation in the vessels, increased blood flow in the relevant tissue, and expansion of the vessels in the muscles.

Although the symptoms of fever syndrome and heat syndrome are very similar, in fever syndrome, the duration and severity of heat syndrome symptoms are greater.

Commonly used points for fire factors are LI 14, LI 11, and GV 14 [3, 4].

1 Liver Fire

The cause of Liver Fire is mainly emotional. After developing Liver Fire, people display common characteristics such as an inability to suppress anger. In addition, seasonal conditions cause Liver heat and fire and can be a cause of anger. For example, in spring, wind-heat easily invades the liver, leading to inner fire [1, 2].

In the "Liver Fire" syndrome, people show common characteristics such as inability to suppress anger, moodiness, and easy irritability. People with this type of constitution are seen to suffer from "Exuberant Liver Fire." It has been shown that women, especially older women, are more likely to have Liver Fire than men, and the duration of Liver Fire is longer [1].

Symptoms of Liver Fire: temporal region pain increased by stress, red face and eyes, tinnitus, constipation, and a perception of hot sensation [1, 2].

Tongue Findings: Red tongue body, redder sides with a yellow coating on top [2].

Pulse Findings: Weak, rapid pulse [2].

Treatment: LIV 3, LIV 2, GB 40, and GB 38 points are used.

Equivalent in Current Medicine: Medical equivalents of this syndrome may include temporal headache and anxiety.

2 Stomach Fire

The change in mood, the fire caused by anger, can easily cause disharmony between the liver and the stomach, so many people experience stomach pain when they are angry. The "Stomach Fire" syndrome can also occur when eating very spicy, hot, or moist foods [1, 2].

Symptoms of Stomach Fire: burning sensation and pain in the epigastrium, a sour taste in the mouth, a feeling of discomfort in the stomach, thirst, preference for cold drinks, bad breath, ulceration and bleeding or pain and swelling of the gums, and constipation [1, 2].

Tongue Findings: Yellow coating on a red tongue [2].

Pulse Findings: Rapid pulse [2].

Treatment: ST 36, ST 42, and ST 44 points are used.

Equivalent in Current Medicine: Current medical equivalents of this syndrome may include acute gastritis, peptic ulcer, duodenal ulcer, and reflux gastritis.

3 Heart Fire

The fire element is associated with the Heart and its partner organ, the Small Intestine. When out of balance, anxiety, agitation, or sleep disturbances occur. This is because the heart governs blood circulation and houses the mind. Excessive heat in the heart can disturb the mind. Sweat comes from body fluids, and the heart controls body fluids to some extent. If you experience persistent excessive sweating without much exertion, this may be a sign of Heart Qi deficiency. There are many blood vessels in the skin, so rashes and a flushed red face can indicate excessive heat [1, 2].

Symptoms of Heart Fire: Heart Fire can also cause ulcers in the mouth and tongue. Heart Fire can also cause flushed skin and a constant feeling of warmth in the body. In addition, people can also feel sad, have insomnia, and thirst. In this syndrome, redness and a yellow tongue coating are seen on the tip of the tongue [1, 2].

Tongue Findings: Red tongue body, especially the tip of the tongue is red [2].

Pulse Findings: Rapid pulse [2].

Treatment: H 7, H 8, P 7, and P 8 points are used.

Equivalent in Current Medicine: Current medical equivalents of this syndrome may include anxiety, depression, and insomnia.

4 Lung Fire

Symptoms of Lung Fire: After Lung Fire, the most obvious symptom is a loud cough. People with high fever also experience shortness of breath, heavy breathing, thick and yellow sputum that may be bloody, hoarseness, night sweats, and increasing weakness [1, 2].

Tongue Findings: Red tongue body, especially the tip of the tongue is red, larger area than the Heart [2].

Pulse Findings: Rapid pulse [2].

Treatment: LU 9, LU 10, and LU 7 points are used.

Equivalent in Current Medicine: Current medical equivalents of this syndrome may include acute pneumonia, bronchitis, and inflammations of the respiratory tract.

5 Kidney Fire

Kidney Fire is usually caused by Kidney Yin deficiency, so there is no full fire, and almost all are empty fire [1, 2].

Symptoms of Kidney Fire: The main symptoms are dizziness and tinnitus, insomnia and forgetfulness, hair loss, back pain, throat and mouth dryness; men are prone to nocturnal emissions, and women with too much Kidney Fire may become amenorrheic [1, 2].

Tongue Findings: Thin coating on a red tongue body [2].

Pulse Findings: Filiform [2].

Treatment: To reduce Kidney Fire, it is best to nourish the yin energy and invigorate the kidney first. KID 3, KID 6, and BL 23 points are used.

Equivalent in Current Medicine: Medical equivalents of this syndrome may include postmenopausal syndrome, amenorrhea, dysmenorrhea, and acute glomerulonephritis.

According to TCM, patients diagnosed with dew deficiency and fever syndrome take longer to respond to treatment and recover [5].

In TCM, fever is seen as a symptom of various underlying imbalances within the body. TCM considers it a manifestation of disharmony between the body's internal systems. Different patterns of disharmony, such as wind, cold, heat, dampness, can cause fever, and identifying the specific pattern is essential for effective treatment [1, 2].

In TCM, the equivalent of fever syndrome in current medicine is acute inflammation, infection, and allergic diseases. In this presentation, I will also comment on which diseases Liver, Stomach, Heart, Lung, and Kidney Fire syndromes can correspond to in current medicine. Thus, I will have built a bridge between the past and the present. I believe that with this approach, doctors with up-to-date medical training can learn TCM and acupuncture much more easily.

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 Theoretical Exploration

Oncology And Theoretical-practical Experiences Of Acupuncture Application

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Abstract

Integrated oncology presents an application field of now vast scope, evidence and feedback, thus examining the international bibliography it is easy to see how at the level of the major scientific societies (ASCO, SIO, WHO, NIH) its use is the founding principle of a large number of public facilities where integration with allopathic medicine is carried out.

In this section of the Congress, acupuncturist formulas that find appropriateness and evidence in the use in the Oncology field of Acupuncture will be introduced and taught.

In fact, the space set aside for this meeting is apt to explain and show classic and innovative treatments (microsystems) that counteract the side effects of chemo and radiotherapy.

The protocols of traditional Chinese medicine will be explained and the needle infusion modalities will be shown, which at cancer patients present particular characteristics of subjectivity with achievement of substantial improvement by placing them side by side with classical therapies; techniques that actually differ from acupuncture practiced for other modalities. Hence of great importance for acupuncture side-by-side with allopathic therapy.

In addition, consideration will be given to what for Chinese medicine is a great prerequisite in improving Quality of Life in Oncology, which is the application of ancient and modern formulas that by activating multiple neurotransmitters (endorphins, serotonin, dopamine) unquestionably improve patient well-being.

In fact, the founding principle of Chinese medicine is to strengthen the healthy part, the own immunity so that the patient can counter and curb the pathological part by enhancing psyche and soma.

Therefore, the application of some protocols proposed both in Chinese and American hospital settings (Beijing Traditional Medicine Training Center of WFAS, Memorial Sloan Kettering Cancer Center New York, Anderson Cancer Center of Houston) and in our national settings (Public Outpatient Clinics Tuscany Region) will be made available to the learners who will benefit from the great experience that the speaker has in this field.

It must be remembered that this seminar is based mainly on practice so as to provide participants with know-how that will serve them in the field of oncology.

Keywords— oncology, acupuncture

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 Theoretical Exploration

New Thought of Treating Infectious Wounds and Ulcers Due to Diabetes with Seven-Star Moxibustion

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Abstract

According to Traditional Chinese Medicine (TCM) differentiation, chronic diabetes patients typically exhibit Qi and Yin deficiency or internal dryness with body fluid deficiency. When these patients sustain traumatic injuries, their wounds are difficult to heal and prone to inflammation due to elevated blood glucose levels. Clinical manifestations include redness, swelling, exudation, pus formation, or ulceration, which are classified as Heat Syndrome or Deficient Heat Syndrome due to Yin Deficiency. Both Western Medicine (WM) and TCM consider these conditions among the most challenging to treat. Based on extensive clinical practice, considering the pathogenesis of diabetes, the properties of moxa leaves, and the application of moxibustion, we have found that the Reducing Method of Moxibustion is highly effective for treating infectious wounds and ulcers. In particular, the modified “Seven-Star Moxibustion” technique offers a novel and rapid treatment approach.

Keywords— Moxibustion, Diabetic Complication, Infectious Wound and Ulcer

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 Theoretical Exploration

The Integrated Application of Acupuncture's "Zhutong Yiteng" and "Cross-Meridian Contralateral Needling" in Pain Management

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Abstract

"Relieving pain by selecting intersecting and interconnected meridians", a classical acupuncture point selection method derived from Classic of Acupuncture: Biao You Fu, treats pain syndromes by stimulating confluent acupoints or Yin-Yang interconnected meridians. This theory aligns with the core principles of "meridian connectivity" and "Yin-Yang balance" in traditional Chinese medicine, offering critical guidance for clinical techniques and acupoint selection. In modern pain treatment, techniques such as "Cross-meridian Contralateral Needling" (left disease treated on the right) and "Distal Collateral Draining Needling" (upper disease treated on the lower) are widely applied. "Zhutong Yiteng" and "Cross-meridian Contralateral Needling" are interrelated acupuncture techniques in pain management. The former involves selecting acupoints at intersecting meridians related to the pain area, while the latter employs a contralateral needling approach such as treating left-side ailments by stimulating right-side acupoints and vice versa. Both are based on the meridian theory and the qi and blood circulation principle of traditional Chinese medicine. Meridians are the channels for the circulation of qi and blood in the human body. Acupuncture can regulate the meridians, qi and blood to achieve the purpose of pain relief and jointly achieve the analgesic effect. In clinical practice, according to the specific conditions and pain characteristics of patients, the two methods of "Zhutong Yiteng" and "Cross-meridian Contralateral Needling" can be flexibly used for treatment. Through synergistic action, it can better regulate meridians, qi and blood and relieve pain. Guided by this theory, our study systematically summarizes six characteristics of acupuncture techniques and five acupoint selection principles. Specific applications in headache and shoulder-arm pain were detailed: for migraine, contralateral stimulation of Gallbladder Meridian confluent points; for shoulder pain, distal points like Yanglingquan combined with collateral draining techniques demonstrated significant efficacy. This research provides theoretical and practical foundations for optimizing acupuncture protocols in pain management.

Keywords— Acupuncture, Pain Management, Zhutong Yiteng, Cross-Meridian Contralateral Needling

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 Theoretical Exploration

Time-Based Disease Prevention and Health Preservation: The Key to Anti-Aging

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Abstract

In traditional Chinese medicine (TCM), the meridian system reveals a profound interplay of time, yin-yang, and the five elements, offering insights into disease prevention and anti-aging. The lung meridian (metal) initiates the daily meridian cycle, while the liver meridian (wood) concludes it, contrasting with the seasonal cycle where wood (spring) begins and metal (autumn) follows. This study explores this apparent contradiction, revealing a deeper natural order. The lung and liver serve as structural poles, encompassing the twelve-meridian system, reflecting the east-west pairing in Chinese cosmology that signifies totality. The twenty-four-hour organ clock aligns with yin-yang transformations, with midnight (Zi-hour, 11 p.m. – 1 a.m.) marking yang's conception within yin, and noon (Wu-hour, 11 a.m. – 1 p.m.) marking yang's peak. The liver (1 a.m. – 3 a.m.) stores and detoxifies blood during deep sleep, preparing for the lung's (3 a.m.–5 a.m.) initiation of breath, embodying the principle “blood mothers qi.” The Chinese lunisolar calendar, synchronized with the 24 solar terms, places the new year near “Beginning of Spring” (Lichun), reflecting the emergence of yang from winter's yin. This mirrors daily cycles, where yang arises at dawn. Rest during pivotal yin-yang transitions (midnight and noon) aligns the body with natural rhythms, promoting longevity. The Yijing and classical texts like *Huangdi Neijing* and *Huainanzi* emphasize this harmony, linking the seed of life at the Winter Solstice to its visible sprouting in spring. By understanding these cycles, TCM provides a framework for health preservation, emphasizing rest, diet, and emotional balance to align with cosmic rhythms, fostering vitality and anti-aging.

Keywords— Meridian system, yin-yang, five elements, anti-aging, TCM

Time is life itself, and in the ancient Chinese worldview, the five elements begin with wood. This aligns with the natural cycle of the seasons, where wood represents spring, the season of emergence and new growth. Naturally, one might expect wood to initiate every major cycle. Yet, in traditional Chinese medicine, a mystery arises within the body's meridian system: the lung meridian, associated with the metal element, comes first, while the liver meridian, associated with wood, comes last.

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Why does the meridian circuit begin with metal and end with wood, when in the seasonal cycle, wood initiates the new year with spring, and metal marks the harvest of autumn? Why are the lungs, rather than the liver, given the role of opening the body's meridian flow?

This apparent contradiction reveals deeper structures within Chinese medicine and cosmology. To resolve it, we must examine the interplay of yin and yang and the five elements across the daily meridian clock, the seasonal calendar, and the natural rhythms of life. This article explores why the lung and liver form the two poles encompassing the twelve-meridian system and how their relationship reveals the hidden order of the natural world.

To begin, we review the twelve meridians and their correspondences. In Chinese medicine and cosmology, the theory of correspondences forms the foundation for understanding the relationships between the body and the cosmos. The following table serves as a reference for those familiar with traditional Chinese medicine and a guide for new readers:

Table 1: Meridian and Organ Time

#	Meridian Organ	Yin Yang	Five Elements	Time
1	Lungs	Yin	Metal	3 a.m. – 5 a.m.
2	Large Intestine	Yang	Metal	5 a.m. – 7 a.m.
3	Stomach	Yang	Earth	7 a.m. – 9 a.m.
4	Spleen	Yin	Earth	9 a.m. – 11 a.m.
5	Heart	Yin	Fire	11 a.m. – 1 p.m.
6	Small Intestine	Yang	Fire	1 p.m. – 3 p.m.
7	Urinary Bladder	Yang	Water	3 p.m. – 5 p.m.
8	Kidneys	Yin	Water	5 p.m. – 7 p.m.
9	Pericardium	Yin	Fire	7 p.m. – 9 p.m.
10	Triple Burner	Yang	Fire	9 p.m. – 11 p.m.
11	Gallbladder	Yang	Wood	11 p.m. – 1 a.m.
12	Liver	Yin	Wood	1 a.m. – 3 a.m.

In the human body, the lung marks the beginning of the twelve-meridian circuit, while the liver marks its conclusion. The lung meridian belongs to the metal element, characterized by inward and downward movement, suggesting harvest, contraction, and consolidation. The liver meridian, associated with wood, exhibits upward and outward movement, suggesting emergence, growth, and extension.

Although metal corresponds to autumn and wood to spring, it may seem puzzling that the lung meridian opens the daily meridian circuit while the liver meridian concludes it. This arrangement can be understood through two principles: the east-west pairing in Chinese thought, expressing totality, and the twenty-four-hour organ clock. In the daily cycle, wood governs from 11 p.m. to 3 a.m., followed by metal from 3 a.m. to 7 a.m. Each four-hour period is subdivided into two phases, reflecting yin and yang within each element. During wood's governance, 11 p.m. to 1 a.m. corresponds to yang-wood (gallbladder meridian), and 1 a.m. to 3 a.m. to yin-wood (liver meridian). Under metal's governance, 3 a.m. to 5 a.m. represents yin-metal (lung meridian), and 5 a.m. to 7 a.m. yang-metal (large intestine meridian).

Among the twelve meridians, the lung and liver serve as structural poles, encompassing the entire circuit. A central principle of the Yijing is that every issue has two sides, defined by two poles. To understand the whole, one must first grasp the endpoints. The ten meridians between the lung and liver form internal-external pairs, reflecting yin and yang.

Focusing on the middle without recognizing the endpoints leads to incomplete understanding. Learning begins by identifying the poles, then observing how the elements between them arrange as reflections of yin and yang.

The concepts of yin and yang are fundamental to the twenty-four-hour meridian cycle. Each day is divided into two halves by noon and midnight. Noon marks the sun's peak, while midnight represents its opposite. Daylight corresponds to yang's light and warmth, nighttime to yin's darkness and cold. As the day progresses, yin and yang transform into each other in a continuous cycle.

Midnight, when yin is fullest, marks the conception of yang. This explains why the yang-wood gallbladder meridian governs 11 p.m. to 1 a.m., followed by the yin-wood liver meridian from 1 a.m. to 3 a.m. Around 2 a.m., birds begin chirping. From 3 a.m. to 5 a.m., yin-metal (lung meridian) governs, known as the "fifth night-watch", when the rooster's crow signals dawn. From 5 a.m. to 7 a.m., yang-metal (large intestine meridian) governs, as the sun rises, birthing the active yang of day.

Table 2: The Twelve Earthly Branches

11 p.m. to 1 a.m.	1 a.m. to 3 a.m.	3 a.m. to 5 a.m.	5 a.m. to 7 a.m.
Yang-Wood Gallbladder	Yin-Wood Liver	Yin-Metal Lungs	Yang-Metal Large Intestine

Table 3: The Twelve Earthly Branches

1	2	3	4	5	6	7	8	9	10	11	12
zi	chou	yin	mao	chen	si	wu	wei	shen	you	xu	hai

Table 4: The Twelve Lunar Months

1	2	3	4	5	6	7	8	9	10	11	12
yin month	mao month	chen month	si month	wu month	wei month	shen month	you month	xu month	hai month	zi month	chou month

This pattern repeats in the annual cycle. The traditional Chinese calendar divides the year into twelve lunar months, each corresponding to an Earthly Branch. The eleventh month, containing the Winter Solstice, is assigned to Zi, meaning "seed" and the first Earthly Branch. Despite its association with midnight (11 p.m. to 1 a.m.), Zi is the eleventh month.

In the Zhou era, the year began with the Zi-month, centered on the Winter Solstice. In 104 BCE, Emperor Wudi's Taichu reform adopted the Xia-style calendar, incorporating the 24 solar terms. The first solar term, "Beginning of Spring", became the new year's start, shifting the first month to the Yin-month.

In contrast, the Western calendar's January 1st, established by Julius Caesar in 45 BCE, aligns with administrative cycles, not astronomical phenomena. Named after Janus, it lacks direct connection to natural cycles. The Gregorian calendar uses a fixed 365-day year with leap

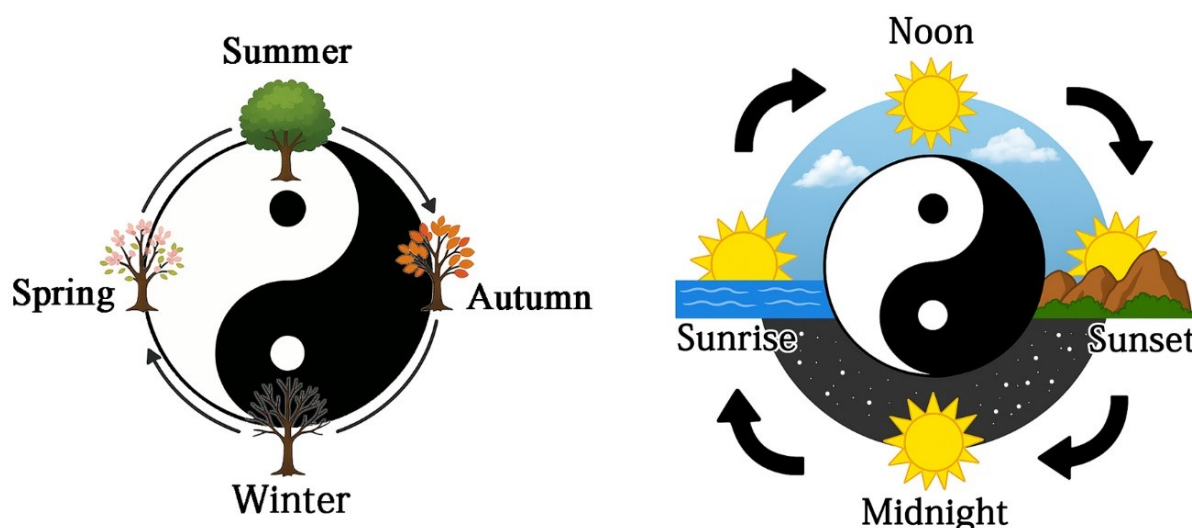


Figure 1: Yin-Yang Cycles: Seasons and Day/Night

years to align with the solar cycle of 365.25 days, but its months do not correspond to lunar phases or solar positions.

The Winter Solstice (December 21st or 22nd) marks the return of sunlight, but January 1st, falling 11 days later, holds no astronomical significance. Unlike the Chinese calendar, which aligns with the 24 solar terms and lunar phases, the Western calendar reflects political decisions.

The Chinese calendar, lunisolar in nature, coordinates lunar phases with the sun's ecliptic position. The 24 solar terms divide the year into 15-degree segments of celestial longitude, marking seasonal transitions. Chinese New Year, near "Beginning of Spring", occurs on the second new moon after the Winter Solstice, between mid-January and mid-February. An intercalary month aligns lunar and solar cycles every two to three years.

Table 5: The Numeric Sequence and Name of The Earthly Branch

1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9th Month	10th Month	11th Month	12th Month
Early Spring	Middle Spring	Late Spring	Early Summer	Middle Summer	Late Summer	Early Autumn	Middle Autumn	Late Autumn	Early Winter	Middle Winter	Late Winter
	Spring			Summer			Autumn			Winter	
	Wood			Fire			Metal			Water	

In *Huangdi Neijing • Suwen*, Chapter 10, it states: "The Liver is the general. It stores the Blood; when we lie down, the Blood returns to the Liver."

During deep sleep (11 p.m. to 3 a.m.), the liver detoxifies blood, processes waste, recycles red blood cells, and stores glycogen. Blood flow redirects from muscles to inner organs, supporting regeneration and immunity. This "storage" prepares the body for daytime activity.

The transformation times of yin and yang at midnight and noon are pivotal for balance and longevity. Noon marks peak yang; midnight, peak yin, when yang is conceived. Laozi, Sun Simiao, and Ma Danyang emphasized resting at noon (11 a.m. to 1 p.m.) and midnight (11 p.m. to 1 a.m.), known as the Midnight-Noon Zi-Wu nap. A short rest from 5 a.m. to 7 a.m., as yang strengthens, is also recommended.

The impulse to move arises after rest, as yin gives rise to yang. Muscle growth occurs during sleep through protein synthesis, not during exercise. This mirrors the principle that yang (visible growth) arises from yin (rest).

In *Huainanzi: Treatise on Astronomy*, it states: "When the handle of the Big Dipper points to Zi, it is Winter Solstice."

During the Zi-month, the yang seed is dormant. In the Chou-month, the seed anchors, and in the Yin-month, it sprouts, mirroring the daily cycle where yang is conceived at midnight (Zi-hour, 11 p.m. to 1 a.m.) and emerges at dawn (Yin-hour, 3 a.m. to 5 a.m.).

Life begins at conception, but we celebrate birth. Similarly, the new year is conceived at the Winter Solstice but marked at “Beginning of Spring.” The lungs, initiating the first breath, mark the start of life, while the liver, storing blood, concludes the meridian cycle. This reflects the aphorism “Blood mothers Qi” where the liver (1 a.m. to 3 a.m.) prepares blood for the lungs (3 a.m. to 5 a.m.) to initiate breath.

The sun rises in the east (wood) and sets in the west (metal), mirroring the meridian sequence. The rhetorical device *duiju*, pairing “east” and “west”, conveys totality. The lung and liver meridians, as the first and last, encompass the entire system.

In Master Du’s teachings, the week maps to the eight trigrams: Monday (Qian, wood) begins the cycle, and Sunday (Gen and Kun, yin) marks rest. This mirrors the annual and daily cycles, where yin nurtures yang.

The lungs initiate life through breath, as plants release oxygen at dawn. This meridian sequence reflects natural rhythms, where yin and yang, wood and metal, frame the cycles of life.

Appendix: Afterword

Actions are seen, but their origin lies in unseen intention. In Daoism, merit is earned through deeds, not intentions, mirroring the celebration of birth over conception. Virtue, like spring, fosters growth and renewal through action.

 Theoretical Exploration

Exploration of the TCM Pathogenesis of Viral Pneumonia

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Abstract

This paper explores the pathogenesis of viral pneumonia, integrating traditional Chinese medicine (TCM) theory with modern medical research to analyze its etiology, pathological mechanisms, and treatment principles. Through case studies, it elucidates the syndrome characteristics and TCM differential diagnosis and treatment methods, providing a theoretical basis and practical reference for integrated Chinese-Western medicine approaches to improve clinical outcomes, enhance patient prognosis, and advance medical understanding of viral pneumonia.

Keywords— Viral Pneumonia, Pathogenesis

1 Introduction

Viral pneumonia is a common and highly harmful respiratory disease, gaining global attention due to its high morbidity and mortality in recent public health events. Understanding its pathogenesis is critical for effective prevention and treatment strategies. TCM, with its unique theoretical system and rich clinical experience, combined with modern medicine, offers new avenues for managing viral pneumonia.

2 TCM Understanding of Viral Pneumonia Pathogenesis

2.1 Etiology

2.1.1 Zheng Qi Deficiency

TCM posits that “where evil gathers, qi must be deficient.” Zheng qi (vital qi), encompassing qi, blood, yin, and yang, weakens the body’s defense against external pathogens when deficient. Relative deficiency, caused by factors like prolonged fatigue or chronic illness, loosens the body’s protective barrier (muscle interstices), allowing pathogens like wind to invade.

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2.1.2 Evil Toxins

Evil toxins are key external pathogens in viral pneumonia. TCM links disease to environmental factors (wind, rain, cold, heat) and emotional imbalances (joy, anger). Emotional distress impairs organ function, wind invades the upper body, and dampness affects the lower body. Toxins, characterized by strong pathogenicity and rapid transmission, include external pathogens like viruses and internal pathological products like phlegm or blood stasis.

2.2 Pathogenesis

Viral pneumonia results from the interaction of zheng qi deficiency and evil toxins. As the *Neijing* states, “Wind, rain, cold, or heat cannot harm unless there is deficiency.” Adequate zheng qi resists pathogens, but deficiency allows toxins to invade, driving disease progression through their mutual interaction.

3 Zheng Qi Deficiency Manifestations

3.1 Qi Deficiency

Symptoms include low voice, shortness of breath, and fatigue, reflecting weakened organ function and reduced adaptability due to qi’s role in driving bodily functions and defense.

3.2 Blood Deficiency

Manifestations include pale complexion, dull nails, and palpitations, as blood fails to nourish organs, particularly the heart, which relies on blood for function.

3.3 Yin Deficiency

Symptoms like dry mouth, red tongue with little coating, and thin pulse indicate insufficient yin fluids, reducing moisturizing and calming functions.

3.4 Yang Deficiency

Fear of cold reflects weakened warming function due to yang qi deficiency, lowering tolerance to cold.

4 Evil Toxin Manifestations

Evil toxins cause severe symptoms like wheezing, high fever, chest tightness, hemoptysis, flushed face, abdominal distension, excessive phlegm, or coma. These reflect toxins’ disruption of organ function, such as lung qi obstruction causing wheezing, intense zheng qi-toxin conflict causing fever, or toxins invading the pericardium causing coma.

5 Factors Influencing Pathogenesis

5.1 Constitution

TCM identifies nine constitutional types, affecting disease susceptibility and progression. Yang-deficient individuals are prone to cold pathogens, while yin-deficient ones are susceptible to heat, influencing disease manifestations.

5.2 Geographical Environment

Humid environments promote dampness-related symptoms like sticky phlegm and chest tightness, while dry regions lead to lung dryness with dry cough and nasal dryness.

5.3 Season

Seasonal changes affect physiology. Winter's cold weakens yang qi, leading to cold symptoms like clear phlegm, while summer's heat causes heat symptoms like yellow, thick phlegm.

6 Modern Interpretation of Pathogenesis

6.1 Zheng Qi

Zheng qi corresponds to the immune system, including humoral immunity (antibody production), cellular immunity (T-cell activity), and non-specific (innate) and specific (adaptive) immunity.

6.2 Evil Toxins

Evil toxins align with viral load, virulence, and inflammatory cytokines. High viral loads breach immune defenses, while excessive cytokine release causes inflammation, leading to tissue damage or cytokine storms in severe cases.

7 Treatment Principles

7.1 Strengthening Zheng Qi

Enhancing zheng qi involves supplementing qi, blood, yin, and yang using herbs like Astragalus (qi), Angelica (blood), Ophiopogon (yin), and Aconite (yang) to boost immunity.

7.2 Detoxification

Methods like clearing heat, promoting blood circulation, resolving phlegm, and dispelling dampness remove toxins. Herbs like Honeysuckle (heat), Salvia (blood stasis), Pinellia (phlegm), and Poria (dampness) restore organ balance.

8 Commonly Used Herbs

8.1 Zheng Qi Herbs

Qi-tonifying herbs (Astragalus, Ginseng), blood-nourishing herbs (Angelica, Rehmannia), yin-nourishing herbs (Ophiopogon), and yang-supporting herbs (Aconite) enhance immunity and organ function.

8.2 Detoxification Herbs

Heat-clearing herbs (Honeysuckle, Coptis), blood-activating herbs (Salvia, Ligusticum), phlegm-resolving herbs (Pinellia, Fritillaria), and dampness-dispelling herbs (Poria, Coix) address toxin-related symptoms.

9 Case Studies

9.1 Case 1

Patient Hua, male, 32, admitted February 20, 2020, with 10 days of intermittent fever and 7 days of fatigue. Fever (37.3°C) began February 10 after travel, resolving briefly after medication but followed by fatigue and loose stools. Recent mild cough and chest tightness; CT showed bilateral ground-glass opacities.

Syndrome Analysis: Fatigue and travel caused zheng qi deficiency, allowing evil invasion, leading to qi deficiency and dampness obstruction.

Treatment: Strengthen zheng qi and dispel dampness using Astragalus (30g), Pseudostellaria (30g), Ephedra (10g), Almond (10g), Magnolia (20g), Agastache (20g), Hirudo (10g), and Plantago (10g).

9.2 Case 2

Patient Shu, female, 51, admitted January 30, 2020, with 6 days of intermittent fever and sore throat. Fever (37.4°C) began January 24, with travel history to Wuhan. Symptoms recurred (37.6°C) without cough or diarrhea.

Syndrome Analysis: Exposure to epidemic toxins led to damp-heat-toxin syndrome, causing fever and sore throat.

Treatment: Clear heat and detoxify using Artemisia (15g), Scutellaria (10g), Talc (30g), Polygonum (15g), Magnolia (10g), and Hirudo (10g).

10 Conclusion

Viral pneumonia's pathogenesis is complex, with TCM emphasizing zheng qi deficiency and evil toxin interactions, influenced by constitution, environment, and season. Modern medicine

links zheng qi to immunity and toxins to viral load and cytokines. Integrated treatment using zheng qi-strengthening and detoxification herbs improves outcomes, highlighting TCM' s clinical value.

Theoretical Exploration

Application of the Human Bow - String Anatomical Theory in the Prevention and Treatment of Chronic Orthopedic Diseases

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Abstract

In contemporary society, chronic orthopedic and musculoskeletal disorders exert a profound influence on people's quality of life. With the progressive aging of the population and alterations in lifestyle patterns, the incidence of such disorders has been on a continuous upward trend, and the age of onset has been gradually decreasing. Conditions like cervical spondylosis, lumbar disc herniation, and knee osteoarthritis are prime examples. Currently, both Western medical approaches including pharmacotherapy, physical therapy, and surgical interventions, as well as traditional Chinese medicine (TCM) therapies such as acupuncture, tuina (massage), and Chinese herbal medicine, have demonstrated certain efficacy. However, they fall short in achieving complete cure and preventing recurrence. The human bow-string anatomical theory in orthopedics integrates the TCM concept of the "holistic view of tendons and bones" with modern anatomical and biomechanical knowledge. It metaphorically likens human soft tissues, such as muscles and ligaments, to "strings" and bones to "bows". This theory posits that the development of chronic orthopedic and musculoskeletal disorders is associated with the "holistic view of tendons and bones". Tendon injuries can disrupt the nutritional supply and metabolism of bones. Moreover, it is related to the imbalance of the human bow-string mechanical-anatomical system, and the formation of "nodules" represents a crucial stage in the disease progression. Based on this theory, the principle of "treating bones by first relaxing tendons, and adjusting the strings to rectify the bow" for the prevention and treatment of orthopedic disorders has been established. In the early stage of the disease, which can be categorized as non-nodular meridian obstruction, a comprehensive treatment approach incorporating acupuncture, moxibustion, tuina, qigong-based exercises, and the internal and external application of Chinese herbal medicine is em-

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ployed. In the advanced stage, characterized as nodular meridian obstruction, acupotomy is initially performed for soft-tissue release, followed by a combination of other therapeutic modalities. Currently, in the clinical application of the prevention and treatment protocols for orthopedic disorders guided by the human bow-string anatomical theory, there is a pressing need to enhance the standardization and regularization of treatment techniques, and to deepen the research on the underlying mechanisms of action. In the future, it is imperative to strengthen basic research and clinical practice, refine this theory and the associated prevention and treatment techniques, and thus offer more scientific and effective solutions for the prevention and treatment of chronic orthopedic and musculoskeletal disorders, bringing greater benefits to patients.

Keywords— Chronic orthopedic and musculoskeletal disorders; Holistic view of tendons and bones; Human bow-string mechanical-anatomical system; Acupotomy therapy; Comprehensive traditional Chinese medicine therapy

 Theoretical Exploration

Exploring Treatment Approaches For Periorcular Anti-aging Through Cosmetic Facial Acupuncture Based On Fascia Theory

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Abstract

Fascia theory serves as one of the material foundations for the meridian theory in Traditional Chinese Medicine. The generation of meridian effects is inseparable from fascial connective tissue. The facial fascia in Traditional Chinese Medicine is composed of the superficial musculoaponeurotic system (SMAS) and the retaining ligament system. Periorbital aging is attributed to the atrophy and stiffness of mimetic muscles within the superficial musculoaponeurotic system, the disruption of collagen fiber bundles, and the degradation of elastin, as well as the aging of retaining ligamentous structures. Periorbital aging can be addressed with cosmetic facial acupuncture by relieving atrophy and stiffness of mimetic muscles, stimulating collagen remodeling, and restoring the structural integrity and elasticity of the retaining ligaments, thereby repairing the facial fascia.

Keywords— fascia; superficial musculoaponeurotic system; retaining ligament; cosmetic facial acupuncture

1 Introduction

Aging is an inevitable physiological process driven by intrinsic and extrinsic factors, with facial aging showing a trend toward earlier onset due to societal changes. Periorbital aging is often the first sign of facial aging, with mild to moderate cases caused by changes in the fascial system, the material basis for meridian effects [1]. This article explores treatment approaches for periorbital anti-aging using cosmetic facial acupuncture based on fascia theory, highlighting its green and effective role in anti-aging aesthetics.

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2 TCM Understanding of Facial Fascia

TCM's understanding of fascia stems from descriptions of “membrane source” and “diaphragm” in the *Huangdi Neijing*. Later scholars proposed that the external fascial system, represented by meridian sinews, and the internal fascial system form the TCM fascial system [1]. Meridian sinews are distributed in patterns of “knotting, gathering, intersecting, and uniting,” converging at the head and face. Anatomically, meridian sinews include superficial fascia, muscles, and deep fascia (e.g., tendons, ligaments, muscle sheaths, nerve sheaths) [2].

2.1 Superficial Musculoaponeurotic System (SMAS)

The SMAS lies deep to the subcutaneous fat layer of the head and face, forming a continuous fibrous-muscular layer primarily composed of mimetic muscles and some aponeuroses. The aponeurotic portion consists of dense connective tissue fascia, made of collagen fiber bundles and elastin [3]. Periorbital SMAS muscles include the orbicularis oculi (OOM), corrugator supercilii (CSM), and depressor supercilii (DSM).

2.2 Retaining Ligament System (LT)

Facial retaining ligaments are true (originating from periosteum, attaching to dermis, e.g., orbicularis retaining ligament [ORL], zygomatic ligaments [ZL], zygomatic cutaneous ligaments [ZCL], lateral orbital thickening [LOT]) or false (originating from dermis, attaching under SMAS, weaker but stronger in periorbital areas). They are dense fibrous connective tissue complexes [4].

3 Relationship Between Periorbital Aging and Fascia

Periorbital aging manifests primarily as wrinkles. Repeated movement of the orbicularis oculi (OOM) causes sustained high muscle tension, loss of fiber elasticity, and structural changes, leading to atrophy and stiffness, with early sagging in the lower lateral OOM [3]. OOM fibers surround the orbit, producing wrinkles: static wrinkles (e.g., crow's feet) from aging fixation/attachment points; horizontal wrinkles at the eye corner; 30°–60° wrinkles at the lower lateral eye; and vertical wrinkles from horizontal upper eyelid movement [4].

Reduced collagen and elastin cause loss of connective tissue elasticity, thinning the dermis, and shifting membranous structures and SMAS downward [4]. Retaining ligaments limit local tissue sagging but not above, forming tear troughs (e.g., ORL restricts orbital septum fat sagging). Aging reduces ligament elasticity, with gravity accelerating fat protrusion, forming eye bags [4].

4 Treatment Approach with Cosmetic Facial Acupuncture

Using cosmetic facial acupuncture (plastic-handled needles, 0.12×15mm), patients lie supine, face cleansed and disinfected. Needles are inserted horizontally along OOM fiber direction, 5–10mm deep, to stimulate periorbital fascia. Points include above the eyebrow, inner 1/4 eyebrow arch, mid-eyebrow, outer 1/4 eyebrow arch, eyebrow tail, 2–3cm lateral to outer canthus, OOM attachment below outer canthus, and OOM attachment below pupil (Figure 1). Needling stimulates CSM, OOM, LOT, ZCL, and ORL, relieving high-tension mimetic muscles and ligaments,

alleviating wrinkles from atrophy/stiffness. Acupuncture promotes collagen fiber reorganization, increases collagen concentration, inhibits degradation, corrects abnormal fiber alignment, enhances cell activity, and restores ligament structure and elasticity [5, 6].

5 Typical Case

Female, 52, presented with facial skin laxity and periorbital aging for over a year. History: Facial skin laxity, periorbital wrinkles, bilateral upper eyelid, and eye corner drooping noted one year ago. Current symptoms: Clear consciousness, fair energy, fatigued appearance, dull complexion, marked facial laxity (especially periorbital), bilateral upper eyelid and eye corner drooping, visible eye bags. Poor appetite, occasional postprandial bloating, poor sleep, loose stools, normal urination, pale enlarged tongue with teeth marks, thin white coating, slow pulse. Western diagnosis: Skin laxity, upper eyelid ptosis; TCM diagnosis: Upper eyelid ptosis, spleen qi deficiency. Treatment: Strengthen spleen, boost qi, lift and secure. Method: Cosmetic facial acupuncture per above, needles retained 20 minutes, once weekly, three sessions per course. After one course, complexion improved, eyes opened naturally, upper eyelid coverage of cornea reduced in level gaze, and eye corner drooping lessened (Figure 2). Advised sun protection, adequate sleep, emotional balance, and moderate exercise to invigorate spleen yang.

6 Conclusion

Integrating TCM meridian and anatomical theories, periorbital aging is closely tied to facial fascia. Compared to traditional acupuncture, which regulates meridians and balances qi, blood, yin, and yang, cosmetic facial acupuncture precisely targets SMAS and retaining ligaments, enhancing local blood circulation, activating mimetic muscles, stimulating collagen production, and restoring ligament structure and elasticity for periorbital rejuvenation.

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 Theoretical Exploration

Thoughts on clinical diagnosis and treatment of persistent skin diseases by acupuncture and moxibustion in Chinese medicine and typical cases

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Abstract

Intractable skin diseases are chronic skin diseases with complex etiology and pathogenesis, which have a long course, recurring episodes over a long period of time and are difficult to be cured. For example, chronic eczema, psoriasis, vitiligo, chronic urticaria, chronic ringworm, onychomycosis, chronic pruritus, etc. Clinical diagnosis is based on the combination of diagnosis and dialectic, a comprehensive and careful understanding of the condition, distinguish between primary and secondary, pay attention to the relationship between the local and the whole, a comprehensive judgment of the condition for the development of treatment plans to provide a basis for treatment, treatment within the combination of treatment and external treatment, the combination of needles and drugs for the different physique, the condition of the factors such as the severity of the urgency of the development of personalized treatment programs. This paper discusses the diagnosis and treatment ideas of intractable dermatosis through the case analysis of typical cases of clinical treatment of intractable dampness soup and treatment of intractable ringworm with Tori disinfecting and blood stasis evading soup.

Keywords— stubborn skin disease, stubborn wet soup, diagnosis and treatment ideas

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 Theoretical Exploration

A Brief Analysis of Diagnostic and Therapeutic Approaches for Cardiac Neurosis Based on the Theory of "CHENG Acupuncture";

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Abstract

Background: Cardiac neurosis (CN), in Traditional Chinese Medicine (TCM), falls under "emotional disorders," categorized as "palpitations" (Xin Ji), "fright palpitations" (Zheng Chong), or "Yu syndrome" (depressive disorder) when accompanied by anxiety or depression. In Western medicine, CN results from sympathetic nervous system overactivity causing autonomic dysregulation.

Objective: To explore the application of Academician Cheng Xinong's "CHENG Acupuncture" theory in CN diagnosis and treatment.

Methods: Analyzes Cheng Xinong's syndrome differentiation, acupoint selection, meridian-based diagnosis, and "Three-Talent Acupuncture Technique," focusing on superficial needling of Neiguan (PC6) with qi-guiding techniques for CN.

Results: The "Three-Talent Acupuncture Technique" with superficial Neiguan needling and qi-guiding significantly improves CN cardiovascular symptoms, with high patient acceptance.

Conclusion: CHENG Acupuncture offers an effective, safe treatment for CN, reducing relapse rates and improving quality of life.

Keywords— Cardiac Neurosis; CHENG Acupuncture; Diagnostic and Therapeutic Strategies

1 Introduction

With increasing life pressures, cardiac neurosis (CN) incidence is rising, presenting with symptoms like palpitations, chest tightness, pain, and shortness of breath, often accompanied by anxiety, depression, or other psychological disorders [1, 2]. CN is not a specific disease, typically

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lacking organic pathology but manifesting somatic symptoms, leading to frequent misdiagnosis or missed diagnosis [2]. In TCM, CN aligns with "palpitations," "fright palpitations," or "Yu syndrome," involving the heart and related organs (liver, spleen, lung, kidney), linked to emotional distress, qi-blood stagnation, and impaired "heart storing spirit" function [3]. Academician Cheng Xinong's "CHENG Acupuncture" integrates principles, methods, prescriptions, acupoints, and techniques, harmonizing heaven, humanity, and earth, with the "Three-Talent Acupuncture Technique" effectively treating CN through superficial needling. This paper explores its application in CN diagnosis and treatment.

2 Meridian-Based Diagnosis and Acupoint Selection

Meridian-based diagnosis, rooted in the *Huangdi Neijing*, emphasizes meridian and organ interactions [4]. Cheng Xinong advocates combining disease and syndrome differentiation for acupoint selection [5]. The twelve meridians reflect organ and pathway characteristics, guided by "where meridians pass, diseases are treated" [4]. For CN, involving heart dysfunction and qi stagnation, acupoints like Neiguan and Danzhong invigorate heart yang and regulate qi, while Daling, Shenmen, Baihui, and Sishencong calm the mind [6]. Analysis of *Zhen Jiu Da Cheng* shows frequent use of Xinshu and Shenmen (9 times each) for emotional disorders, with upper limb (43.5%) and bladder meridian (13.0%) acupoints most common [7].

3 Improved Three-Talent Acupuncture Technique

Based on *Zhen Jiu Da Cheng*'s three-talent theory, Cheng Xinong developed the "Three-Talent Acupuncture Technique," dividing needling into superficial (heaven, 1-2mm), middle (human, 5-6mm), and deep (earth, 3-4mm) layers, integrating point selection, finger pressing, skin penetration, and needling with minimal pain [8]. Heaven-layer needling regulates qi-blood and ying-wei; human-layer promotes blood flow; earth-layer adjusts organ function [6]. For CN's autonomic dysregulation, light and superficial needling prevents anxiety exacerbation [9].

4 Application of CHENG Acupuncture in CN

4.1 Neiguan Acupoint Selection

Neiguan (PC6), on the pericardium meridian, connects to the triple energizer and yin-wei mai, treating heart and chest disorders [9]. CN's autonomic dysregulation aligns with pericardium dysfunction, making Neiguan ideal [6].

4.2 Three-Talent Technique Features

The "Three-Talent Technique" uses light, superficial needling for CN's sensitive patients, avoiding overstimulation. Superficial needling of Neiguan (heaven layer, 1-2mm) with qi-guiding induces upward sensation, improving cardiovascular symptoms with high patient acceptance [8, 9].

5 Outlook

CN relates to psychosocial, environmental, and somatic factors, requiring early detection, diagnosis, and treatment with drugs, psychotherapy, and physical therapy [1]. Cheng's "Three-Talent Technique" innovates TCM theory, using superficial Neiguan needling to improve CN symptoms, ECG abnormalities, relapse rates, and quality of life.

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 Theoretical Exploration

Clinical Experience of Three Talent Acupuncture Treatment for Acute Stroke

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Abstract

“Sancai Acupuncture,” founded by TCM master Cheng Xinnong, centers on the “heaven, human, earth” layered needling technique. This article explores its targeted treatment for the acute stroke phase, characterized by “qi-blood disorder, wind-fire-phlegm-stasis blocking orifices,” summarizing its theoretical basis and clinical value. Cheng’s Sancai Acupuncture features “layered differentiation” and “dynamic intervention.” Layered Qi Regulation: Superficial (heaven) light needling awakens the mind, middle (human) regulates qi and balances organs, deep (earth) penetration promotes functional recovery, aligning with acute stroke’s “deficient righteous qi, excessive evil qi.” Dynamic Acupoint Matching: Adjusts needling intensity and acupoints by disease progression—early stage uses light Fengchi and Baihui needling to relieve cerebral stasis-heat, mid-stage strengthens limb and speech areas, and late-stage consolidates with deep earth needling. For consciousness disorders, it emphasizes awakening the mind and raising yang via superficial needling of Fengchi, Baihui, Renzhong, and Yongquan. For limb paralysis, “layered oblique needling” with tremor technique induces muscle twitching and neuromuscular reflexes to enhance strength. For speech disorders, it balances orifice-opening and blood circulation. Combining traditional meridian theory with neuroscience, Sancai Acupuncture offers a “precise layered, immediate intervention” solution. Future research should use functional imaging and bioelectrical analysis to quantify its effects on brain metabolism and neural networks, advancing standardized acupuncture research.

Keywords— Three Talent Acupuncture; Acute Stroke; Layered Needling; Awaken the Mind; Partition Therapy

1 Introduction

Cheng’s Sancai Acupuncture, developed by TCM master Cheng Xinnong, innovates the ancient “three talents” concept, integrating principles, methods, prescriptions, acupoints, and

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techniques into a unified system, emphasizing precise depth, angle, and technique [1]. Professor Cheng Kai, his academic heir, advanced the theory with the concept of acupoints as three-dimensional structures where needle tip placement determines efficacy. Stroke, a high-incidence, disabling, and deadly cerebrovascular disease, features complex pathology: “qi-blood disorder, wind-fire-phlegm-stasis blocking orifices” [2–4]. Acupuncture in the acute phase reduces disability risk and improves 6-month outcomes [5]. Sancai Acupuncture’s layered differentiation and dynamic intervention align with acute stroke’s complex pathology, offering an optimized treatment approach.

2 Physiological Theoretical Basis

Acupoints are divided into three layers: heaven (superficial, wei qi, skin-fascia) for awakening the mind and expelling evil qi; human (middle, ying qi, muscle-vessel) for balancing qi-blood and organs; earth (deep, yuan qi, bone-organ) for unblocking meridians and restoring function [1]. Sancai Acupuncture aligns needle depth with disease location and severity, addressing acute stroke’s “deficient righteous qi, excessive evil qi.”

3 Layered Qi Regulation

3.1 Heaven Layer Light Needling

Superficial needling (subcutaneous or shallow fascia) with gentle twirling or pecking stimulates wei yang qi, clears heat, and opens orifices. Acupoints like Fengchi (disperse wind-yang), Baihui (raise clear yang), Renzhong (open orifices), and Yongquan (guide fire downward) target consciousness disorders and cerebral stasis-heat [3].

3.2 Human Layer Regulation

Middle-layer needling (muscle) with even supplementation-drainage or small-amplitude manipulation regulates qi-blood and stabilizes the internal environment. Acupoints include Neiguan (regulate heart qi, calm mind), Zusanli (strengthen spleen-stomach, boost qi-blood), Sanyinjiao (regulate liver-spleen-kidney, promote circulation), and Hegu (regulate qi, activate blood) [1].

3.3 Earth Layer Penetration

Deep needling (tendon, periosteum) or through-acupoint techniques with stronger manipulation (e.g., layered oblique needling + tremor) stimulates jing qi, rebuilds neuromuscular reflexes. For limb paralysis: upper limb (Jianyu to Binao, Quchi to Shaohai, Hegu to Houxi); lower limb (Huantiao, Yanglingquan to Yinlingquan, Xuanzhong to Sanyinjiao); speech disorders: Lianquan, Tongli deep needling [4].

4 Dynamic Intervention by Stage

4.1 Early Stage (72 Hours to 1 Week)

Focus on heaven-layer light needling (Fengchi, Baihui, Renzhong, Yongquan) with human-layer support (Neiguan, Zusanli) to control progression and awaken consciousness, using light stimulation [3].

4.2 Mid-Stage (1 to 2-4 Weeks)

Strengthen human (Sanyinjiao, Neiguan) and earth-layer (Jianyu, Quchi, Huantiao, etc.) deep/through needling with tremor technique to restore motor and speech functions. Speech therapy adds Lianquan, Tongli deep needling and Jinjin-Yuye pricking [4].

4.3 Late Stage (After 4 Weeks)

Balance all layers, emphasizing earth-layer deep needling (Jianyu, Yanglingquan) with moxibustion or electroacupuncture to consolidate recovery and address residual deficits [1].

5 Case Study

Patient Zhang, male, 68, admitted August 4, 2024, for “right-sided weakness, speech difficulty for 3 hours.” CT showed left basal ganglia infarction. Symptoms: drowsiness, slow response, mixed aphasia, right central facial paralysis, right upper limb strength grade 0, lower limb grade I; dark red tongue, yellow-greasy coating, wiry-slippery-rapid pulse. Diagnosis: TCM: Stroke (phlegm-stasis blocking meridians); Western: Acute cerebral infarction.

Acupuncture Treatment:

- **Days 1-3:** Heaven-layer light needling: Fengchi (bilateral), Baihui, Renzhong, Yongquan (left); human-layer: Neiguan (bilateral), Zusanli (bilateral). Daily, 30-minute retention. After 2 days, consciousness improved, drowsiness reduced.
- **Days 4-14:** Heaven-layer: Baihui; earth-layer deep needling: Lianquan, Tongli (left), Jinjin-Yuye pricking; human-layer: Neiguan, Sanyinjiao; earth-layer deep/through needling: Jianyu to Binao, Quchi, Hegu to Houxi, Huantiao, Yanglingquan to Yinlingquan, with tremor technique. After 1 week, single-syllable speech, right upper limb strength II, lower limb III.
- **Week 3 Onward:** Continued mid-stage plan, added earth-layer Xuanzhong to Sanyinjiao, electroacupuncture (sparse-dense wave) on Jianyu-Binao, Yanglingquan-Xuanzhong. By week 4, simple conversation (less fluent), right upper limb strength III+, lower limb IV, assisted walking.

Analysis: Early heaven-layer needling improved consciousness; mid-stage earth-layer deep needling with tremor enhanced motor/speech recovery; late-stage electroacupuncture consolidated gains, reflecting layered differentiation and dynamic intervention.

6 Conclusion and Outlook

Cheng’ s Sancai Acupuncture aligns needle depth with acute stroke’ s complex pathology, achieving synergistic treatment via “awakening the mind (heaven), regulating qi-blood (human), unblocking meridians (earth).” It integrates meridian theory with neuroscience, offering a “precise layered, immediate intervention” approach. Future research should quantify its effects on brain metabolism and neural networks using functional imaging and bioelectrical analysis to advance standardized acupuncture research [5].

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 Digital Medicine

Evaluation of the Teaching Effect of Acupuncture Manipulation Based on Machine Learning

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Abstract

Objective: The precise execution of acupuncture manipulation is a core element determining clinical efficacy. However, traditional manual evaluation has limitations such as low efficiency and strong subjectivity, and an intelligent solution is urgently needed. This study proposes an evaluation system for the teaching effect of acupuncture manipulation based on machine learning, aiming to break through the bottleneck of operation accuracy and consistency between students and teachers, and to achieve real-time feedback and precise correction of the manipulation operation.

Methods: Computer vision technology was used to analyze the micro-movements of the hand holding the needle during acupuncture, and a method for describing the three-dimensional position coordinates of the joint points of the index finger of the hand holding the needle was given. In addition, for the characteristic acupuncture manipulation movements of our hospital, an acupuncture manipulation trajectory model based on machine learning was designed. By integrating the information of the hand skeleton of acupuncturists with the changes in joint angles, the movement trajectory of the joint points of the index finger was accurately predicted.

Results: Teaching practice shows that undergraduates and postgraduates who use this model for assisted learning are superior to the control group in three core indicators, namely standardized Dynamic Time Warping (DTW), Mean Absolute Error (MAE), and smoothness (variance of the angular change rate); and there is a significant positive correlation between the clinical seniority of postgraduates and the quality of manipulation operation.

Conclusion: The intelligent evaluation system constructed in this study can effectively improve the precision and efficiency of acupuncture manipulation teaching, provide quantitative feedback and instant error correction support for the standardized inheritance of acupuncture manipulation, and has important academic value and potential for clinical transformation.

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Keywords— intelligent evaluation system

 Digital Medicine

Innovation and Practice of Acupuncture Course Teaching Empowered by Artificial Intelligence

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Abstract

Objective: Taking acupuncture courses as the research object, this study constructs a digitally empowered blended teaching model through the development of a knowledge graph. The teaching plan is designed in stages, integrating the knowledge graph throughout the entire process of pre-class learning, in-class learning, and post-class learning. The innovative teaching practice demonstrates that the knowledge graph helps stimulate students' learning interest and improve their learning outcomes, providing valuable insights for talent cultivation in the acupuncture discipline.

Methods: This study develops a knowledge graph and integrates online and offline teaching resources to implement a blended teaching model, evaluating the efficacy in acupuncture education.

Results: The application of the knowledge graph significantly enhances student engagement and knowledge mastery, fostering clinical thinking and practical skills.

Conclusion: The AI-empowered teaching model for acupuncture courses offers new insights for educational reform and holds potential for broader application.

Keywords— Acupuncture education; Artificial intelligence; Knowledge graph; Blended teaching

1 Introduction

The curriculum is the cornerstone of talent cultivation. Developing a curriculum that equips students with a broad and solid professional foundation, a systematic knowledge framework, and the ability to address complex clinical acupuncture problems while fostering innovation is

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critical for acupuncture education. The acupuncture curriculum is extensive, and within limited class hours, students struggle to connect knowledge points and form a cohesive knowledge system. Traditional teaching models often result in fragmented knowledge, superficial learning, and inadequate development of deep learning skills and comprehensive competencies, failing to meet the demands of acupuncture talent cultivation [1].

With the increasing application of digital technologies in education, implementing multi-modal blended teaching is vital for enhancing teaching effectiveness and talent development [2]. Research indicates that knowledge graphs in education significantly improve knowledge mastery and problem-solving skills [3, 4]. Integrating knowledge graphs with blended teaching facilitates seamless online self-directed learning and offline interaction, enhancing teaching outcomes [5]. Through the study and practice of knowledge graph-empowered blended teaching in acupuncture courses, this work aims to provide new ideas and methods for acupuncture education reform and insights for cultivating internationalized acupuncture professionals.

Modern blended teaching emphasizes student-centered learning, promoting online-offline synergy. It enriches online resources to meet individualized learning needs, allowing students to choose content based on their pace and preferences, while offline classes focus on discussions, practical applications, and collaborative projects to foster innovative thinking and teamwork.

2 Challenges in Acupuncture Courses

Initial blended teaching in acupuncture courses relied on self-developed MOOCs and question banks, supplemented by online Q&A [1]. While this has become standard, challenges remain in fostering good study habits, developing higher-order thinking, providing personalized learning plans, and achieving precise assessments. First, acupuncture courses cover meridians, acupoints, needling techniques, and treatments, with extensive and complex knowledge points often described qualitatively. Memorizing acupoint locations, meridians, specific points, and functions is daunting. The lack of tight integration between classroom teaching, online learning, and clinical practice can diminish student interest if study habits and thinking methods are not effectively guided. Second, acupoint localization requires anatomical knowledge, and needling demands mastery of techniques beyond memorization. Some students face a gap between theory and practice, resulting in hesitation or inability to perform needling. Finally, the goal of acupuncture courses is to enable students to use acupuncture to treat common diseases, but insufficient case analysis and discussion in early teaching hinders clinical thinking and problem-solving skills. To address these issues, enhancing online and offline resources and integrating digital teaching tools are necessary to improve course quality and cultivate autonomous learning, higher-order thinking, and clinical skills.

3 Digitally Empowered Acupuncture Courses

Artificial intelligence (AI) applications in education have become a focal point, with the integration of AI and education driving digital transformation globally. Knowledge graphs and other digital technologies enable digitized teaching models. A knowledge graph is a semantic network that uses graphical models to establish intuitive, visualized relationships between concepts and entities. In education, it structures knowledge, systematizing fragmented information, helping students master course content, enabling teachers to monitor learning progress, and providing personalized guidance. Knowledge graphs ensure a structured knowledge system for blended teaching and support dynamic content updates.

3.1 Construction of Knowledge Graph

Using the Zhihuishu online platform, the acupuncture curriculum was systematically organized, compiling 173 knowledge points, 240 relationships, 317 teaching resources, and 61 problem systems across modules like key concepts, practical training, and extensions. AI and natural language processing algorithms integrated these knowledge points into a comprehensive, multi-dimensional knowledge network. Students can switch between "tree" and "network" views of the knowledge graph or explore via "problem maps" or "competency maps" to navigate course problems and required skills. They can follow the graph's prompts or create personalized learning paths based on interests. The Zhihuishu platform's AI teaching assistant learns from uploaded materials (textbooks, papers, questions, standards, cases) to answer student queries with source references, offering systematic analysis and customized recommendations to meet individualized needs and boost engagement.

3.2 Implementation of Blended Teaching

3.2.1 Pre-Class Learning

In the pre-class phase, students use the knowledge graph's course unit modules to understand knowledge point structures, complete MOOC lessons, and conduct self-assessments. They can consult the AI assistant for quick answers and learning strategies or message instructors online. Teachers use platform data to gain insights into students' understanding and mastery, adjusting pre-class tests and content to optimize teaching methods and classroom quality.

3.2.2 In-Class Learning

In offline classes, teachers emphasize key and difficult points, guiding students through contextual learning activities to master knowledge and enhance application skills. Immersive hospital scenario simulations allow students to learn and practice in realistic settings, preparing them for real-world challenges and fostering professional fulfillment.

3.2.3 Post-Class Learning

Post-class learning involves summarization and internalization. Students access the knowledge graph to review mastery levels and follow recommended learning paths for deeper study and reflection. By analyzing online learning records, comprehensive evaluations inform targeted adjustments to teaching plans and activities to achieve course goals.

4 Teaching Outcomes

Blended teaching with knowledge graphs, tracked via the online platform, showed increased student engagement. Over 90% of students voluntarily submitted post-class tests without mandatory requirements, with 67% scoring above 90, indicating proactive learning. In the 9th-week midterm, 34% scored above 90, and 62% above 80, reflecting a correlation between study habits and knowledge mastery.

5 Conclusion

The application of knowledge graphs in blended acupuncture teaching is in its early stages, but results show positive impacts on building knowledge systems and aiding teachers in managing the teaching process. It addresses student queries promptly, reduces teacher workload, and enhances outcomes. However, challenges remain, such as ensuring timely corrections to AI assistant responses and developing effective evaluation systems based on knowledge graphs.

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 Clinical Research

Acupuncture Combined with Chinese Herbal Medicine Reduce the Risk of Stroke in Patients with Hypertension

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Abstract

Objective: This study aimed to determine whether acupuncture combined with Chinese herbal medicine could reduce the the risk of stroke in patients with hypertension.

Methods: We enrolled patients newly diagnosed hypertension between January 1, 2008 and December 31, 2019 from the Taiwanese National Health Insurance Research Database. Patients who received at least three sessions of TCM outpatient consultation or a single acupuncture treatment between 2008 and 2019 were defined as the TCM cohort and those who did not receive TCM were defined as the non-TCM cohort. The claim data for both the TCM cohort and non-TCM cohort were assessed from the index date to December 31, 2019. A Cox regression model adjusted for age, sex, comorbidities, and medication use was used to compare the hazard ratios of the two cohorts. The cumulative incidence of stroke was estimated using the Kaplan–Meier method.

Results: After performing a propensity score matching with a 1:1 ratio, 160918 patients with hypertension receiving TCM matched with 160918 patients with hypertension who did not receive TCM in this study. Patients receiving acupuncture combined with Chinese herbal medicine had a significantly lower risk of stroke than the control group (adjusted hazard ratio = 0.39, 95

Conclusion: This study revealed that acupuncture combined with Chinese herbal medicine decreased the risk of stroke in patients with hypertension in Taiwan. The detailed mechanisms can be further clarified through prospective studies.

Keywords— stroke; hypertension; acupuncture; Chinese herbal medicine

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 Clinical Research

Application of Acupuncture Therapy in the Treatment of Patients with Muscle Tension Dysphonia

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Abstract

Objective: Exploring the therapeutic effect of acupuncture on muscle tension dysphonia.

Methods: Sixty patients with muscle tension dysphonia were randomly divided into two groups. The treatment group received acupuncture treatment, while the voice rest group received rest without special treatment. Acoustic analysis, stroboscopic laryngo-scope, F0, jitter, shimmer MPT, vocal discomfort index (VTD), vocal handicap index (VHI), subjective voice score (GRABS) before and after treatment in the two groups.

Results: (1) There was no significant difference in the above indicators between the two groups before treatment ($P>0.05$); After treatment, the VTD, VHI, G scores, F0, jitter, and shimmer in the treatment group were significantly lower than before treatment ($P<0.01$); MPT was significantly higher than before treatment ($P<0.01$); After treatment, there was no significant difference in the VTD, VHI, G scores, F0, jitter, shimmer and MPT of the voice rest group ($P>0.05$); (2) After treatment, the MPT in the treatment group was significantly higher than that in the sound rest group ($P<0.01$), and the other indicators were lower than those in the sound rest group ($P<0.01$).

Conclusion: Acupuncture therapy is more effective than the voice rest method in treating muscle tension dysphonia.

Keywords— Muscle Tension Dysphonia; Acupuncture; Voice examination

 Clinical Research

Clinical application status of Toujiu technology

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Abstract

Toujiu is a characteristic therapy founded by Professor Gao Xiyan on the basis of ancient moxibustion technology and combined with many years of clinical experience. It takes sufficient moxibustion volume to achieve qi and blood permeability as the core, and has the advantages of temperature control, smoke-free operation, and safety. This article reviews the related research of penetrating moxibustion since its establishment, and systematically discusses the technical characteristics and clinical application status of Toujiu. Through temperature control (about 43°C) and continuous moxibustion (≥ 30 minutes), the Toujiu technology ensures local flushing, sweating and other signs of Toujiu, and develops special moxibustion devices for different parts, which significantly improves safety and adaptability. Studies have shown that Toujiu is effective in many diseases such as internal, external, women, children, bone injury, otorhinolaryngology and so on.

Keywords— Toujiu

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 Clinical Research

Effects of Non-Invasive Microneedle Stimulation on Balance and Jump Performance

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Abstract

1 Introduction

Recent studies have shown that mechanical stimulation of the skin can enhance physical functions, particularly balance and jump performance [1, 2]. For example, Moon et al. (2022) reported that applying white noise vibration (1–350 Hz) at 130% of the sensory threshold to the plantar surface (metatarsal heads and heel) via insoles significantly increased vertical jump height by an average of 0.38 cm ($p = 0.008$). While these findings suggest that somatosensory input from the skin surface may affect motor output, the requirement for specialized vibration equipment limits its practicality in sports and daily life. In contrast, a recently developed non-invasive microneedle tool, which can be easily applied to the skin surface, has been reported to reduce muscle fatigue and pain [3, 4]. Similarly, sensory stimulation via microneedles may influence muscle function. Due to its non-invasiveness, safety, and ease of use—adhering to the skin like a bandage—this tool holds promise for practical applications. This study aimed to investigate the effects of non-invasive microneedle stimulation on balance and jump performance.

2 Methods

Five healthy, physically active male university students (age: 21.4 ± 0.5 years; height: 169.6 ± 7.4 cm; weight: 64.2 ± 9.9 kg) participated in this study. Each participant was randomly assigned to a stimulation (S) or non-stimulation (N) condition and performed a single-leg stance with eyes closed and a vertical jump under each condition. For the single-leg stance, participants stood barefoot on their dominant support leg (defined as the leg opposite to the kicking foot) and closed their eyes. The time (in seconds) until balance was lost was recorded over five trials, and the mean was used for analysis. Vertical jump height was measured using a jump meter (Takei, T.K.K 5406) attached at the waist. Each participant jumped twice, and the higher value was used. Jumps landing outside the designated area were repeated. Microneedle stimulation was applied using the SOMARESON (Toyorezin

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Co., Ltd.), which contains microneedles arranged on a 7-mm diameter disc. The tools were applied to six locations: four on the feet, one on the medial knee, and one on the anterior superior iliac spine (ASIS). In the single-leg stance test, tools were applied to the supporting leg, while for the vertical jump, they were applied bilaterally.

3 Results and Discussion

In the single-leg stance, the N condition showed a mean balance time of 27.5 ± 12.9 sec, while the S condition showed 41.1 ± 22.1 sec. Although the difference was not statistically significant, a trend toward improved balance performance was observed in the S condition. Considerable inter-individual variation was noted, with some participants showing minimal changes and others improving by up to 44 seconds. In contrast, vertical jump height showed no clear differences between the N condition (51.8 ± 6.9 cm) and the S condition (52.2 ± 5.7 cm). These results suggest that microneedle-based skin stimulation may influence neural control in static balance tasks. Future studies should increase the sample size and incorporate more detailed assessments, such as center of pressure trajectories and sway area in balance tasks, as well as ground reaction forces and electromyographic activity in jumping. Given its non-invasiveness and ease of application, the microneedle tool used in this study has strong potential for use in sports and rehabilitation settings.

Keywords— Non-invasive Microneedle Stimulation, Somatosensory Input, Postural Balance

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 Clinical Research

Comprehensive Therapy of Abdominal Acupuncture and Rehabilitation Training for Lower Back Pain with Pelvic Floor Dysfunction

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Abstract

Low back pain (LBP) caused by pelvic floor dysfunction (PFD) is one of the hotspots of clinical research in recent years, commonly seen in postpartum and elderly women. Recent literature has shown that relaxation and dysfunction of the pelvic floor muscles lead to an imbalance of muscle strength, resulting in low back pain. Abdominal acupuncture and rehabilitation training are simple and effective methods for improving LBP caused by relaxed pelvic floor dysfunction, which can effectively reduce pain intensity.

Objective: This paper analyzes the mechanism of pelvic floor dysfunction on non-specific low back pain and proposes a comprehensive therapy of acupuncture and rehabilitation training for LBP caused by PFD.

Methods: A controlled, randomized, parallel, and blinded clinical trial will be conducted at four hospitals in Beijing, China. Participants will be divided into two groups (Group A: acupuncture and conventional rehabilitation, Group B: conventional rehabilitation alone). After obtaining consent, participants will be assigned to either group using a computer-generated random list. Each participant will receive one course of treatment, consisting of 10 sessions. The first three treatments will be given daily, and from the fourth treatment onwards, every other day. This study is performed in accordance with the principles of the Declaration of Helsinki and has been approved by the Medical Ethics Committee. Inclusion and exclusion criteria were designed according to diagnostic standards. Interventions

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include health education, pelvic floor rehabilitation training, and acupuncture. Outcomes will be measured using the VAS, ODI, JOA, pelvic floor muscle function, ultrasound examination of abdominal muscles, TCM syndrome scores, and assessment of adverse events or safety.

Results: The sample size calculation was based on previous studies, with 38 participants per group, totaling 76. Statistical analysis will be performed using SPSS 20.0. Measurement data will be expressed as mean $\pm$ standard deviation, and enumeration data as frequency (n). A value of $P < 0.05$ will be considered statistically significant.

Conclusions: LBP is one of the main causes of disability worldwide. The effect of combined acupuncture and pelvic floor rehabilitation training in LBP has not been clarified. This randomized, multicenter study aims to evaluate the efficacy and safety of the combination of acupuncture and pelvic floor rehabilitation training, as compared to pelvic floor rehabilitation training alone, in the treatment of LBP related to PFD.

Keywords— PFD(pelvic floor dysfunction); LBP (low back pain); abdominal acupuncture; rehabilitation training; evaluation indicator

 Clinical Research

Evaluation On The Effect Pain Relief, Improve Range Of Motion Of Fire Dragon Moxibustion Method Combined With Electroacupuncture And Massage -Acupressure For Sciatica

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Abstract

Objective: (1) To evaluate the analgesic effect and improvement in lumbar spine range of motion (ROM) of the Fire Dragon moxibustion method combined with electroacupuncture and acupressure massage in the treatment of sciatica. (2) To monitor the method's adverse effects.

Subject and Method: Prospective, controlled, before-after treatment comparison intervention; 80 patients were divided into two groups. The study group was treated by the Fire Dragon moxibustion method combined with electroacupuncture and acupressure massage. The control group was treated by electroacupuncture and acupressure massage.

Results: After 15 therapeutic days, the study group's VAS decreased from 5.33 ± 1.05 points to 1.43 ± 1.55 points ($p < 0.05$). Lumbar spine ROM significantly improved: flexion increased from $53.25 \pm 13.48^\circ$ to $69.43 \pm 9.12^\circ$, extension from $19.28 \pm 3.62^\circ$ to $24.88 \pm 2.68^\circ$, and lateral bending from $21.93 \pm 3.61^\circ$ to $28.85 \pm 3.03^\circ$ ($p < 0.05$). No clinical adverse effects related to the interventions were observed.

Conclusion: Fire Dragon Moxibustion combined with electroacupuncture and acupressure massage is effective in reducing VAS pain scores and improving lumbar spine range of motion in patients with sciatica. No adverse clinical effects were reported from the interventions.

Keywords— sciatica, Fire Dragon moxibustion, electroacupuncture

1 Introduction

Sciatica is a common clinical condition, primarily manifested by pathological symptoms of the lumbar spine and nerve root pathology. Globally, it is estimated that approximately 49% to 70% of the population experiences low back pain at least once in their lifetime, with 5–10% attributed to sciatica pain [1, 2]. In Vietnam, the prevalence of sciatica pain has not been fully documented,

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but according to Tran Ngoc An et al., the disease accounts for 41.45% of spinal diseases and is among the 15 most common musculoskeletal disorders [3].

In most cases, sciatica develops benignly, not directly threatening the patient's life. However, its symptoms significantly impact quality of life, daily activities, and work capacity [1]. Modern medicine (MM) employs treatments such as pharmacotherapy, physical therapy, or interventional procedures, including surgery. However, anti-inflammatory analgesics often cause side effects such as gastrointestinal issues, water retention, and hypertension [1].

In Traditional Medicine (TM), sciatica is referred to as lumbosacral pain with leg pain or sciatica, categorized under rheumatic pain. TM offers various treatment methods, including herbal medicine, acupuncture, reflexology massage, spinal manipulation, sauna, moxibustion, and thread implantation, which have been applied in medical facilities with high clinical effectiveness [4].

Although Fire Dragon Moxibustion (FDM) has been widely researched and applied in China for pain relief in conditions caused by wind-cold-dampness, achieving positive results [5, 6], no studies in Vietnam have evaluated its efficacy. Therefore, we conducted this study, titled "Evaluation of the Effect of the Fire Dragon Moxibustion Method Combined with Electroacupuncture and Reflexology Massage for the Treatment of Sciatica," with the following objectives:

1. Evaluate the effect of Fire Dragon Moxibustion combined with electroacupuncture and acupressure massage on pain reduction and improvement of lumbar spine range of motion in treating sciatica.
2. Monitor for unwanted effects of the intervention.

2 Materials, Objects, and Research Methods

2.1 Research Materials

- Velvet wormwood and fresh ginger.

2.2 Research Media

- KWD-TN09-T06 electromagnet machine (Hanoi Medical Equipment Trading and Manufacturing Co., Ltd.).
- Stainless steel acupuncture needles, 5–10 cm long, 0.1 mm in diameter, pointed tip (Dong A Company, Vietnam).
- Sterile gauze, cotton, 70° alcohol, towel, lighter, Panthenol burn spray.
- Tape measure, VAS pain level gauge, joint range of motion (ROM) gauge.

2.3 Subjects of Study

The study included 80 patients diagnosed with sciatica at the National Hospital of Traditional Medicine who met the inclusion criteria.

2.3.1 Criteria for Patient Selection

According to Modern Medicine (MM):

- Age: 18 to 70 years.
- Regardless of gender, occupation, or duration of illness.
- Pain level: $3 \leq \text{VAS} \leq 6$.
- Voluntary participation and compliance with treatment principles.
- Clinical: Spinal syndrome and nerve root compression syndrome.
- Subclinical: Degenerative findings of the lumbar spine on X-ray or MRI [1, 4].

According to Traditional Medicine (TM):

- Diagnosis of "Lumbosacral pain with leg pain" with one of the following: wind-cold dampness or wind-cold dampness combined with liver and kidney deficiency.

2.3.2 Criteria for Exclusion of Patients

- Patients indicated for surgical treatment.
- Pain caused by physical damage to the lumbar spine, systemic diseases (e.g., lumbar spine cancer, metastatic cancer, bacterial infection, spinal tuberculosis).
- Pregnant women, patients with uncontrolled hypertension or cardiovascular diseases.
- Patients with skin diseases, lesions, or open wounds in the lumbar region.
- Patients with other acute diseases.
- Non-compliance with treatment or unauthorized use of medications outside the study.

2.4 Research Methods

2.4.1 Research Design

Prospective, clinical intervention study with before-after comparisons and control group comparisons.

2.4.2 Study Sample Size

- Total: 80 patients, divided into two groups:
- Experimental Group (EG): 40 patients treated with Fire Dragon Moxibustion combined with electroacupuncture and reflexology massage.
- Control Group (CG): 40 patients treated with electroacupuncture and reflexology massage.

2.4.3 Research Process

Step 1: Patients diagnosed with sciatica meeting inclusion criteria underwent clinical examination and lumbar spine X-ray or MRI.

Step 2:

Experimental Group (EG):

- Fire Dragon Moxibustion treatment on days D0, D3, D7, D11, D15 (no treatment on weekends).
- Preparation: Crushed fresh wormwood and ginger.
- Procedure: Patient lies prone, exposing the back. Rub the area, apply a layer of towel or gauze along the lumbar spine and Bladder meridian. Spread ground ginger (1–3 cm thick, 5 cm wide) on gauze, topped with velvet wormwood (1.5 cm thick, 3 cm wide). Ignite the wormwood, allowing it to burn completely, repeating 1–2 times (15–20 minutes) [5, 6].
- Electroacupuncture and reflexology massage per Ministry of Health protocol.

Control Group (CG): Treated with electroacupuncture and reflexology massage per Ministry of Health protocol for 15 days (no treatment on weekends).

2.4.4 Research Indicators

- General characteristics: Age, gender, duration of disease.
- Clinical criteria (evaluated on D0, D5, D10, D15):
 - Pain level (VAS scale).
 - Lumbar spine ROM: Flexion, extension, lateral flexion (using ROM goniometer with zero method).
 - Quality of life (Oswestry Disability Index, ODI).
- Adverse effects: Needle syncope, bleeding, infection, increased pain, burns, skin allergies.

2.5 Location and Time of Study

- Location: National Hospital of Traditional Medicine.
- Period: May 2023 to November 2023.

2.6 Data Processing

Data were processed using SPSS 20.0. Mean and standard deviation (SD) were calculated. Group comparisons used T-tests for means and χ^2 tests for proportions. Statistical significance was set at $p < 0.05$.

2.7 Ethical Issues in Research

Patients participated voluntarily, and the study aimed to protect and improve patient health. Patient information was confidential and used solely for research purposes.

3 Results

3.1 General Characteristics of the Research Object

3.1.1 Age Characteristics

Table 3.1. Distribution of Patients by Age

Table 1: Comparison of Age Groups Between Experimental and Control Groups

Age Group	Experimental group (n=40)		Control group (n=40)		$P_{(EG-CG)}$
	n	%	n	%	
18–29	2	5.0	2	5.0	>0.05
30–39	9	22.5	7	17.5	
40–49	6	15.0	7	17.5	
50–59	13	32.5	17	42.5	
60–70	10	25.0	7	17.5	
Sum	40	100	40	100	
Average age ($\bar{x} \pm SD$)	49.80 $\pm$ 12.77		49.86 $\pm$ 11.23		>0.05

The highest age group in both the Experimental Group (EG) and Control Group (CG) was 50–59 years. The mean age was 49.80 ± 12.77 years (EG) and 49.86 ± 11.23 years (CG), with no statistically significant difference ($p > 0.05$).

3.1.2 Gender Characteristics

Female patients were more prevalent (EG: 67.5%, CG: 65.0%), with no statistically significant difference ($p > 0.05$).

3.1.3 Characteristics of Disease Duration

Figure 3.1. Distribution of Patients by Disease Duration

Most patients (62.5% in both groups) had a disease duration exceeding 3 months. Patients with disease duration under 1 month accounted for 17.5% (EG) and 20.0% (CG), with no significant difference ($p > 0.05$).

3.2 Research Results

3.2.1 Improvement in Average VAS Index

Before treatment, VAS scores were similar between groups ($p > 0.05$). After 15 days, the EG reduced VAS from 5.33 ± 1.05 to 1.43 ± 1.55 , and the CG from 5.38 ± 0.98 to 2.25 ± 1.74 . The difference within and between groups was statistically significant ($p < 0.05$).

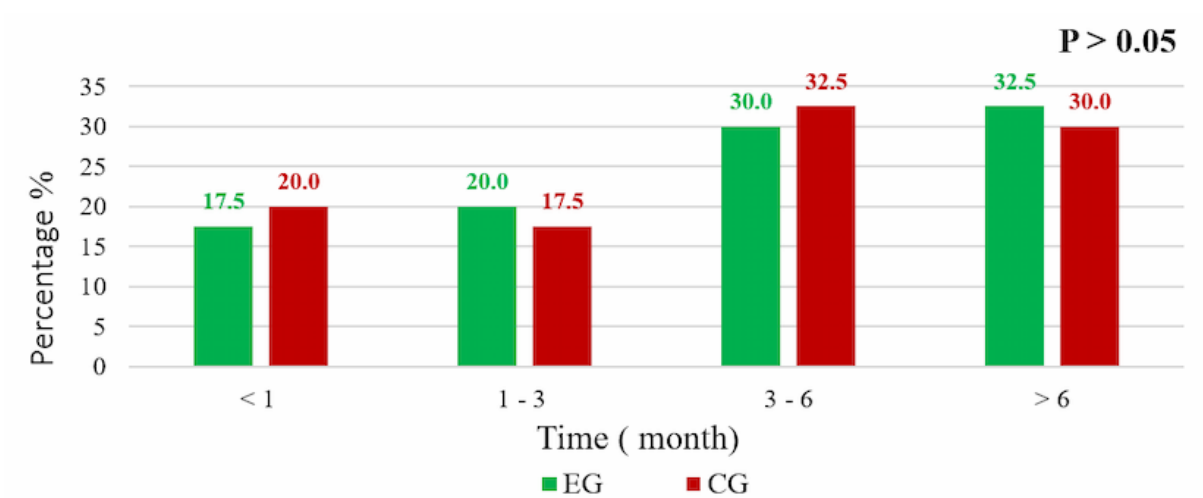


Figure 1: Distribution of patients according to the time of illness

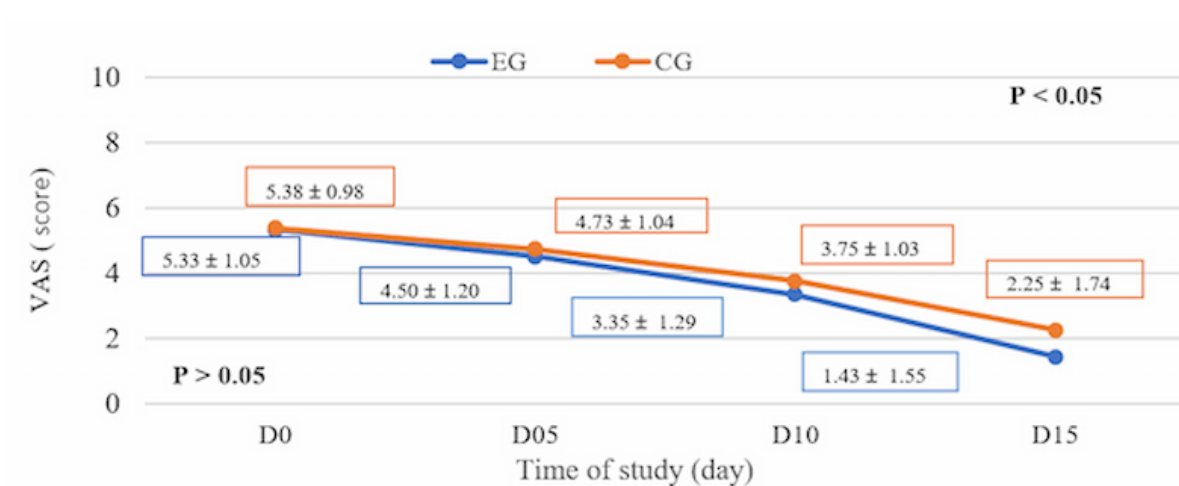


Figure 2: Results of improvement in average VAS index at different times

3.2.2 Improvement in Lumbar Spine Range

graphicx

multirow

Table 2: Comparison of Range of Movement (degrees) between Experimental and Control Groups

Range of Movement (degree)	Group	Experimental Group (EG)	Control Group (CG)	P _{EG-CG}
D_0 (1)	Flexion	53.25 ± 13.48	53.15 ± 10.85	> 0.05
	Extension	19.28 ± 3.62	$7.33 \text{ p.m.} \pm 3.70 \text{ p.m.}$	
	Lateral Flexion	21.93 ± 3.61	22.08 ± 3.77	
D_5 (2)	Flexion	57.90 ± 12.58	55.75 ± 10.75	> 0.05
	Extension	20.93 ± 3.27	20.53 ± 3.46	
	Lateral Flexion	23.28 ± 3.52	23.13 ± 3.55	
D_{10} (3)	Flexion	63.05 ± 10.74	58.60 ± 10.24	> 0.05
	Extension	22.38 ± 2.52	21.73 ± 3.06	
	Lateral Flexion	24.93 ± 3.12	24.00 ± 3.60	
D_{15} (4)	Flexion	69.43 ± 9.12	62.75 ± 10.62	< 0.05
	Extension	24.88 ± 2.68	22.98 ± 2.78	
	Lateral Flexion	28.85 ± 3.03	25.65 ± 3.83	
$P_{1-2}, P_{1-3}, P_{1-4}, P_{2-3}, P_{2-4}, P_{3-4}$		< 0.05	< 0.05	

Before treatment, ROM (flexion, extension, lateral bending) showed no difference ($p > 0.05$). After 15 days, the EG improved significantly: flexion from $53.25 \pm 13.48^\circ$ to $69.43 \pm 9.12^\circ$, extension from $19.28 \pm 3.62^\circ$ to $24.88 \pm 2.68^\circ$, lateral bending from $21.93 \pm 3.61^\circ$ to $28.85 \pm 3.03^\circ$ ($p < 0.05$). The EG outperformed the CG ($p < 0.05$).

3.2.3 General Treatment Results

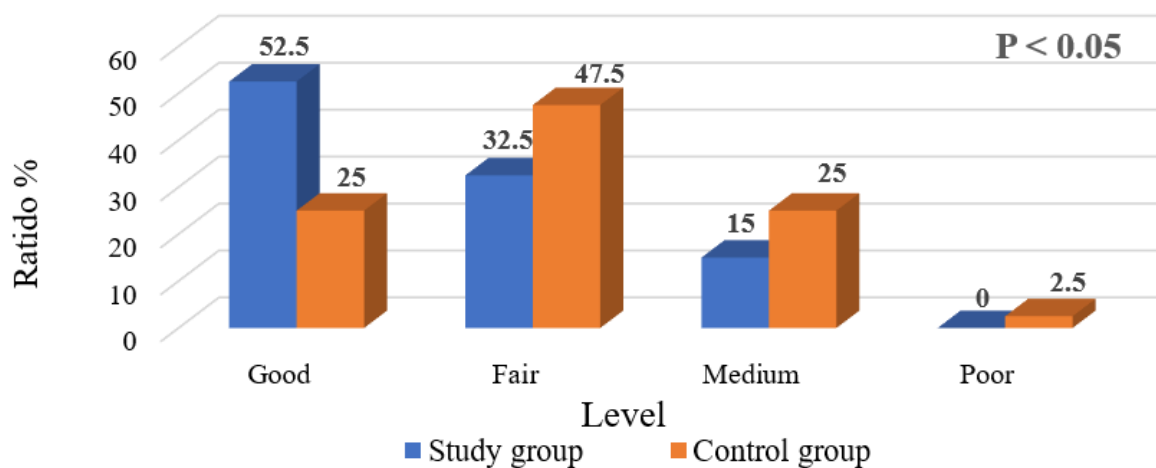


Figure 3: General Treatment Results

After 15 days, the EG achieved good results in 52.5%, quite good in 32.5%, and average in 15.0%, with no poor outcomes. The CG had good results in 25.0%, quite good in 47.5%, average in 25.0%, and poor in 2.5% (1 patient). The difference was statistically significant ($p < 0.05$).

3.3 Adverse Effects

No adverse effects were recorded during the interventions.

4 Discussion

4.1 General Characteristics

Age: The mean age was 49.74 ± 11.95 years, consistent across groups.

Gender: Females had a higher incidence (female/male ratio $\approx 2/1$), aligning with Tran Danh Tien Thinh and Phung Quang Tung (2022) [7].

Disease Duration: Most patients had chronic sciatica (>3 months), consistent with Tran Thi Hong Ngai et al. (2023) [8].

4.2 Pain Level Improvement

The EG's VAS reduction (5.33 to 1.43) outperformed the CG (5.38 to 2.25), similar to Nguyen Thi Thu Ha and Nguyen Kim Ngoc (2022) [9]. Fire Dragon Moxibustion, combined with electroacupuncture and massage, relaxes tendons, clears meridians, and relieves pain through the warmth of mugwort and ginger, enhanced by acupuncture's reflex effects [4, 5, 7].

4.3 Lumbar Spine Range Improvement

The EG showed significant ROM improvement compared to the CG ($p < 0.05$), though less pronounced than Ngo Quynh Hoa and La Kieu Oanh (2022) [10], possibly due to methodological differences or sample size limitations.

4.4 General Treatment Results

Fire Dragon Moxibustion targets the Du and Bladder Meridians, warming and unblocking qi and blood flow, enhancing treatment efficacy [5, 6].

4.5 Clinical Adverse Effects

No adverse effects were observed, indicating the safety of the combined intervention.

5 Conclusion

1. Fire Dragon Moxibustion combined with electroacupuncture and massage/acupressure significantly reduced VAS pain scores and improved lumbar spine ROM, outperforming the control group ($p < 0.05$).
2. No clinical adverse effects were reported.

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 Clinical Research

A Randomized Controlled Trial of Self-administered Acupressure for Depression

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Abstract

Background: Depression is a debilitating mental disorder that poses significant socio-economic costs to society. The treatment of depression is often associated with a social stigma, which hinders Participants from seeking formal treatment. Therefore, an early, stigma-free, readily available, and flexible intervention is important for treating depression. This proposal will examine the effects of self-administered acupressure intervention for alleviating depressive symptoms.

Objectives: This study aimed to evaluate the effects of self-administered acupressure delivered by a training course for depression treatment.

Design and methods: A randomized controlled trial was conducted on 250 Participants with depression disorder from the community. All eligible Participants were randomized into the self-administered acupressure (SAA) or the mental health education (MHE) group in a 1:1 ratio. The self-administered acupressure group attended an acupressure training course (two sessions, 2 hours each) to learn self-administered acupressure, which they then performed every night for 12 weeks. The comparison group received MHE (two sessions, 2 hours each, same as the treatment group) and were reminded to follow the mental health practices daily for 12 weeks. The primary outcome was the Patient Health Questionnaire (PHQ). Other measures included a Hamilton Depression Rating Scale (HDRS), Depression Anxiety Stress Scales (DASS-21), Insomnia Severity Index (ISI) and Short-form Six-dimension at 4, 8 and 12 weeks.

Results: 250 Participants (186 female [74.4

Conclusions: This study demonstrated that a brief SAA training program can effectively alleviate depressive symptoms. The participants showed high compliance with the SAA training program.

Keywords— Self-Administered Acupressure, Depression, Mental Health, Randomized Controlled Trial

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 Clinical Research

Study on the Effectiveness of Scalp Acupuncture in the Treatment of Migraine Headaches

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Abstract

Objective: To evaluate the therapeutic effects of scalp acupuncture in treating migraines and monitor potential side effects.

Subjects and Methods: Sixty migraine patients were randomly assigned to a treatment group (n=30) receiving daily scalp acupuncture based on a standardized protocol, and a control group (n=30) receiving topiramate (50 mg/day). Assessments included migraine attack frequency, duration, pain intensity (Visual Analog Scale - VAS), disease severity, cerebral blood flow (Transcranial Doppler Sonography - TCD), and adverse effects over 30 days.

Results: After 30 days, attack frequency decreased from 7.45 ± 1.63 to 3.36 ± 1.24 times/month, duration from 6.02 ± 1.40 to 3.11 ± 0.86 hours, and VAS from 7.05 ± 1.24 to 3.51 ± 1.84 . Cerebral blood flow improved significantly ($p < 0.05$), with no adverse effects reported.

Conclusion: Scalp acupuncture effectively reduces migraine symptoms and improves cerebral blood flow, presenting a safe treatment option.

Keywords— Migraine, scalp acupuncture, pain relief, cerebral blood flow

1 Introduction

Migraine is a chronic, recurrent headache disorder accompanied by gastrointestinal symptoms, photophobia, and phonophobia. A 2008 study by Nguyễn Văn Chương and colleagues in Vietnam, conducted on 2,000 individuals, found tension-type headaches to be the most common, with migraines accounting for 19.7% prevalence, three times more frequent in females than males, peaking at ages 20–29 (43.8%) and declining after 40 (18.0%) [1]. Treatment includes pharmacological and non-pharmacological approaches for pain relief and recurrence prevention, though modern medications have limitations in efficacy and side effects. Scalp acupuncture, integrating Traditional Chinese Medicine (TCM) and modern medicine based on cerebral cortex functional zones, has proven effective for neurological disorders like encephalitis sequelae, insomnia, and cerebrovascular accidents in China [2]. This study explores the efficacy and safety of scalp acupuncture for migraines.

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2 Study Subjects and Methods

2.1 Study Subjects

Patients diagnosed with migraine, hospitalized at Tuệ Tĩnh Hospital and the National Hospital of Acupuncture from April 1, 2020, to November 1, 2020, were included. Inclusion criteria were: aged 18–65, voluntary participation, diagnosed per International Headache Society (IHS) 3rd edition beta criteria, and TCM diagnosis of migraine (Tiān tóu tòng) due to liver qì stagnation, liver yang hyperactivity, blood stasis, or cold-damp accumulation. Exclusion criteria included other chronic headaches, systemic diseases (e.g., tuberculosis, HIV/AIDS, psychiatric disorders, cerebrovascular accidents), non-compliance (missing >2 days of treatment), unwillingness to continue, need for alternative treatment, and pregnancy/breastfeeding.

2.2 Study Design

This open-label, controlled clinical intervention compared pre- and post-treatment outcomes. Sixty patients were purposively sampled into two groups: a study group (n=30) receiving scalp acupuncture and a control group (n=30) receiving topiramate (50 mg/day). Assessments were conducted at baseline, day 15, and day 30.

2.2.1 Treatment Protocols

- ****Study Group****: Daily scalp acupuncture for 30 days, performed in the morning. Points were selected on the headache side, with additional areas based on syndrome differentiation. Needles were inserted at a 30° downward angle post-disinfection until "de qì" sensation, using 150–200 Hz for reduction (xie) or 60–120 Hz for reinforcement (bu), with 1–4 mA intensity for 20–30 minutes. Formula: MS10 (Jiache ST-6 to Xuanli GB-6) and MS11 (Shuaigu GB-8 to Qubin GB-7) [3].

- ****Control Group****: Oral topiramate 50 mg twice daily (Topimax, Janssen-Cilag).

2.3 Evaluation Criteria

Assessments included migraine frequency, attack duration (hours), pain intensity (VAS), global disease severity, cerebral blood flow (TCD), and adverse effects.

2.4 Data Processing

Data were analyzed using biomedical statistical methods with SPSS 20.0.

3 Results

3.1 Evaluation of Clinical Improvement

Table 3.1 shows migraine frequency decreased from 7.45 ± 1.63 to 5.95 ± 2.10 (day 15) and 3.36 ± 1.24 (day 30) in the study group, and from 7.01 ± 1.21 to 4.25 ± 1.91 (day 15) and 2.84 ± 1.04 (day 30) in the control group ($p < 0.05$), with no significant inter-group difference ($p >$

0.05). Table 3.2 indicates attack duration reduced from 6.02 ± 1.40 to 4.61 ± 2.01 (day 15) and 3.11 ± 0.86 (day 30) in the study group, and from 5.98 ± 1.70 to 4.81 ± 2.01 (day 15) and 2.81 ± 0.86 (day 30) in the control group ($p < 0.05$), with no significant difference ($p > 0.05$). Table 3.3 shows VAS scores dropped from 5.97 ± 1.30 to 4.53 ± 1.43 (day 15) and 2.87 ± 1.36 (day 30) in the study group, and from 5.83 ± 1.39 to 4.40 ± 1.57 (day 15) and 2.93 ± 1.48 (day 30) in the control group ($p < 0.05$), with no significant difference ($p > 0.05$). Table 3.4 indicates disease severity improved, with 43.3% good and 50% moderate outcomes in the study group by day 30, versus 33.3% good and 53.4% moderate in the control group ($p > 0.05$).

3.2 Cerebral Blood Flow Changes

Table 3.5 shows significant improvements: alpha peak time decreased from 218.23 ± 66.41 ms to 180.37 ± 71.24 ms (study) and 217.33 ± 81.32 ms to 196.52 ± 56.62 ms (control, $p < 0.05$); pulse index α/T reduced from $23.5 \pm 6.76\%$ to $19.7 \pm 7.24\%$ (study) and $23.1 \pm 5.35\%$ to $20.9 \pm 5.87\%$ (control, $p < 0.05$); A/C index increased from 0.62 ± 0.34 to 1.12 ± 0.42 (study) and 0.68 ± 0.35 to 1.02 ± 0.39 (control, $p < 0.05$); blood flow conductance rose from $18.12 \pm 7.97\%/min$ to $24.95 \pm 8.74\%/min$ (study) and $19.75 \pm 7.61\%/min$ to $22.78 \pm 7.64\%/min$ (control, $p < 0.05$); peak width remained unchanged ($p > 0.05$).

3.3 Adverse Effects

Table 3.6 shows no significant changes in heart rate (77.8 ± 6.7 to 78.6 ± 5.3 study, 76.5 ± 5.5 to 75.2 ± 4.5 control), systolic (118.8 ± 13.6 to 121.2 ± 13.2 study, 113.5 ± 12.5 to 115.7 ± 12.8 control), or diastolic blood pressure (77.3 ± 11.4 to 77.5 ± 9.8 study, 75.5 ± 8.2 to 76.5 ± 10.6 control, $p > 0.05$). Table 3.7 reports no adverse effects (dizziness, bleeding, needle breakage, infection, syncope, pain, or bruising).

4 Discussion

4.1 Evaluation of Clinical Improvement

Both groups showed significant reductions in migraine frequency and duration after 15 and 30 days ($p < 0.05$), aligning with Zhou's finding that acupuncture outperforms Western medicine [4]. Studies by Alecrim-Andrade and Linde also support acupuncture's efficacy in pain reduction and attack shortening (1–2 hours) compared to medication [5, 6]. VAS scores indicated comparable efficacy (3.51 ± 1.84 study vs. 3.87 ± 1.78 control), suggesting long-term benefits and recurrence prevention. Improved cerebral blood flow (increased intensity, reduced vascular tension) enhanced circulation, reducing dizziness and improving sleep, consistent with scalp acupuncture's stimulation of cortical functional areas and syndrome-based points.

4.2 Evaluation of Adverse Effects

Scalp acupuncture proved safe, with no reported side effects, supporting its use as a standalone or adjunctive therapy for migraines.

5 Conclusion

Scalp acupuncture reduced migraine attack frequency, shortened duration, alleviated pain severity, and improved cerebral blood flow after 30 days. It is a safe and effective treatment option for migraine patients.

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 Clinical Research

Investigating Brain Network Responses to Transcutaneous Electrical Acupoint Stimulation via EEG-fNIRS Dual-Modal Signals and the Mechanisms Underlying Post-Stroke Upper Limb Spasticity Improvement

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Abstract

Introduction: Post-stroke upper limb spasticity is a prevalent complication that significantly impairs the rehabilitation of motor function in affected patients. The underlying pathological mechanisms involve abnormal central nervous system remodeling and an imbalance in the compensatory functions of brain networks. Although pharmacological treatments for post-stroke spasticity are available, they are limited by side effects and lack significant long-term efficacy, highlighting the need for exploring non-pharmacological therapies. Transcutaneous electrical acupoint stimulation (TEAS), a non-invasive neuromodulation technique, has demonstrated distinct advantages in alleviating post-stroke spasticity. However, its exact mechanism of action remains to be further elucidated.

Objective: To assess the clinical efficacy of Transcutaneous Electrical Acupoint Stimulation (TEAS) in treating post-stroke upper limb spasticity, and to investigate the brain region response patterns and signal characteristics associated with TEAS intervention in post-stroke

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spasticity, using electroencephalogram-functional near-infrared spectroscopy (EEG-fNIRS) dual-modality signal acquisition and analysis techniques.

Method: A randomized, sham-controlled, single-blind clinical trial was carried out and 68 patients experiencing upper limb spasticity within 1-12 months post stroke were randomly assigned to either TEAS group or sham-TEAS group. Patients in the TEAS group received transcutaneous electrical acupoint stimulation on Jianyu(LI15), Binao(LI14), Quchi(LI11), Shousanli(LI10), Waiguan(TE5), Hegu(LI4) of the affected side. Meanwhile, those in the sham-TEAS group was treated on the same acupoints without electrical stimulation. Both groups underwent same conventional treatment. The treatment was administered thrice weekly over a six-week period. Primary outcome (FMA-UE) and secondary outcomes (MAS, WMFT, VAS, and BI) were assessed to evaluate upper limb motor function and muscle spasticity, and to examine the clinical effects of TEAS on post-stroke upper limb spasticity using various evaluation methods. These outcomes were assessed at baseline, as well as at 3 and 6 weeks. Additionally, 28 patients with post-stroke upper limb spasticity and 14 matched healthy controls were included in the study. EEG and fNIRS data were collected at baseline and after 6 weeks of treatment. Synchronized EEG-fNIRS data were analyzed to examine brain network connectivity and investigate the underlying mechanisms of TEAS intervention in upper limb spasticity.

Results : At 3 and 6 weeks of treatment, the FMA-UE, MAS, WMFT, BI, and VAS scores in the experimental group showed significantly greater improvement from baseline compared to the control group ($P < 0.001$). EEG spectral analysis revealed that, in the Alpha frequency band, the long-term cumulative response of spasticity patients treated with 6 weeks of TEAS showed significantly greater treatment effects in the frontal lobe, anterior temporal lobe, and central regions in the experimental group compared to the control group ($P < 0.05$). fNIRS functional connectivity analysis indicated that the experimental group had significantly greater connectivity in the prefrontal executive/regulatory network and prefrontal-sensorimotor network compared to the control group ($P < 0.01$). fNIRS brain network analysis showed that the experimental group had significantly higher betweenness centrality (BC) in the prefrontal polar region compared to the control group ($P < 0.01$), as well as significantly higher degree centrality (DC) in the same region ($P < 0.05$).

Conclusion: TEAS treatment improved the neural oscillation stability in patients with post-stroke upper limb spasticity, enhanced functional connectivity between the prefrontal cortex and motor cortex, and increased network integration efficiency. It gradually normalized abnormal compensatory patterns and promoted brain network remodeling in post-stroke spasticity patients.

Keywords— Post-stroke spasticity¹, transcutaneous electrical acupoint stimulation², brain network reorganization³

 Clinical Research

Clinical Observation of Tongue Acupuncture in the Treatment of Complex Ocular Diseases: A Study of 50 Cases Involving Retinal Degeneration, Glaucoma, and Autoimmune-Related Visual Impairment

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Abstract

This clinical study evaluated the efficacy of tongue acupuncture in treating 53 patients with various ocular conditions, including 5 cases of retinal pigmentosa, 15 glaucoma, 20 chronic eye disease combinations (blindness, eyeball pain, vision defects), 10 post-LASIK dry eye, and 3 Sjögren's syndrome cases with severe vision defects and dry eye. The treatment demonstrated exceptional patient compliance, with a return rate exceeding 95%. Clinical outcomes showed symptom improvement and long-term maintenance efficacy in over 95% of cases, suggesting tongue acupuncture may be a highly effective intervention for diverse ocular pathologies, including complex autoimmune-related conditions. These promising results warrant further controlled studies to validate the therapeutic potential of tongue acupuncture in ophthalmology.

Keywords— Tongue acupuncture, retinal pigmentosa, glaucoma, chronic eye disease, LASIK dry eye, vision improvement

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 Clinical Research

Gender Differences in Acupuncture Based on Task-Based Functional Magnetic Resonance Imaging

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Abstract

Objective: To investigate potential gender-related variations in brain activity during acupuncture at acupoints using task-based functional magnetic resonance imaging (TB-fMRI).

Methods: The modular task-based functional magnetic resonance imaging (fMRI) technique was employed to investigate brain activity, and the Massachusetts General Hospital Acupuncture Sensation Scale (MASS) was utilized to assess acupuncture sensations experienced by the participants. Alterations in activated brain regions and functional connectivity were examined separately for males and females. Statistical analyses were performed to determine potential gender differences in acupuncture sensation.

Results: Significant statistical differences were observed in the 12 acupuncture sensation scores of the MASS scale ($p < 0.001$). Acupuncture at the LR3 acupoint activated the left inferior cerebellar gyrus, right superior marginal gyrus, and left posterior central gyrus in females, and activated the right superior marginal gyrus, left central sulcus, and right paracentral lobule in males. Enhanced functional connectivity was also observed in the bilateral thalamus of females: the bilateral caudate nucleus, right precuneus, right cuneus, and bilateral lingual gyrus were highly active. Furthermore, the right thalamus demonstrated enhanced functional connectivity with the left cuneus, right posterior cingulate gyrus, and left precuneus.

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Conclusion: The differences in the functional connectivity of the right superior marginal gyrus and thalamus between males and females may underlie the differences in acupuncture sensory processing between males and females. The right superior marginal gyrus may be a specific brain region critical for activation of the LR3 acupoint.

Keywords— acupuncture, gender difference, task-based magnetic resonance imaging, functional connectivity

 Clinical Research

Acupuncture treatment of menstrual migraine without aura using the Ling Gui Ba Fa: a clinical case study

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Abstract

Objective: To investigate whether acupuncture using the Ling Gui Ba Fa (LGBF) method has a positive effect in the treatment of menstrual migraine without aura.

Methods: This clinical case study included 5 female patients aged 18 to 55 years with menstrual migraine without aura. Acupuncture points were selected based on the Ling Gui Ba Fa method, determined by the heavenly stems and earthly branches at the time of treatment, using 0.25 x 25 mm needles with gentle manipulation until Deqi. Needles were retained for 30 minutes. Treatments occurred twice weekly for a total of 5 sessions between two menstrual periods, conducted at the researcher's acupuncture clinic in Aalborg, Denmark.

Results: The study involved 6 female participants (aged 28 to 49 years), with 1 dropout. Three had menstrual-related migraine, 2 had pure menstrual migraine, and 3 were diagnosed with chronic migraine. Acupuncture with LGBF showed a modest reduction in overall migraine frequency, with a more pronounced effect on pure menstrual migraine. Menstrual migraine days decreased from an average of 3 days to 1.6 days, total migraine duration reduced from 33 hours to 18.9 hours, and average pain intensity dropped from 6.8 to 3.6. Painkiller use remained largely unchanged, but sick days due to migraines decreased by over 50%.

Conclusion: Acupuncture using the Ling Gui Ba Fa method appears to be a promising treatment for menstrual migraine without aura, particularly for patients with pure menstrual migraine. The treatment significantly reduced the frequency, duration, and intensity of menstrual migraines, though its impact on chronic menstrual-related migraines was limited. Further research is needed to confirm these findings.

Keywords— Acupuncture; Ling Gui Ba Fa; Menstrual migraine; Without aura; Heavenly stems and earthly branches

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1 Introduction

Migraine is a common disorder, the third most prevalent in Denmark, affecting approximately 640,000 people [1]. It significantly reduces functional capacity, leading to decreased quality of life and work absenteeism. Annually, migraine costs 420 million DKK in treatment and 1.2 billion DKK in lost productivity [2]. In Denmark, waiting times for specialist headache and migraine treatment exceed two years [2]. Women are at higher risk, with approximately 50% experiencing migraines related to the menstrual cycle [3].

Most menstrual migraine attacks are without aura [4], characterized by greater pain, longer duration, higher recurrence, and increased treatment difficulty [5]. Menstrual migraines pose a significant burden to patients and society.

Studies from China suggest acupuncture as a promising treatment for menstrual migraine [6], but evidence remains inconclusive due to study quality [7]. Classical acupuncture methods like Ling Gui Ba Fa (LGBF) are understudied for menstrual migraine treatment. LGBF is a time-based acupuncture method using heavenly stems and earthly branches to align treatment with natural rhythms [8]. The Su Wen states, “Every individual’s life is intimately connected to nature, and acupuncture should follow celestial timing” [8]. Given the monthly rhythm of menstrual migraines, LGBF is a compelling approach.

Menstrual migraine, as defined by the International Classification of Headache Disorders III [9], includes pure menstrual migraine (attacks exclusively during the peri-menstrual period) and menstrual-related migraine (attacks also outside the peri-menstrual period). This study encompasses both subcategories.

2 Migraine from a TCM Perspective

The head is the confluence of all yang meridians, with Qi and Blood of the five Zang and six Fu organs ascending to it. The liver yin meridian reaches the head at Du 20 [10]. One-sided headaches often result from excess or stagnant Qi in the Gall Bladder meridian, typically due to ascending Liver Yang, Liver Fire, or Liver Wind, manifesting as temple pain or a pressing sensation behind the eyes. A murmuring or tired feeling behind the eyes indicates Liver Blood Deficiency [11].

3 Heavenly Stems and Earthly Branches

Ling Gui Ba Fa relies on heavenly stems, earthly branches, the eight trigrams, the Nine Squares, and the opening points of the eight extraordinary meridians, which influence deep health levels [12]. During the Ming dynasty, Li Yan noted, “The 360 acupuncture points are governed by 60 points, and the 60 extremity points are governed by the eight confluent points” [13]. These confluent points, as “keys” to the extraordinary meridians, treat the entire body.

LGBF identifies the most influential opening point of the eight extraordinary meridians based on the year, month, day, and hour’s stem and branch to promote health [12]. The day and hour’s stem and branch are calculated using methods from Zhen Jiu Da Cheng. The opening point is needled first, followed by its coupled point [8]. Point selection involves calculating the remainder of the date and hour’s numerals (divided by 9 for yang days, 6 for yin days) to select points per the “Song of Eight Methods”: 1 for Shenmai (BL62), 2 and 5 for Zhaohai (KI6), 3 for Waiguan (SJ5), 4 for Zulinqi (GB41), 6 for Gongsun (SP4), 7 for Houxi (SI3), 8 for Neiguan (PC6), 9 for Lieque (LU7). Confluent points are paired: Neiguan (PC6) with Gongsun

(SP4), Waiguan (SJ5) with Zulinqi (GB41), Houxi (SI3) with Shenmai (BL62), Lieque (LU7) with Zhaohai (KI6). Note: Stem and branch numerals are based on the He Tu and Luo Shu diagrams, but their complexity is beyond this study's scope.

4 Methods

Objective: To investigate whether acupuncture using the Ling Gui Ba Fa method has a positive effect in the treatment of menstrual migraine without aura.

Methods: Acupuncture points were selected based on Ling Gui Ba Fa, determined by the heavenly stems and earthly branches at the treatment time, using bilateral points. Using 0.25 x 25 mm acupuncture needles, gentle manipulation achieved Deqi, with needles held for 2 minutes to guide Qi. Patients focused their intention to direct Qi to the head [14], with needles retained for 30 minutes without further manipulation. Treatments occurred twice weekly for 5 sessions between two menstrual periods, postponed if interrupted to ensure 5 treatments. All treatments were conducted at the researcher's acupuncture clinic in Aalborg, Denmark.

Note: Figures (Fig 1 to Fig 7) referenced in the results are not included due to missing graphical data.

5 Results

Results: The study involved 6 female participants (aged 28 to 49 years), with 1 dropout. Three had menstrual-related migraine, 2 had pure menstrual migraine, and 3 were diagnosed with chronic migraine. All received 5 acupuncture treatments between two menstrual periods. Acupuncture with LGBF showed a modest reduction in overall migraine frequency, with a more pronounced effect on pure menstrual migraine. Menstrual migraine days decreased from an average of 3 days to 1.6 days, total migraine duration reduced from 33 hours to 18.9 hours, and average pain intensity dropped from 6.8 to 3.6. Painkiller use remained largely unchanged, but sick days due to migraines decreased by over 50%.

Note: Figures 1 to 7, showing patient data and mean results, are not included due to missing graphical data.

6 Conclusion

Conclusion: Acupuncture using the Ling Gui Ba Fa method appears to be a promising treatment for menstrual migraine without aura, particularly for patients with pure menstrual migraine. The treatment significantly reduced the frequency, duration, and intensity of menstrual migraines, though its impact on chronic menstrual-related migraines was limited. Further research is needed to confirm these findings and explore the potential of LGBF acupuncture in treating menstrual migraine effectively.

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 Clinical Research

A Web-Based Survey Research on Clinical Practice Patterns of Korean Medicine Treatment for Degenerative Arthritis of the Hip and Finger Joints

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Abstract

Objectives: This study aimed to understand the current status of clinical practice patterns of Korean medicine in the treatment of degenerative arthritis of the hip and finger joints using a web-based survey.

Methods: An e-mail questionnaire survey was conducted with the Korean Medicine Doctor (K.M.D.) registered in the Korean Medicine Association. The survey data were analyzed using Microsoft Excel.

Results: Although the response rate of the survey was low, the characteristics of the respondents generally reflected the characteristics of the study population. A total of 35.2% of the respondents had heard of the guidelines; however, they did not use them for medical treatment. 32.8% of respondents cited the reason as "not enough treatment time to check the manual and apply it." More than half (78.8%) answered that they were treating patients with both degenerative hip and finger arthritis; however, the average monthly number of first-time patients was five or fewer. A total of 379 (60.9%) respondents answered that "acupuncture is very important," which was the only treatment exceeding the majority support compared to others. As a result of the safety investigation, "acupuncture, herbal medicine, cupping" were considered high in safety, while "pharmacopuncture and bee venom acupuncture" were considered low in safety.

Conclusions: This survey helped to determine the current clinical practice patterns of Korean medicine treatments, furthermore providing basic data for CPGs for degenerative arthritis of the hip and finger joints.

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Keywords— Degenerative arthritis of the hip and finger joints, Korean medicine treatment clinical practice patterns, Web-based survey research

 Clinical Research

Clinical Study on Acupuncture for Facial Cutaneous Laxity

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Abstract

Objective: To compare the clinical efficacy of facial acupuncture versus LED light therapy for facial skin laxity, aiming to identify a safe and effective treatment and enrich acupuncture cosmetology methods.

Methods: Sixty-six patients with facial skin laxity were randomly assigned (1:1) to an observation group and a control group, each with 33 patients. The control group received red light treatment using an LED light therapy device, while the observation group was treated with the “Yang-regulating and Brain-healthy” acupuncture method, targeting Touwei (ST8), Qubin (GB7), Yangbai (GB14), Juliao (ST3), Dicang (ST4), Sibai (ST2), Yingxiang (LI20), Jiache (ST6), Xiaguan (ST7), and local Ahshi points at the nasolabial folds with dense needling. Nasolabial fold scores and VISIA wrinkle and texture indices were assessed before and after treatment, with statistical analysis to compare efficacy.

Results: Post-treatment, both groups showed significant improvements in nasolabial fold scores and VISIA wrinkle and texture percentiles compared to baseline ($P < 0.05$). Differences in pre- and post-treatment scores between groups were statistically significant ($P < 0.01$).

Conclusion: Both “Yang-regulating and Brain-healthy” acupuncture and LED light therapy effectively improve nasolabial folds and VISIA wrinkle and texture scores in facial skin laxity, with acupuncture showing superior efficacy.

Keywords— Acupuncture Cosmetology; Skin Laxity; Clinical Observation

1 Introduction

Facial skin, comprising about 3% of total skin area, is a key indicator of aging [1]. Early facial skin laxity manifests as reduced elasticity, progressing to multi-tissue displacement and eventual full-layer structural collapse due to weakened superficial musculoaponeurotic system support

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[2]. This process underlies facial aging, presenting in varied forms. With global aging and rising living standards, maintaining youthful vitality is a growing concern. Preventive and mitigative measures for facial aging are a key focus in modern medical cosmetology [3]. Acupuncture cosmetology, with its simplicity, efficacy, minimal invasiveness, and lack of side effects, is increasingly recognized as a valuable anti-aging approach [4]. This study compares the “Yang-regulating and Brain-healthy” acupuncture method with LED light therapy to assess their effects on facial skin laxity.

2 Methods

This trial adheres to the 2010 CONSORT Statement, with intervention details per the template checklist, approved by the Ethics Committee of the Affiliated Hospital of Shaanxi University of Traditional Chinese Medicine (Approval No. SZFYIEC-PJ-2024-62).

2.1 Study Design

This 2-arm, randomized controlled trial recruited patients from the Acupuncture Department of the Affiliated Hospital of Shaanxi University of Traditional Chinese Medicine from April 2024 to February 2025. The 8-week study included twice-weekly treatments. Outcomes were assessed pre- and post-treatment.

2.2 Participants

Sixty-six patients meeting facial skin laxity criteria were recruited via hospital WeChat and posters, randomized into observation and control groups (33 each). One control group patient and two observation group patients dropped out, leaving 32 and 31 patients, respectively.

Inclusion Criteria: ☐ Female, aged 30–50, meeting Type I/II facial skin laxity criteria; ☐ No chronic diseases (e.g., tumors, connective tissue diseases); ☐ No severe primary diseases; ☐ No anti-aging treatments (surgery, injections, lasers) in the past 3 months; ☐ Voluntary participation with informed consent.

Exclusion Criteria: ☐ Severe chronic diseases; ☐ Prior facial skin laxity treatments; ☐ Scar-prone or allergic skin; ☐ Pregnant or lactating; ☐ Unwilling to be randomized.

2.3 Sample Size

Based on nasolabial fold scores, assuming changes of 1.5 ± 0.8 (observation) and 1.0 ± 0.8 (control), with $\alpha=0.05$ and 80% power, 30 patients per group were needed. Accounting for 10% dropout, 33 patients per group (66 total) were enrolled.

2.4 Randomization and Blinding

A random number table (1:1 allocation) was used, with sequences generated by an independent party and sealed in opaque envelopes. Patients and outcome assessors were blinded; therapists were not due to intervention nature.

2.5 Interventions

2.5.1 Control Group

Patients used the DJG780 LED light therapy device (Wujiang Yunlong Medical Equipment Co., Ltd). After moisturizing with lotion or cream, patients lay supine, wore protective goggles, and received red light treatment for 30 minutes. Treatments occurred every 3 days for 8 weeks. Patients were advised to reduce outdoor activities and avoid sunlight or photosensitive substances.

2.5.2 Observation Group

Acupoints: Touwei (ST8), Qubin (GB7), Yangbai (GB14), Juliao (ST3), Dicang (ST4), Sibai (ST2), Yingxiang (LI20), Jiache (ST6), Xiaguan (ST7), plus nasolabial fold Ahshi points.

Procedure: Patients lay supine, and 0.16×10mm Yunlong acupuncture needles were used after disinfection. Needling followed a “bottom-up, inside-out” approach with three-layer insertion (superficial for skin, middle for fascia, deep for qi regulation). Dense needling at nasolabial fold Ahshi points (2.0cm spacing) used upward oblique insertion with twisting reinforcement to achieve deqi, with needles retained for 30 minutes. Treatments occurred every 3 days for 8 weeks. Acupoint locations followed national standards [5].

2.6 Outcomes

The VISIA skin analyzer assessed nasolabial fold scores (per China Anti-Aging Association standards [6]) and VISIA wrinkle and texture percentiles pre- and post-treatment. Efficacy was evaluated using SSRI (decline index): marked effect (SSRI>0.8), effective (0<SSRI≤0.8), ineffective (SSRI=0). Total effective rate = (marked + effective cases)/total cases × 100%.

2.7 Statistical Analysis

SPSS 26.0 was used. Data were reported as means±SD. Paired t-tests compared pre- and post-treatment within groups, and independent t-tests compared between groups. P<0.05 indicated statistical significance.

3 Results

3.1 Baseline Characteristics

No significant differences were found in age (observation: 38.84±4.48 years; control: 38.03±3.13 years), nasolabial fold scores, or VISIA indices (P>0.05).

3.2 Efficacy

Post-treatment, both groups showed reduced nasolabial fold scores (P<0.05) and increased VISIA wrinkle and texture scores (P<0.05). The observation group outperformed the control group in nasolabial fold scores (2.87±0.85 vs 3.44±0.95), VISIA wrinkles (83.55±22.75 vs

78.53±26.96), and texture (76.23±29.60 vs 71.06±25.56) ($P<0.05$). The observation group's effective rate was 87%, higher than the control group's 72% ($P<0.01$). See Tables 1 and 2.

Table 1: Comparison of Nasolabial Fold and VISIA Scores Pre- and Post-Treatment (Mean±SD)

Group	n	Index	Pre-Treatment	Post-Treatment
Control	32	Nasolabial Fold Score	4.16±0.85	3.44±0.95 [#]
		VISIA Wrinkle	74.69±11.19	78.53±26.96 [#]
		VISIA Texture	68.06±9.74	71.06±25.56 [#]
Observation	31	Nasolabial Fold Score	4.48±0.96	2.87±0.85 ^{**}
		VISIA Wrinkle	73.16±11.55	83.55±22.75 ^{**}
		VISIA Texture	69.29±14.47	76.23±29.60 ^{**}

Note: [#] $P<0.05$ vs pre-treatment; ^{*} $P<0.05$ vs control group.

Table 2: Comparison of Clinical Efficacy (Cases, %)

Group	n	Marked Effect	Effective	Ineffective	Total Effective Rate
Control	32	0	23	9	72%
Observation	31	0	27	4	87%

4 Discussion

Traditional Chinese Medicine notes that after age 35, women experience declining Yangming meridian qi and blood, leading to facial laxity or “face scorching” [7]. The “Yang-regulating and Brain-healthy” acupuncture method, developed by Professor Hui Jianrong, emphasizes Yang meridian acupoints and layered needling [4]. Superficial needling mobilizes wei qi, middle-layer needling adjusts fascial tension, and deep needling regulates the hypothalamic-pituitary-adrenal axis via “needle sensation-neuroendocrine” pathways, improving qi and blood flow [4]. This creates a “skin stimulation-meridian conduction-organ regulation” effect, enhancing facial microcirculation and repair.

Acupoints target three facial zones (forehead-temporal, zygomatic-cheek, mandibular-neck): Touwei regulates qi and blood, relaxing temporalis to reduce forehead wrinkles; Qubin balances temporalis and orbicularis oculi, alleviating periorbital wrinkles; Yangbai maintains forehead smoothness; Sibai relaxes periorbital muscles, reducing dynamic wrinkles [8]; Yingxiang enhances nasal muscle tone, improving nasolabial folds [9]; Jiache and Xiaguan balance masticatory muscles, improving jawline contours; dense needling at nasolabial Ahshi points supports tissue lifting via mechanical stress and meridian regulation [10].

4.1 Limitations

1) Therapist non-blinding may introduce bias. 2) Lack of placebo control. 3) Small sample size requires multi-center validation. 4) Subjective scores may be influenced by patient expectations.

5 Conclusions

Both “Yang-regulating and Brain-healthy” acupuncture and LED light therapy improve nasolabial folds and VISIA wrinkle and texture scores in facial skin laxity, but acupuncture demonstrates superior efficacy, warranting clinical promotion.

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 Clinical Research

Effects of Acupuncture on Endometrial Blood Perfusion, Anxiety, Depression, and Pregnancy Outcomes in Frozen-Thawed Embryo Transfer Patients

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Abstract

Objective: To evaluate the effects of acupuncture on endometrial blood perfusion, anxiety, depression, and pregnancy outcomes in frozen-thawed embryo transfer (FET) patients undergoing hormone replacement therapy (HRT) or GnRH agonist down-regulation plus HRT (GnRH-a+HRT), and to analyze the correlation between endometrial blood perfusion indices, anxiety, depression, and clinical pregnancy, exploring potential mechanisms.

Methods: Ninety-eight patients from the Reproductive Medicine Department of Guangdong Hospital of Traditional Chinese Medicine were randomized into an acupuncture group and a basic treatment group (49 each). Eighty-eight patients were included in the final analysis. The basic treatment group received HRT or GnRH-a+HRT, while the acupuncture group received additional acupuncture from the start of HRT, every 3 days until one day before transplantation (5–6 sessions). Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS) scores were measured at enrollment and on transplantation day. Differences in endometrial thickness (EMT), endometrial volume (EV), endometrial morphology types, endometrial peristalsis, endometrial blood flow grade, blood flow parameters, uterine artery hemodynamic parameters, SAS/SDS scores, and pregnancy outcomes were compared. Correlation analysis assessed relationships between blood perfusion indices, clinical pregnancy, and SAS/SDS scores. Binary logistic and linear regression analyses inferred acupuncture's mechanisms.

Results: □ Baseline: No significant differences in age, BMI, baseline EMT, infertility duration, SAS/SDS scores, infertility types, fertilization methods, endometrial preparation protocols, or embryo characteristics ($P>0.05$). □ Transformation day: Acupuncture group's mean systolic/diastolic ratio (mS/D) was lower than the basic treatment group's ($P<0.05$); no differences in E2, EMT, EV, endometrial type, blood flow/peristalsis grades, VI, FI, VFI, mPI, or mRI ($P>0.05$). □ Transplantation day: Acupuncture group's EMT, EV, and VFI were higher, and mS/D and mRI were lower than the basic treatment group's ($P<0.05$); no differences in endometrial type, blood flow/peristalsis grades, VI, FI, or mPI ($P>0.05$). □ Anxiety/Depression: Post-treatment SAS/SDS scores decreased in both groups ($P<0.05$);

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acupuncture group's scores were lower, with larger reductions ($P < 0.05$). □ Pregnancy Outcomes: Acupuncture group's clinical pregnancy rate was higher ($P < 0.05$); biochemical pregnancy rate was lower, and early miscarriage rate was higher, but not significantly ($P > 0.05$). □ Safety: Acupuncture group's adverse reaction rate was 2.2%. □ Correlation/Regression: Transplantation day mRI negatively correlated with clinical pregnancy ($P < 0.05$, $r = -0.308$); logistic regression confirmed mRI's significant effect ($P < 0.05$). mS/D, mPI, and mRI positively correlated with SAS scores ($r = 0.312, 0.326, 0.425$, $P > 0.05$); linear regression showed significant effects on SAS scores in the acupuncture group ($P < 0.05$). No significant correlations between EMT, EV, VI, VFI and SAS, or any indices and SDS ($P > 0.05$).

Conclusions: □ Acupuncture improves endometrial blood perfusion, reduces anxiety/depression, and increases clinical pregnancy rates. □ Acupuncture may enhance clinical pregnancy by reducing uterine artery mRI on transplantation day, improving blood perfusion and embryo implantation. □ Acupuncture may alleviate anxiety by reducing mS/D, mPI, and mRI.

Keywords— Acupuncture; Frozen-Thawed Embryo Transfer; Endometrial Blood Perfusion; Anxiety and Depression; Pregnancy Outcomes

1 Introduction

Frozen-thawed embryo transfer (FET) is a cornerstone of assisted reproductive technology, with endometrial blood perfusion critical for embryo implantation [1]. Inadequate perfusion may lead to implantation failure and reduced clinical pregnancy rates [2]. FET patients often experience anxiety and depression, potentially affecting perfusion and outcomes [3]. Acupuncture, a safe and effective traditional Chinese medicine intervention, has been used to improve reproductive outcomes [4]. This study compares acupuncture combined with HRT or GnRH-a+HRT against basic treatment, assessing effects on perfusion, anxiety, depression, and pregnancy outcomes, and exploring mechanisms.

2 Methods

This trial adheres to the 2010 CONSORT Statement, approved by the Ethics Committee of Guangdong Hospital of Traditional Chinese Medicine (Approval No. GDHTCM-2023-045).

2.1 Study Design

This 2-arm, randomized controlled trial recruited patients from the Reproductive Medicine Department of Guangdong Hospital of Traditional Chinese Medicine from June 2023 to June 2024. Acupuncture was administered from HRT onset to one day before transplantation (5–6 sessions). Outcomes were assessed at enrollment and on transplantation day.

2.2 Participants

Ninety-eight FET patients were recruited via hospital promotions, randomized into acupuncture and basic treatment groups (49 each). Ten patients dropped out, leaving 88 (45 acupuncture, 43 basic treatment).

Inclusion Criteria: ☐ Eligible for FET with HRT or GnRH-a+HRT; ☐ Aged 20–40; ☐ No severe cardiovascular, liver, or kidney diseases; ☐ No acupuncture or TCM treatments in past 3 months; ☐ Voluntary participation with informed consent.

Exclusion Criteria: ☐ Severe chronic diseases; ☐ Uterine malformations or severe endometrial pathology; ☐ Psychiatric history; ☐ Pregnant or lactating; ☐ Unwilling to be randomized.

2.3 Sample Size

Based on clinical pregnancy rates (50% acupuncture, 30% basic treatment), with $\alpha=0.05$ and 80% power, 44 patients per group were needed. Accounting for 10% dropout, 49 per group (98 total) were enrolled.

2.4 Randomization and Blinding

A random number table (1:1 allocation) was used, with sequences generated by an independent party and sealed in opaque envelopes. Patients and outcome assessors were blinded; therapists were not due to intervention nature.

2.5 Interventions

2.5.1 Basic Treatment Group

Received standard HRT or GnRH-a+HRT, tailored by reproductive specialists.

2.5.2 Acupuncture Group

In addition to basic treatment, acupuncture was administered from HRT onset, every 3 days until one day before transplantation (5–6 sessions). Acupoints included Guanyuan (CV4), Zigong (EX-CA1), Sanyinjiao (SP6), Taixi (KI3), and Zusanli (ST36). Using 0.25×40mm needles, sites were disinfected, and needles were inserted vertically with twisting reinforcement to achieve deqi, retained for 30 minutes. Acupoint locations followed national standards [5].

2.6 Outcomes

Three-dimensional power Doppler ultrasound (3D-PDA) measured endometrial thickness (EMT), endometrial volume (EV), vascularization index (VI), flow index (FI), vascularization flow index (VFI), mean pulsatility index (mPI), mean resistance index (mRI), and mean systolic/diastolic ratio (mS/D). Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS) assessed psychological status [6]. Pregnancy outcomes included clinical pregnancy, biochemical pregnancy, and early miscarriage rates.

2.7 Statistical Analysis

SPSS 26.0 was used. Data were reported as means±SD. Paired t-tests compared pre- and post-treatment within groups, independent t-tests compared between groups, Pearson correlation an-

alyzed relationships, and binary logistic/linear regression explored mechanisms. $P < 0.05$ indicated statistical significance.

3 Results

3.1 Baseline Characteristics

No significant differences in age, BMI, baseline EMT, infertility duration, SAS/SDS scores, infertility types, fertilization methods, endometrial preparation protocols, or embryo characteristics ($P > 0.05$).

3.2 Transformation Day Outcomes

Acupuncture group's mS/D was lower than the basic treatment group's ($P < 0.05$). No differences in E2, EMT, EV, endometrial type, blood flow/peristalsis grades, VI, FI, VFI, mPI, or mRI ($P > 0.05$).

3.3 Transplantation Day 3D-PDA Outcomes

Acupuncture group's EMT, EV, and VFI were higher, and mS/D and mRI were lower than the basic treatment group's ($P < 0.05$). No differences in endometrial type, blood flow/peristalsis grades, VI, FI, or mPI ($P > 0.05$).

3.4 Anxiety and Depression

Post-treatment SAS/SDS scores decreased in both groups ($P < 0.05$). Acupuncture group's scores were lower, with larger reductions ($P < 0.05$).

3.5 Pregnancy Outcomes

Acupuncture group's clinical pregnancy rate was higher (51.1% vs 30.2%, $P < 0.05$). Biochemical pregnancy rate was lower, and early miscarriage rate was higher, but not significantly ($P > 0.05$). See Table 1.

Table 1: Comparison of Pregnancy Outcomes (%)

Group	n	Clinical Pregnancy Rate	Biochemical Pregnancy Rate	Early Miscarriage Rate
Basic Treatment	43	30.2	18.6	11.6
Acupuncture	45	51.1*	13.3	15.6

Note: * $P < 0.05$ vs basic treatment group.

3.6 Safety

Acupuncture group's adverse reaction rate was 2.2%, with no severe events.

3.7 Correlation and Regression Analysis

Transplantation day mRI negatively correlated with clinical pregnancy ($P < 0.05$, $r = -0.308$); logistic regression confirmed mRI's significant effect ($P < 0.05$). mS/D, mPI, and mRI positively correlated with SAS scores ($r = 0.312, 0.326, 0.425$, $P > 0.05$); linear regression showed significant effects on SAS scores in the acupuncture group ($P < 0.05$). No significant correlations between EMT, EV, VI, VFI and SAS, or any indices and SDS ($P > 0.05$).

4 Discussion

Acupuncture improves endometrial blood perfusion by reducing uterine artery mS/D, mPI, and mRI, promoting embryo implantation [4]. Its mechanism may involve neuroendocrine regulation, enhancing uterine microcirculation [3]. Acupuncture also reduces anxiety and depression via autonomic nervous system modulation, potentially improving endometrial receptivity [7]. The higher clinical pregnancy rate in the acupuncture group highlights its potential in FET.

4.1 Limitations

1) Therapist non-blinding may introduce bias. 2) Small sample size requires multi-center validation. 3) Lack of placebo control. 4) Psychological scores may be influenced by subjective factors.

5 Conclusions

Acupuncture enhances endometrial blood perfusion, reduces anxiety and depression, and improves clinical pregnancy rates in FET patients. It likely works by reducing uterine artery mRI and mS/D to improve perfusion and embryo implantation, and by modulating blood flow parameters to alleviate anxiety.

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 Experimental Study

Electroacupuncture Downregulates IL-17A To Inhibit Neurotoxic Astrocytes And Improve Cerebral Ischemia-reperfusion Injury

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Abstract

Cerebral ischemia-reperfusion injury (CIRI) is a key pathological process in ischemic stroke, but effective treatment strategies remain limited. Neurotoxic astrocytes, driven by inflammatory mediators such as interleukin-17A (IL-17A), exacerbate neuronal damage. Electroacupuncture (EA) has demonstrated neuroprotective potential, but its mechanisms for regulating IL-17A and astrocyte-mediated neurotoxicity during CIRI remain unclear. This study aimed to investigate whether EA could inhibit the activation of neurotoxic astrocytes by downregulating IL-17A, thereby alleviating CIRI. A mouse middle cerebral artery occlusion and reperfusion (MCAO/R) model was established using the Zea-Longa modified ligation method. The Baihui (GV20) and Fengfu (GV16) acupoints were selected as the EA treatment sites. Neurobehavioral changes in mice were observed using the modified neurological deficit score (mNSS), foot fault test, and balance beam test; cerebral infarction volume was assessed via TTC staining; neuronal ultrastructure was examined using transmission electron microscopy; cerebral blood flow changes before and after modeling and EA treatment were observed via laser speckle blood flow imaging to evaluate the efficacy of EA treatment. Western blotting was used to detect the expression of IL-17A, IL-17RA, NF- κ B p65, Bax, Bcl-2, and c-caspase3/Caspase3 protein expression; immunofluorescence was used to detect co-staining of IL-17A with GFAP and C3, and GFAP with IL-17RA. qPCR was used to detect the relative expression levels of IL-17A mRNA. TUNEL was used to detect neuronal apoptosis on the ischemic side; ELISA was used to detect the levels of inflammatory factors IL-17A, TNF- α , and IL-1 β levels in brain tissue. The results showed that EA significantly improved neurological deficit scores, reduced infarct volume, and alleviated neuronal apoptosis. Compared with the model group, EA reduced the expression of IL-17A and related proteins, inhibited neurotoxic astrocytes (C3+/GFAP+), and decreased the secretion of inflammatory factors. Furthermore, the therapeutic effects of EA were re-

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versed by administration of recombinant interleukin-17A, indicating that EA inhibits the expression of neurotoxic astrocytes by modulating IL-17A-related pathways, thereby alleviating neuroinflammation.

Keywords— electroneedle; cerebral ischemia-reperfusion injury, astrocytes, IL-17A , Neuroinflammation

 Experimental Study

Neurochemical Mechanisms of Acupuncture Point Stimulation: Contributions of Serotonin and Oxytocin

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Abstract

Background and Objective: Acupuncture point stimulation is recognized for alleviating stress-related symptoms, such as anxiety and emotional tension, partly through activation of the serotonergic nervous system, which regulates mood and stress responses. However, the role of the oxytocinergic system, known for its anxiolytic and social bonding effects, remains underexplored. This study investigates the contribution of oxytocin to the stress-relieving effects of acupuncture point stimulation, compared to the established serotonergic response.

Materials and Methods: Wistar rats (n=3) were randomly assigned to two groups. Group A received stimulation at ST-36 (Zusanli), a point used in Traditional Chinese Medicine (TCM) for systemic regulation. Group L received identical stimulation with pre-administration of L-368,899, a selective oxytocin receptor antagonist. Stimulation used 0.3 mm sterile stainless steel needles. Extracellular serotonin levels in the raphe nuclei were measured via in vivo microdialysis and high-performance liquid chromatography (HPLC). Statistical analysis employed Student's t-test and Dunnett's test post one-way ANOVA.

Results: Group A showed a significant 18.9% increase in serotonin levels 20 minutes post-stimulation (p=0.04), consistent with prior studies. Group L exhibited only a transient, non-significant serotonin increase. These findings suggest that sustained serotonergic activation by acupuncture may partly depend on oxytocin signaling, indicating a synergistic interaction.

Conclusion: Acupuncture at ST-36 activates both serotonergic and oxytocinergic systems, enhancing stress relief through synergistic neurochemical pathways. Further studies are needed to validate these mechanisms in larger samples.

Keywords— Acupuncture, Serotonin, Oxytocin, Stress Relief, Traditional Chinese Medicine

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1 Introduction

Acupuncture point stimulation is a cornerstone of Traditional Chinese Medicine (TCM), valued for its ability to alleviate stress-related symptoms, including anxiety and emotional tension [1]. Prior research, including our own, has established that stimulation of specific points, such as ST-36 (Zusanli), activates the serotonergic nervous system, which plays a critical role in mood regulation and stress response [2]. The neuropeptide oxytocin, known for its anxiolytic and social bonding effects, may also contribute to acupuncture's therapeutic effects, but its role is less understood [3]. This study aims to elucidate the oxytocinergic system's contribution to stress relief induced by acupuncture point stimulation, compared to the established serotonergic response, to better understand the neurochemical mechanisms underlying TCM's efficacy.

2 Materials and Methods

Wistar rats (n=3) served as experimental subjects and were randomly assigned to two groups. Group A received acupuncture stimulation at ST-36 (Zusanli), a point widely used in TCM for its systemic regulatory effects [1]. Group L received identical stimulation following pre-administration of L-368,899, a selective oxytocin receptor antagonist, to block oxytocin signaling [3]. Stimulation was performed using sterile, disposable stainless steel needles (0.3 mm diameter). Extracellular serotonin (5-HT) levels in the raphe nuclei were measured via *in vivo* microdialysis, followed by high-performance liquid chromatography (HPLC) analysis. Statistical comparisons were conducted using Student's t-test for group differences and Dunnett's multiple comparison test following one-way ANOVA to assess significance over time.

3 Results

In Group A, serotonin levels in the raphe nuclei increased significantly by 18.9% ($p=0.04$) 20 minutes post-stimulation compared to baseline, consistent with previous findings on ST-36's serotonergic activation [2]. In contrast, Group L, with oxytocin signaling inhibited, showed only a transient, non-significant increase in serotonin levels. These results suggest that while acupuncture at ST-36 robustly activates the serotonergic system, the sustained effect may partially rely on oxytocin signaling, indicating a synergistic interaction between the serotonergic and oxytocinergic systems in stress modulation.

4 Discussion

The significant 18.9% increase in serotonin levels in Group A aligns with prior studies demonstrating ST-36's role in activating the serotonergic system for stress relief [1, 2]. The transient, non-significant response in Group L, where oxytocin signaling was blocked, suggests that oxytocin may sustain or amplify serotonin's effects, supporting a synergistic neurochemical mechanism. This interaction could explain acupuncture's efficacy in managing stress-related symptoms like anxiety, as oxytocin is known to enhance emotional regulation and reduce stress responses [3]. Limitations include the small sample size (n=3), which restricts generalizability, and the focus on animal models, necessitating human studies to confirm translatability. Future research should explore additional acupuncture points and larger cohorts to validate these findings and elucidate the precise pathways of serotonin-oxytocin synergy.

5 Conclusion

Acupuncture at ST-36 activates both serotonergic and oxytocinergic systems, enhancing stress relief through synergistic neurochemical pathways. The partial dependence of sustained serotonin increases on oxytocin signaling highlights a novel mechanism underlying acupuncture's therapeutic effects. Further studies with larger samples and human subjects are warranted to confirm these findings and optimize TCM-based interventions for stress-related disorders.

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 Experimental Study

Exploring the effects of electroacupuncture on neuroinflammation and neovascularization in mice with cerebral ischemia-reperfusion injury based on the NOX2 signaling pathway

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Abstract

Objective: We observed the effects of electroacupuncture on the NOX2 signaling pathway and related factors in CIRI mice, and explored the regulatory mechanisms of neuroinflammation and neovascularization after CIRI.

Methods: Ten male C57BL/6 mice were randomly selected as the sham operation group, and the rest of the mice were used to prepare the CIRI mouse model by the modified Longa wire bolus method. After the unsuccessful and dead mice were excluded, the remaining mice were randomly divided into the model group, the electro-acupuncture group, and the inhibitor group, with 10 mice in each group. In the electroacupuncture group, electroacupuncture was applied to “Baihui” and “Neiguan” at 8 h after modeling, with sparse and dense waves, frequency 5 Hz/25 Hz, current 1 mA, once a day, each time for 20 min for 3 consecutive d. The inhibitor group was given intraperitoneal injections of NOX2 (Apocynin), an inhibitor of CIRI, at 8 h after modeling. Apocynin (2.5 mg/kg) was injected intraperitoneally 8 h after modeling for 3 consecutive d. Neurological function was assessed using the Zea-Longa scale; motor function was assessed using the balance beam and foot fault test; cerebral perfusion was measured by laser diffusion flow imaging; CD31-positive cells in the ischemic semidarkness band were counted by immunofluorescence staining (microvessel density); IL-18, IL-1 β , IL-1 β , IL-2 β , IL-1 β , and IL-1 β were detected by ELISA. -18, IL-1 β , TNF- α , and VEGF content; protein expression of GFAP, NOX2, NLRP3, IL-18, IL-1 β , TNF- α , and VEGF was detected by Western Blot; and RT-qPCR was used to detect GFAP, NOX2, VEGF, and CD31 mRNA expression.

Results: Compared with the sham-operated group, the neurological deficit score was elevated in the model group ($P < 0.01$); the score of the balance beam experiment was elevated ($P < 0.01$); the rate of foot failure was elevated ($P < 0.01$); the cerebral perfusion was reduced ($P < 0.01$); the density of the microvessels in ischemic hemidiaphragm was reduced

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($P < 0.01$); the content of IL-18, IL-1 β , and TNF- α was elevated ($P < 0.01$), and VEGF content was decreased ($P < 0.01$); protein expression of GFAP, NOX2, NLRP3, IL-18, IL-1 β , and TNF- α was elevated ($P < 0.01$), and that of VEGF was decreased ($P < 0.01$); GFAP and NOX2 mRNA expression was elevated ($P < 0.01$), and VEGF and CD31 mRNA ($P < 0.05$) expression was decreased. Compared with the model group, the neurological deficit score was reduced in the electroacupuncture group ($P < 0.01$); the score of the balance beam experiment was reduced ($P < 0.01$); the rate of foot malfunction was reduced ($P < 0.01$); the cerebral blood perfusion was elevated ($P < 0.01$); the microvessel density of ischemic hemidiaphragm zone was elevated ($P < 0.05$); the content of IL-18, IL-1 β , TNF- α was reduced ($P < 0.01$) and VEGF content was elevated ($P < 0.01$); protein expression of GFAP, NOX2, NLRP3, IL-18, IL-1 β , and TNF- α was decreased ($P < 0.01$), and that of VEGF was elevated ($P < 0.01$); and the expression of GFAP and NOX2 mRNA was decreased ($P < 0.05$, $P < 0.01$), and that of VEGF and CD31 mRNA ($P < 0.01$) expression was elevated. Compared with the model group, the neurological deficit score was reduced in the inhibitor group ($P < 0.01$); the score of the balance beam experiment was reduced ($P < 0.01$); the rate of foot failure was reduced ($P < 0.01$); cerebral perfusion was elevated ($P < 0.01$); the microvessel density of ischemic hemidiaphragm zone was elevated ($P < 0.05$); the content of IL-18, IL-1 β , TNF- α was reduced ($P < 0.01$), and VEGF content was elevated ($P < 0.01$); protein expression of GFAP, NOX2, NLRP3, IL-18, IL-1 β , and TNF- α was decreased ($P < 0.01$), and that of VEGF was elevated ($P < 0.01$); and the expression of GFAP and NOX2 mRNA was decreased ($P < 0.01$), and that of VEGF and CD31 mRNA ($P < 0.01$), VEGF and CD31 mRNA ($P < 0.01$).

Conclusion: Electroacupuncture “Baihui” and “Neiguan” improved the neurological deficits such as motor dysfunction in CIRI mice, and its effect may be related to the inhibition of astrocyte activation by electroacupuncture and consequently the inhibition of NOX2 signaling pathway, which inhibited the downstream levels of inflammatory factors, and promoted the expression of vascular neovascular factors. and promoting the expression of vascular neovascularization factors.

Keywords— cerebral ischemia-reperfusion injury, NOX2, electroacupuncture, neuroinflammation, vascular neovascularization

 Experimental Study

BNST GABAergic neurons regulate autophagy to alleviate depressive symptoms accompanied by gastric dysfunction

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Abstract

Objective: To investigate the neurobiological mechanisms of electroacupuncture (EA) in treating depression comorbid with gastrointestinal dysfunction, focusing on the neural-gastrointestinal transmission mechanism mediated by GABAergic neurons in the bed nucleus of the stria terminalis (BNST).

Methods: A chronic unpredictable mild stress (CUMS)-induced mouse model of depression with comorbid gastrointestinal dysfunction was established. Behavioral tests (forced swim test, tail suspension test, elevated plus maze, open field test) and gastroelectrophysiological detection were performed to evaluate intervention effects. Chemogenetic techniques were used to regulate BNST GABAergic neuron activity. Transcriptomic sequencing and Western blot validation were integrated to study the neuro-molecular mechanism of EA's holistic regulation.

Results: EA significantly alleviated depressive-like behaviors and gastrointestinal motility dysfunction in CUMS mice. CUMS suppressed BNST GABAergic neuron activity, while EA reversed this inhibitory effect. Chemogenetic activation of BNST GABAergic neurons mimicked EA's therapeutic effects, alleviating depressive-like behaviors and gastrointestinal dysfunction in CUMS mice. Transcriptomic analysis and protein validation showed that EA inhibited the expression of autophagy-related proteins (ATG13, ATG5, and Beclin1) in gastric tissues by modulating BNST GABAergic neurons.

Conclusion: This study reveals a novel BNST GABAergic neuron-mediated brain-gastric axis transmission mechanism, clarifying EA's dual-pathway mode ("neuron activation-autophagy inhibition") in alleviating depression-associated gastrointestinal dysfunction.

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These findings provide neurobiological evidence for acupuncture in treating psychosomatic comorbidities.

Keywords— Electroacupuncture; Bed nucleus of the stria terminalis (BNST); GABAergic neurons; Autophagy; Psychosomatic comorbidity

 Experimental Study

Experimental study of electroacupuncture therapy on improving reproductive function of oligoasthenospermia rats through HPG axis

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Abstract

Objective: To explore the effects of electroacupuncture (EA) therapy with different acupoint combinations on improving reproductive function in oligoasthenospermia rat models through the hypothalamic-pituitary-gonadal (HPG) axis.

Methods: Fifty SD rats were randomly divided into blank control, model, EA group 1 (Shu-Mu acupoint combination), EA group 2 (Local-Distal acupoint combination), and L-carnitine groups, with 10 rats each. An oligoasthenospermia model was established using adenine gavage. After model confirmation, interventions were applied: L-carnitine group (L-carnitine oral liquid, 10 mL/kg, once daily, 28 days), EA group 1 (EA at Ertou Sanxian, Shenshu, Jingmen, Taixi, 30 min/day, 28 days), and EA group 2 (EA at Zhongji, Guanyuan, Zusanli, Sanyinjiao, 30 min/day, 28 days). Post-treatment, serum levels of inhibin B (INHB), testosterone (T), gonadotropin-releasing hormone (GnRH), and follicle-stimulating hormone (FSH) were measured using ELISA. Bilateral kidney and testes weights were measured, and their ratios to body weight were calculated. Sperm count, density, motility, and motility rate in the epididymis were assessed. Testicular pathological morphology was examined using hematoxylin-eosin (HE) staining.

Results: Compared to the blank group, the model group showed decreased serum GnRH, INHB, and T levels ($P < 0.05$), increased FSH levels ($P < 0.05$), reduced sperm count, density, survival rate, and motility rate ($P < 0.05$), and disordered testicular structure with loosely arranged seminiferous tubules, reduced sperm cell numbers, and loose interstitial tissue. Compared to the model group, the L-carnitine, EA group 1, and EA group 2 showed increased serum GnRH, INHB, and T levels ($P < 0.05$), decreased FSH levels ($P < 0.05$), significantly increased sperm count, density, survival rate, and motility rate ($P < 0.05$), and notable recovery of testicular pathology with tighter seminiferous tubule arrangement and increased sperm cell numbers.

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Conclusion: Electroacupuncture therapy improves reproductive function in oligoasthenospermia rat models, likely by regulating the neuroendocrine function of the HPG axis.

Keywords— Oligoasthenospermia; Electroacupuncture; Shu-Mu acupoint combination; Local-Distal acupoint combination; HPG axis

 Experimental Study

Acupuncture at Baihui (GV20) and Zusanli (ST36) Ameliorates Depressive-like Behaviors in Rats via Vagus Nerve-Mediated Regulation of Gut Microbiota and Inhibition of Ferroptosis in the Hippocampal CA1 Region

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Abstract

Background: Depression is a prevalent psychiatric disorder closely linked to gut-brain axis dysregulation and neuronal ferroptosis. Acupuncture, a traditional Chinese medical intervention, modulates the gut microbiota via vagal pathways, but the underlying mechanisms remain unclear.

Objective: To investigate whether acupuncture at Baihui (GV20) and Zusanli (ST36) alleviates depressive-like behaviors in rats by regulating gut microbiota and its metabolites through the vagus nerve, improving intestinal barrier integrity, and inhibiting ferroptosis in the hippocampal CA1 region.

Methods: A chronic unpredictable mild stress (CUMS) model was established in rats, divided into control, model, acupuncture, and vagotomy groups. Behavioral assessments included the forced swim test, sucrose preference test, and open field test. Gut microbiota composition was analyzed via 16S rRNA sequencing. Serum short-chain fatty acids (SC-FAs) were measured using GC-MS. Intestinal barrier integrity and tight junction protein expression were evaluated using HE staining and Western blot. Systemic inflammatory cytokines (TNF- α , IL-6) were measured by ELISA. Hippocampal CA1 region pathology was

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examined using HE staining and transmission electron microscopy. Ferroptosis-related proteins (GPX4, ACSL4) were analyzed by Western blot.

Results: Acupuncture at Baihui (GV20) and Zusanli (ST36) significantly improved depressive-like behaviors, restored gut microbial diversity and beneficial taxa abundance, increased serum SCFA levels, enhanced intestinal barrier integrity, and reduced systemic TNF- α and IL-6 expression. Acupuncture also inhibited ferroptosis in hippocampal CA1 neurons, upregulating GPX4 and downregulating ACSL4. These effects were significantly reduced after vagotomy, highlighting the vagus nerve's critical role in acupuncture's regulatory effects.

Conclusion: Acupuncture at Baihui (GV20) and Zusanli (ST36) exerts antidepressant effects by modulating the gut-brain axis via the vagus nerve, improving the gut microenvironment, and suppressing hippocampal ferroptosis. These findings provide novel mechanistic insights and experimental evidence for acupuncture as a promising therapy for depression.

Keywords— Acupuncture; Vagus nerve; Gut microbiota; Ferroptosis; Depression; Gut-brain axis

 Experimental Study

Prefrontal cortex SGK1 mediates the regulation of electroacupuncture at shenmen(HT7) on anxiety-fear-like behavior in PTSD mice

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Abstract

Objective: To investigate the effects of electroacupuncture (EA) on post-traumatic stress disorder (PTSD)-like behavior and serum/glucocorticoid-regulated kinase 1 (SGK1) expression in the medial prefrontal cortex (mPFC) of mice, elucidating SGK1's role in mediating improvements in PTSD and anxiety-fear-like behavior.

Methods: Male C57BL/6J mice were randomly assigned to normal, model, EA, and EA+SGK1 knockdown groups. A PTSD model was induced using the single prolonged stress plus stimulation (SPSS) method. The EA group received EA at Shenmen (HT7) for 15 minutes daily for 14 days. The EA+SGK1 knockdown group underwent specific SGK1 knockdown in the mPFC. PTSD-like behavior was assessed using the elevated plus maze. SGK1 mRNA, protein, and related neuron expression levels in the mPFC were quantified using real-time quantitative PCR, Western blot, and immunofluorescence.

Results: Compared to the model group, EA at Shenmen (HT7) significantly increased time spent in the central area of the elevated plus maze ($p < 0.05$), increased open arm entries and time spent in open arms ($p < 0.05$), reduced freezing time ($p < 0.05$), and upregulated SGK1 mRNA, protein, and related neuron expression levels in the mPFC ($p < 0.05$), as well as neuronal calcium activity in the mPFC ($p < 0.05$). Compared to the EA group, the EA+SGK1 knockdown group showed increased freezing time ($p < 0.05$) and elevated neuronal calcium activity in the mPFC ($p < 0.05$).

Conclusion: Electroacupuncture at Shenmen (HT7) significantly improves anxiety-like behavior in PTSD mice, likely by upregulating SGK1 expression in the mPFC.

Keywords— SGK 1; electroacupuncture; Shenmen Acupoint; mPFC; PTSD

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 Experimental Study

Electroacupuncture pretreatment alleviates MIRI by reducing the engulfment of LHGlu neuronal dendritic spines by microglia in the Lateral Hypothalamus

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Abstract

Objective: Myocardial ischemia-reperfusion injury (MIRI) is associated with neuroinflammatory responses and excessive microglial activation. Effective clinical strategies to prevent MIRI remain unclear. This study investigates potential therapeutic targets and mechanisms of electroacupuncture pretreatment (EA-pre) for MIRI.

Methods: A MIRI mouse model was established by ligating the left anterior descending coronary artery for 30 minutes followed by 2 hours of reperfusion. The mechanisms of EA-pre in alleviating MIRI were examined using immunofluorescence staining, chemogenetics, and fiber photometry recordings, focusing on the involvement of microglia and glutamate neurons in the lateral hypothalamus (LH).

Results: EA-pre improved cardiac function by suppressing LH microglia activity in MIRI mice, likely through modulation of microglial engulfment. Targeted activation of LH microglia reversed EA-pre's effects on microglial engulfment, increasing LH glutamate neuron activity, leading to sympathetic nervous system overactivation and exacerbating MIRI.

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Conclusion: EA-pre inhibits microglial engulfment of LH glutamate neuron dendritic spines in MIRI mice, suppressing glutamate neuron activity and reducing sympathetic nervous system output, thus exerting a cardioprotective effect.

Keywords— Electroacupuncture pretreatment; Myocardial ischemia-reperfusion injury; Lateral hypothalamus; Microglia; Glutamate neuron

 Experimental Study

An experimental study based on the theory of acupoint-viscera correlation to explore the interrelationship between bilateral PC6 and the three-dimensional functional network of the heart

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Abstract

Objective: To explore the functional network interrelationship between bilateral homonymous meridians, homonymous acupoints, and related target organs, investigating the functional network correlation between myocardial ischemia-reperfusion injury (MIRI) rats and bilateral Neiguan (PC6), whether acupuncture initiates acupoint sensitization, and the potential mechanisms of electroacupuncture (EA) in improving MIRI.

Methods: Forty-eight male Wistar rats were randomly divided into four groups (n=12): control (Control), model (I/R), EA left PC6 (I/R+EA-L), and EA right PC6 (I/R+EA-R). Except for the Control group, the MIRI model was established by ligating the left anterior descending coronary artery. EA groups received intervention for 3 days post-operation (continuous wave, 2/30 Hz, 1.0 mA, 20 min/time, 1 time/day). TTC staining assessed myocardial infarction area, and HE staining evaluated the scope and degree of myocardial histopathological changes. Serum creatine kinase isoenzyme (CK-MB) and cardiac troponin I (cTnI) levels were measured by ELISA to assess myocardial injury. Differentially expressed genes (DEGs) in bilateral PC6 areas were screened by transcriptome sequencing, with Tgm3, Dapl1, and Gjb4 mRNA expression verified by RT-qPCR. Western Blot detected autophagy-related and PI3K/Akt/mTOR pathway proteins. All experiments were synchronized in bilateral PC6 areas and diseased myocardium.

Results: In the Control group, Tgm3, Dapl1, and Gjb4 mRNA expression in bilateral PC6 areas was not significant, with no myocardial infarction, neatly aligned myocardial fibers, no fractures, no inflammatory infiltration, and normal CK-MB and cTnI levels. In the I/R group, Tgm3, Dapl1, and Gjb4 mRNA expression in bilateral PC6 areas was significantly upregulated, accompanied by enlarged myocardial infarction area, fiber breakage, inflammatory infiltration, and elevated CK-MB and cTnI levels. Compared to the I/R group, I/R+EA-L and I/R+EA-R groups showed downregulated DEGs in bilateral PC6 areas, with more significant downregulation on the EA-treated side ($P < 0.05$), reduced myocardial infarction area, alleviated pathological damage, and lower serum marker levels, with no significant dif-

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ference in EA efficacy between groups ($P > 0.05$). Mechanistically, the I/R group showed elevated myocardial PI3K/Akt/mTOR pathway activity and increased autophagy protein P62 expression, which were significantly reversed in the I/R+EA-L and I/R+EA-R groups after EA intervention.

Conclusion: Under myocardial ischemia-reperfusion pathology, upregulation of DEGs in bilateral PC6 areas with myocardial injury reflects an acupoint sensitivity response without anti-ischemic, anti-pathological, or anti-inflammatory effects, indicating no acupoint sensitization. EA at unilateral PC6 induces consistent changes in ipsilateral and contralateral PC6 areas, with more pronounced DEG downregulation on the treated side, effectively improving MIRI-related myocardial injury with anti-ischemic, anti-pathological, and anti-inflammatory effects, indicating acupoint sensitization. Acupoint stimulation is critical for transitioning from acupoint sensitivity to sensitization. Functional interactions exist between left/right PC6 and MIRI myocardium, forming a functional network correlation, with acupuncture as a key initiator of acupoint sensitization. Additionally, EA at PC6 may improve MIRI by suppressing PI3K/Akt/mTOR pathway activity and enhancing autophagy function. This study provides evidence for the functional network relationship between bilateral homonymous meridians, acupoints, and related viscera.

Keywords— MIRI; PC6; Acupoint-Viscera; Functional Network; Acupoint Sensitization

 Experimental Study

Electroacupuncture Pretreatment Attenuates Myocardial Ischemia-Reperfusion Injury Via LncRNA TUG1/miR-186-5p/CLPX Axis

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Abstract

Objective: Myocardial ischemia-reperfusion injury (MIRI) often leads to oxidative stress and mitochondrial dysfunction. CLPX, a molecular chaperone of CLPP, hydrolyzes misfolded proteins and maintains mitochondrial homeostasis, but its role in MIRI remains underexplored. This study investigates the mechanism by which electroacupuncture (EA) regulates CLPX to protect mitochondria and prevent MIRI.

Methods: SD rats were randomly divided into sham, model (I/R), and EA groups (n=10 each) using a random number method. The MIRI model was established by ligating the left anterior descending coronary artery. The EA group received EA pretreatment at Neiguan (PC6), followed by MIRI modeling in the I/R and EA groups. Myocardial damage was assessed by echocardiography, TTC staining, serum myocardial enzyme profile, and TUNEL staining. Oxidative stress was evaluated using flow cytometry and biochemical methods. Mitochondrial morphology was observed via transmission electron microscopy, and myocardial ATP content was measured to assess mitochondrial function. In vitro, H9c2 cells were treated with H₂O₂ and varying concentrations of CLPX overexpression or knockdown plasmids. Single-cell datasets identified lncRNAs potentially regulating CLPX expression. Binding between CLPX, miR-186-5p, and TUG1 was assessed using a dual luciferase assay.

Results: Compared to the I/R group, EA prevented myocardial apoptosis, alleviated oxidative stress, protected mitochondria, and inhibited CLPX overexpression in MIRI rats ($P < 0.05$). In vitro, CLPX and CLPP expression in H9c2 cells increased with prolonged H₂O₂ treatment, and H9c2 cell death was dose-dependently related to CLPX overexpression. Notably, 0.5 μ g CLPX plasmid (6-well plate) was nearly non-toxic and protected H9c2 cells from H₂O₂-induced death. CLPX knockdown before H₂O₂ treatment significantly reduced apoptosis ($P < 0.01$). Single-cell datasets revealed similar transcript level distributions for TUG1 and CLPX in myocardial tissue. Dual luciferase assays confirmed that TUG1 positively regulates CLPX expression by sponging miR-186-5p. Compared to the sham group, lncRNA TUG1 expression was elevated in the I/R group ($P < 0.05$), while EA suppressed CLPX stress-induced elevation by downregulating TUG1 expression ($P < 0.01$).

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Conclusion: CLPX overexpression induces cardiomyocyte death, whereas EA inhibits CLPX stress-induced elevation via the TUG1/miR-186-5p axis, reducing oxidative stress, maintaining mitochondrial function, and protecting the myocardium in MIRI rats.

Keywords— Myocardial ischemia-reperfusion injury; Electroacupuncture; Mitochondria; Benign stress response; Malignant stress response

 Experimental Study

Mechanism of Electroacupuncture Promoting Angiogenesis in Rats with Cerebral Ischemia Based on miR-210 Regulation of the SOCS1-JAK2-STAT3-VEGF Signaling Pathway

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Abstract

Objective: To investigate the effects of electroacupuncture on miR-210 and the SOCS1-JAK2-STAT3-VEGF signaling pathway in a rat model of cerebral ischemia and explore its regulatory mechanism in promoting angiogenesis.

Methods: SD rats were randomly divided into control, model, electroacupuncture, and inhibitor groups, each subdivided into 3, 7, and 14-day treatment subgroups (12 rats each). The right middle cerebral artery occlusion (MCAO) model was established using the Zea Longa method. The electroacupuncture group received treatment at “Dazhui” and “Baihui” acupoints with dense-sparse wave (2Hz/20Hz, 0.5mA intensity) for 20 minutes daily, starting 4 hours post-surgery, for 3, 7, or 14 days. The inhibitor group received electroacupuncture plus daily intraperitoneal SOCS1-specific inhibitor injections (0.3mg/kg) for 3, 7, or 14 days. Neurological deficits were assessed using the modified neurological severity score (mNSS). Transmission electron microscopy observed ultrastructure of neurons and microvascular endothelial cells in the ischemic penumbra cortex. Immunohistochemistry measured microvascular density (MVD). Western blot and real-time quantitative PCR assessed SOCS1, JAK2, STAT3, VEGF protein and mRNA, and miR-210 expression in the ischemic penumbra cortex.

Results: Compared with the control group, the model group showed increased mNSS ($P<0.01$), with edema and severe structural damage in neurons and microvascular endothelial cells. MVD and SOCS1, JAK2, STAT3, VEGF protein and mRNA expression increased ($P<0.01$), while miR-210 expression decreased ($P<0.01$). Compared with the model group, both intervention groups had significantly lower mNSS ($P<0.01$, $P<0.05$) and improved ultrastructure, with the electroacupuncture group showing better recovery. MVD increased in both treatment groups at 3 and 14 days ($P<0.01$) and in the electroacupuncture group at 7 days ($P<0.05$). SOCS1, JAK2, STAT3, VEGF protein and mRNA, and miR-210 expression increased in both intervention groups ($P<0.01$, $P<0.05$). Compared with the electroacupuncture group, the inhibitor group showed lower MVD ($P<0.05$, $P<0.01$) and reduced expression of SOCS1, JAK2, STAT3, VEGF proteins and mRNAs, and miR-210 ($P<0.01$). Within groups, mNSS was lowest at 14 days ($P<0.01$). MVD and SOCS1 protein expression in-

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creased at 7 and 14 days compared to 3 days ($P<0.01$, $P<0.05$). SOCS1 mRNA and miR-210 expression in the model and electroacupuncture groups increased at 14 days compared to 3 and 7 days ($P<0.01$, $P<0.05$). In the inhibitor group, SOCS1, JAK2, STAT3, and VEGF mRNA expression increased at 7 and 14 days compared to 3 days ($P<0.01$).

Conclusion: Electroacupuncture at “Dazhui” and “Baihui” significantly regulates SOCS1-JAK2-STAT3-VEGF signaling pathway protein and mRNA expression in the ischemic penumbra cortex of MCAO rats, likely by upregulating miR-210 to target this pathway, promoting angiogenesis and exerting neuroprotective effects.

Keywords— Cerebral Ischemia; Electroacupuncture; Angiogenesis; mRNA; SOCS1-JAK2-STAT3-VEGF Signaling Pathway

1 Introduction

Cerebral ischemia is a common neurological disorder threatening human health. Angiogenesis is a critical mechanism for recovery post-ischemia. Electroacupuncture, a traditional Chinese therapy, shows significant efficacy in promoting neurological recovery and angiogenesis. This study investigates the effects of electroacupuncture on miR-210 and the SOCS1-JAK2-STAT3-VEGF signaling pathway in a rat model, exploring its mechanism in promoting angiogenesis to provide a theoretical basis for clinical treatment.

2 Materials and Methods

2.1 Experimental Animals and Grouping

Healthy male SD rats were randomly assigned to control, model, electroacupuncture, and inhibitor groups, each subdivided into 3, 7, and 14-day treatment subgroups (12 rats each).

2.2 Model Preparation

The right middle cerebral artery occlusion (MCAO) model was established using the Zea Longa method, following standard protocols.

2.3 Interventions

Electroacupuncture Group: Treatment at “Dazhui” and “Baihui” acupoints used dense-sparse wave (2Hz/20Hz, 0.5mA intensity) for 20 minutes daily, starting 4 hours post-surgery, for 3, 7, or 14 days.

Inhibitor Group: Alongside electroacupuncture, daily intraperitoneal SOCS1-specific inhibitor injections (0.3mg/kg) were administered for 3, 7, or 14 days.

2.4 Outcome Measures

- **Neurological Assessment:** Modified neurological severity score (mNSS) evaluated neurological deficits.
- **Ultrastructure Observation:** Transmission electron microscopy assessed neuron and microvascular endothelial cell ultrastructure in the ischemic penumbra cortex.
- **Microvascular Density (MVD):** Immunohistochemistry measured MVD in the ischemic penumbra cortex.
- **Protein and Gene Expression:** Western blot detected SOCS1, JAK2, STAT3, VEGF protein expression; real-time quantitative PCR measured SOCS1, JAK2, STAT3, VEGF mRNA, and miR-210 expression.

2.5 Statistical Analysis

Data were expressed as mean $\pm$ standard deviation and analyzed using SPSS software. Inter-group comparisons used one-way ANOVA, with $P < 0.05$ indicating statistical significance.

3 Results

3.1 Neurological Severity Score (mNSS)

Compared to the control group, the model group showed higher mNSS ($P < 0.01$). Compared to the model group, both intervention groups had lower mNSS ($P < 0.01$, $P < 0.05$), with greater improvement in the electroacupuncture group. All groups had the lowest mNSS at 14 days ($P < 0.01$).

3.2 Ultrastructure Observation

The model group exhibited edema and severe structural damage in neurons and microvascular endothelial cells. Both intervention groups showed improved ultrastructure, with the electroacupuncture group outperforming.

3.3 Microvascular Density (MVD)

Compared to the control group, the model group had higher MVD ($P < 0.01$). Compared to the model group, both treatment groups showed increased MVD at 3 and 14 days ($P < 0.01$), and the electroacupuncture group at 7 days ($P < 0.05$). The inhibitor group had lower MVD than the electroacupuncture group ($P < 0.05$, $P < 0.01$). MVD increased at 7 and 14 days compared to 3 days in all groups ($P < 0.01$, $P < 0.05$).

3.4 Protein and Gene Expression

Compared to the control group, the model group showed increased SOCS1, JAK2, STAT3, VEGF protein and mRNA expression ($P < 0.01$) and decreased miR-210 expression ($P < 0.01$). Compared to the model group, both intervention groups showed increased SOCS1, JAK2, STAT3, VEGF protein and mRNA, and miR-210 expression ($P < 0.01$, $P < 0.05$). The inhibitor

group had lower expression of these markers compared to the electroacupuncture group ($P<0.01$). In the model and electroacupuncture groups, SOCS1 mRNA and miR-210 expression increased at 14 days compared to 3 and 7 days ($P<0.01$, $P<0.05$). In the inhibitor group, SOCS1, JAK2, STAT3, and VEGF mRNA expression increased at 7 and 14 days compared to 3 days ($P<0.01$).

4 Discussion

Electroacupuncture at “Dazhui” and “Baihui” upregulates miR-210 expression, targeting the SOCS1-JAK2-STAT3-VEGF signaling pathway, promoting angiogenesis in the ischemic penumbra cortex, improving ultrastructure, reducing mNSS, and exerting neuroprotection. The inhibitor group’s weaker effects confirm the critical role of the miR-210-SOCS1-JAK2-STAT3-VEGF pathway in electroacupuncture’s mechanism.

5 Conclusion

Electroacupuncture at “Dazhui” and “Baihui” significantly regulates SOCS1-JAK2-STAT3-VEGF signaling pathway protein and mRNA expression in MCAO rats, likely by upregulating miR-210 to target this pathway, promoting angiogenesis and neuroprotection.

 Experience Transmission

Historical Evolution And Clinical Characteristics Of Zhux27;s Needling Method

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Abstract

Zhu's needling method is an important branch of acupuncture and moxibustion in traditional Chinese medicine. It originated from Mr. Yang, a wandering doctor in the late Qing Dynasty, and was formally founded after his daughter Zhu Yang's work pulse table was handed down to his son zhufulin. Zhufulin, known as "divine needle", has practiced medicine for more than 50 years to treat more than 300000 patients, and founded the first Acupuncture Department in Northern Jiangsu in Yangzhou. His son zhuxintai, as the fourth generation of heirs, has integrated modern medical theory, innovated techniques, and improved Zhu's needlework system. In 2016, he was listed in the intangible cultural heritage of Jiangsu Province. Core techniques and theoretical features: 1 Fast acupuncture can regulate qi, and it is flexible in reinforcing and reducing: fast acupuncture: it emphasizes that the needle is fast, the Qi is fast, and the effect is fast. For acute diseases, it is often "needle to disease", while for chronic diseases, it shortens the course of treatment. Method of activating qi: pay attention to the transmission of needle sensation to the disease site, such as "treating anesthesia with anesthesia, and treating pain with Tongzhi", which has an immediate effect. . 2. innovative techniques and comprehensive therapies; Zhuxintai created the characteristic combination of "Fengchi three needle method" (treating headache and cervical spondylosis) and "throat four needle method" (treating throat disease). Flexible use of electroacupuncture (high-frequency strong stimulation), water acupuncture (high-dose drug acupoint injection), catgut embedding and other auxiliary therapies, according to individual conditions. 3. integration of theory with modern medicine: it advocates the organic combination of meridian system and nervous system, blood system, immune system and other systems, and puts forward "respecting the ancient but not the ancient, and innovation is inseparable from the source". Zhu's acupuncture has a significant effect in the treatment of scapulohumeral periartthritis, lumbar spondylosis, stroke hemiplegia and other difficult diseases, especially good at emergency treatment. At present, through the inheritance and training of working teachers, college teachers and family teachers, the establishment of national, provincial and Municipal Teachers' studios, and overseas communication (such as medical aid in Tanzania) continue to develop.. In the future, we need to strengthen the protection of inheritors and the cultivation of young talents to maintain the sustainability of this traditional medical treasure.

Keywords— Zhux27;s Needling Method, Acupuncture, Traditional Chinese Medicine, Intangible Cultural Heritage

 Experience Transmission

Premenstrual Syndrome and Acupuncture in Traditional Chinese Medicine

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Abstract

Objective: To explore the therapeutic role of acupuncture in managing Premenstrual Syndrome (PMS) based on Traditional Chinese Medicine (TCM) principles.

Subjects and Methods: This study examines PMS as a manifestation of internal imbalances in TCM, focusing on Liver, Spleen, Heart, and Kidney disharmonies. Various syndromes (e.g., Liver Qi Stagnation, Liver Blood Deficiency) are differentiated, with acupuncture points and treatment principles outlined for each. The approach integrates TCM diagnostics and clinical observations.

Results: Acupuncture effectively addresses PMS symptoms by regulating Qi and Blood flow, soothing Liver Qi, nourishing Blood, subduing Liver Yang, tonifying Spleen Qi, warming Kidney Yang, clearing Fire, and calming the Mind, tailored to specific syndromes.

Conclusion: Acupuncture offers a personalized, effective treatment for PMS by harmonizing organ systems and alleviating symptoms, supported by TCM syndrome differentiation.

Keywords— Premenstrual Syndrome, acupuncture, Traditional Chinese Medicine, Qi regulation, syndrome differentiation

1 Introduction

Premenstrual Syndrome (PMS) is a common disorder characterized by recurrent physical and emotional symptoms during the luteal phase of the menstrual cycle, resolving after menstruation begins, significantly impacting quality of life. Biomedically, PMS is linked to hormonal fluctuations, particularly estrogen and progesterone [1, 2]. In Traditional Chinese Medicine (TCM), it reflects internal imbalances, primarily involving the Liver, Spleen, Heart, and Kidney systems. Acupuncture, a core TCM modality, aims to harmonize Qi and Blood flow, regulate organ systems, and alleviate PMS symptoms.

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2 Traditional Chinese Medicine Syndromes Related to PMS

In TCM, PMS is viewed as a spectrum of syndromes due to disharmony among the Zang-Fu organs, with syndrome differentiation (Bian Zheng) guiding individualized acupuncture strategies based on symptoms, tongue, pulse, and treatment principles.

2.1 Liver Qi Stagnation

The most common PMS syndrome, resulting from the Liver's failure to regulate Qi, often due to emotional stress.

Symptoms: Irritability, mood swings, breast distension, hypochondriac pain, abdominal bloating, premenstrual tension, sighing.

Tongue: Normal or slightly red sides.

Pulse: Wiry.

Treatment Principle: Soothe the Liver, regulate Qi, relieve stagnation.

Acupuncture Points: LIV-3 (Taichong), LI-4 (Hegu), GB-34 (Yanglingquan), SJ-6 (Zhigou), P-6 (Neiguan), SP-6 (Sanyinjiao).

Explanation: Emotional disturbances impair Liver Qi flow, causing stagnation and related symptoms.

2.2 Liver Blood Deficiency

Arises from chronic illness, overwork, or poor nutrition, leading to insufficient Liver Blood.

Symptoms: Depression, fatigue, poor memory, dizziness, scanty periods, blurred vision, dry eyes, insomnia.

Tongue: Pale and thin.

Pulse: Choppy or fine.

Treatment Principle: Nourish Liver Blood, regulate the cycle.

Acupuncture Points: LIV-8 (Ququan), SP-6 (Sanyinjiao), ST-36 (Zusanli), BL-18 (Ganshu), BL-20 (Pishu).

Explanation: Liver Blood, vital for emotional stability and menstruation, when deficient, causes neuro-psychological and menstrual issues.

2.3 Liver Yang Rising

Evolves from prolonged Liver Qi stagnation or Liver Yin deficiency.

Symptoms: Headaches, irritability, dizziness, red eyes, tinnitus, bitter taste, anger.

Tongue: Red with yellow coating.

Pulse: Wiry and rapid.

Treatment Principle: Subdue Liver Yang, nourish Liver Yin.

Acupuncture Points: LIV-2 (Xingjian), GB-20 (Fengchi), KI-3 (Taixi), SP-6 (Sanyinjiao), LIV-8 (Ququan).

Explanation: Insufficient Yin allows excessive Yang to rise, causing heat and agitation.

2.4 Spleen Qi Deficiency with Dampness

Linked to fatigue, dietary irregularities, and chronic digestive weakness.

Symptoms: Bloating, loose stools, fatigue, heaviness, foggy mind, breast distension, vaginal discharge.

Tongue: Pale with teeth marks, greasy coating.

Pulse: Weak or slippery.

Treatment Principle: Tonify Spleen Qi, resolve Dampness.

Acupuncture Points: SP-3 (Taibai), ST-36 (Zusanli), SP-9 (Yinlingquan), REN-12 (Zhongwan), BL-20 (Pishu).

Explanation: Weak Spleen Qi fails to transform fluids, leading to Damp accumulation.

2.5 Kidney Yang Deficiency

Common in those with constitutional weakness or chronic disease.

Symptoms: Cold sensations, low libido, fatigue, back pain, menstrual irregularities, depression.

Tongue: Pale, swollen.

Pulse: Deep, weak, slow.

Treatment Principle: Warm Kidney Yang, tonify the Uterus.

Acupuncture Points: KI-3 (Taixi), REN-4 (Guanyuan), DU-4 (Mingmen), BL-23 (Shenshu), ST-36 (Zusanli).

Explanation: Kidney Yang warms reproductive functions and hormonal regulation.

2.6 Phlegm-Fire Harassing the Heart

Arises from excessive emotional stress and poor lifestyle, producing Heat and Phlegm.

Symptoms: Severe mood swings, anxiety, restlessness, insomnia, chest oppression, mental confusion.

Tongue: Red with sticky yellow coating.

Pulse: Slippery, rapid.

Treatment Principle: Clear Fire, transform Phlegm, calm the Mind.

Acupuncture Points: HT-7 (Shenmen), P-7 (Daling), ST-40 (Fenglong), REN-14 (Juque), DU-20 (Baihui).

Explanation: Emotional distress disrupts the Heart, producing Heat and Phlegm that obscure the Mind.

2.7 Liver Heat

Progresses from Liver Qi stagnation transforming into Heat.

Symptoms: Irritability, red eyes, bitter taste, thirst, constipation, premenstrual headaches.

Tongue: Red with redder sides.

Pulse: Wiry and rapid.

Treatment Principle: Clear Liver Heat, calm the Mind.

Acupuncture Points: LIV-2 (Xingjian), GB-43 (Xiashi), LI-11 (Quchi), SP-6 (Sanyinjiao), LIV-3 (Taichong).

Explanation: Emotional and dietary factors convert stagnation into Heat, intensifying PMS symptoms.

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 Experience Transmission

Application of Body-Qi-Spirit Auricular Diagnosis and Treatment in Psychosomatic Diseases

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Abstract

Psychosomatic disorders are a group of conditions closely associated with psychological and social factors. This study explores the relationship between traditional Chinese medicine (TCM) emotional theory, psychosocial medicine, and Body-Qi-Spirit theory to analyze the etiology and prevention of psychosomatic disorders, highlighting the forward-thinking perspective of TCM. It advocates for the integrated and complementary clinical application of Body-Qi-Spirit theory with auricular diagnosis and treatment. Based on five years of clinical research on auricular treatment of psychosomatic disorders, this paper discusses and summarizes the practical applications of Body-Qi-Spirit Auricular Diagnosis and Treatment in the diagnosis, treatment, and healthcare applications of psychosomatic disorders, promoting its continuous improvement and widespread adoption.

Keywords— Body-Qi-Spirit Auricular Diagnosis and Treatment; Psychosomatic disorders; TCM emotional theory; Psychosocial medicine

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 Experience Transmission

Why Is Regulating Qi So Important in Acupuncture, and How Is It Practised Clinically?

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Abstract

Objective: To investigate the critical role of acupoint stimulation in regulating physiological responses in acupuncture and its clinical application, elucidating the scientific basis of Traditional Chinese Medicine (TCM) acupoint therapy.

Methods: Based on TCM principles, filiform needle acupuncture was employed, using manipulation techniques (e.g., lifting-thrusting, twisting-rotating, following Qi flow, breathing coordination, opening-closing) to stimulate specific acupoints and induce therapeutic sensory responses (e.g., soreness, numbness, distension, heaviness). Stimulation intensity and techniques were adjusted based on patient constitution and disease nature (e.g., excess or deficiency conditions, young or elderly patients). Clinical practice emphasized practitioner focus, clinical experience, and observation of patient responses to optimize outcomes and minimize discomfort.

Results: Therapeutic sensory responses induced by acupoint stimulation are essential for acupuncture efficacy. Patients with excess conditions or younger, healthier individuals typically exhibit stronger sensory responses, requiring moderate stimulation, while those with deficiency conditions or elderly patients show subtler responses, necessitating gentler techniques. Needle manipulation (e.g., lifting-thrusting, twisting-rotating) effectively modulates organ system functions (e.g., cardiovascular circulation, spleen metabolism) and immune and nutritional status. Appropriate techniques significantly enhance therapeutic outcomes with no notable adverse effects.

Conclusion: Acupoint stimulation in acupuncture regulates physiological responses, enhancing organ system function and systemic balance, which is central to its therapeutic efficacy. Personalized needle manipulation and practitioner professionalism are critical for optimizing outcomes, warranting further research and clinical application.

Keywords— Acupuncture; Acupoint stimulation; Therapeutic sensory response; Traditional Chinese Medicine; Physiological regulation

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 Experience Transmission

Fengfu Acupoint: The Preferred Acupoint for Acupuncture Treatment of Facial Paralysis

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Abstract

The Fengfu acupoint (GV16), an intersection point of the Governor Vessel and multiple meridians, is a key acupoint for treating wind pathogens. Facial paralysis, commonly known as Bell's palsy, is a dysfunction of facial expression muscles due to facial nerve damage. Acupuncture, as a traditional Chinese medicine therapy, is widely used in the treatment of facial paralysis. This article aims to explore the clinical application and advantages of acupuncture centered on the Fengfu acupoint in treating facial paralysis. Clinical observations indicate that acupuncture at Fengfu alone or in combination with other acupoints can significantly improve symptoms, shorten recovery time, and increase cure rates. Compared to conventional Western medical treatments, this approach demonstrates significant efficacy with fewer side effects, applicable to the acute, recovery, and sequelae stages. Therefore, the Fengfu acupoint is regarded as the preferred acupoint for acupuncture treatment of facial paralysis.

Keywords— Fengfu Acupoint, Acupuncture, Facial Paralysis, Treatment, Clinical, Acupoint

1 Introduction

Western medicine often employs hormones and physical therapy for facial paralysis, which, while effective, carry significant side effects. Acupuncture, as a traditional Chinese medicine therapy, offers notable efficacy with minimal side effects. The use of the Fengfu acupoint as the primary point in acupuncture treatment of facial paralysis holds unique advantages [1].

2 Clinical Manifestations and Classification of Facial Paralysis

Facial paralysis, also known as facial neuritis or Bell's palsy, is a peripheral facial nerve paralysis caused by nonspecific inflammation. Its main clinical manifestation is dysfunction of the facial expression muscles on the affected side, with symptoms including skewed mouth and eyes, deviated nasolabial fold, speech leakage, drooling, difficulty closing the eyes, and weak cheek puffing.

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Based on the lesion site, facial paralysis is classified into peripheral and central types. Commonly referred to Bell's palsy typically denotes peripheral facial paralysis.

- **Peripheral Facial Paralysis:** Often caused by cold exposure or viral infections, the lesion occurs at the facial nerve nucleus or the facial nerve itself, manifesting as paralysis of facial expression muscles on one side.
- **Central Facial Paralysis:** The lesion is located above the facial nerve nucleus up to the corticomedullary tract, typically caused by cerebrovascular disease, intracranial tumors, brain trauma, or inflammation. It manifests as paralysis of the lower half of the face, often accompanied by other neurological symptoms.

2.1 Main Differences

- **Onset Age:** Peripheral facial paralysis can occur at any age, typically with acute onset peaking within 1–3 days; central facial paralysis is more common in individuals over 60.
- **Etiology:** Peripheral paralysis is often triggered by damage to the facial nerve nucleus or nerve due to cold exposure, viral infections, chronic suppurative otitis media, trauma, or local inflammation causing vascular spasms and microcirculatory disorders, leading to impaired nourishment of the facial nerve [2]. Central paralysis results from damage to supranuclear structures (cortex, corticobulbar fibers, pons, internal capsule), commonly due to cerebrovascular diseases, brain tumors, carotid artery occlusion, or hemiplegia, with potential for self-recovery after controlling the underlying condition.
- **Clinical Manifestations:**
 - **Peripheral Facial Paralysis:** Acute onset, dry eyes, involuntary tearing, inability to close eyelids, loss of forehead wrinkles, difficulty frowning, nasal flaring obstruction, mouth skewed to the healthy side due to traction, difficulty chewing, and food retention. Early-stage mastoid pain may occur, and if the lesion is in the lower pons to the stylomastoid foramen, it may involve taste loss, lacrimal and salivary gland dysfunction, and auditory changes.
 - **Central Facial Paralysis:** Paralysis of facial expression muscles below the eyelid on the opposite side of the lesion, with preserved frowning, eyebrow lifting, and eye closure. Forehead wrinkles remain symmetrical. Often accompanied by hemiplegia on the same side as the paralysis, abnormal tendon reflexes, and Babinski sign, with no taste, lacrimal, salivary, or auditory changes.

3 Theoretical Basis of Acupuncture for Facial Paralysis

In traditional Chinese medicine, facial paralysis falls under the categories of “mouth distortion” or “skewed mouth.” It is believed to result from a weak constitution, deficient meridians, and invasion of wind-cold or wind-heat pathogens, leading to meridian stagnation, muscle malnutrition, and laxity. Treatment focuses on expelling wind, unblocking meridians, regulating muscles, promoting qi and blood flow, and restoring facial muscle function. Acupuncture centered on the Fengfu acupoint, supplemented by local acupoints on the Hand and Foot Yangming meridians and Hand and Foot Shaoyang meridians, effectively unblocks meridians, harmonizes qi and blood, and restores facial muscle function [3].

4 Fengfu Acupoint

4.1 Efficacy

- **Expelling Wind, Relieving Exterior, Unblocking Meridians, and Alleviating Pain:** As an intersection point of the Governor Vessel and multiple meridians, Fengfu has significant effects in expelling wind, relieving the exterior, unblocking meridians, and alleviating pain. Facial paralysis, often caused by external wind pathogens or internal wind disturbances, can be effectively treated by acupuncture at Fengfu, which disperses wind, clears meridians, and relieves muscle tension and spasms, thereby improving facial muscle function.
- **Calming the Mind and Awakening the Brain:** Belonging to the Governor Vessel and connected to the brain, Fengfu calms the mind and awakens brain functions. For facial paralysis patients with neurological or expression abnormalities, acupuncture at Fengfu regulates nerve function and promotes nerve conduction, accelerating muscle recovery [4].
- **Harmonizing Qi and Blood, Promoting Recovery:** Intersecting with the Foot Taiyang Bladder Meridian and Yangwei Vessel, Fengfu harmonizes qi and blood and clears phlegm. Acupuncture at this point enhances facial blood flow, improves nerve nutrition, and promotes facial nerve repair, speeding up recovery.

Clinical treatment of facial paralysis with acupuncture at Fengfu alone or in combination with other acupoints significantly improves symptoms, shortens recovery time, and increases cure rates, showing efficacy in the acute, recovery, and sequelae stages. Thus, Fengfu is regarded as the “primary acupoint” for treating facial paralysis [5].

4.2 Location

Located at the nape, one inch directly above the posterior hairline, in the depression below the external occipital protuberance, between the trapezius muscles.

4.3 Method of Locating

The patient sits upright with the head slightly lowered or lies prone. Palpate the prominent external occipital protuberance at the occiput. Below it, between the two large trapezius muscles, a depression with tenderness upon pressure indicates the acupoint.

4.4 Anatomical Structure

Passes through the skin, subcutaneous tissue, nuchal ligament, spinous ligament, and yellow ligament. The acupoint area includes accompanying arteries, with deeper structures such as the atlanto-occipital membrane, greater occipital nerve, occipital artery, dura mater, and spinal cord.

4.5 Therapeutic Indications

- Neurological disorders: facial paralysis, stroke, dementia.

- Psychiatric disorders: mania, hysteria.
- ENT disorders: headache, vertigo, neck stiffness, eye pain, epistaxis, sore throat, aphonia.

4.6 Acupuncture Technique

The patient sits upright at a desk with the head slightly tilted forward and neck muscles relaxed. Use straight or oblique needling, with a depth of 0.5–1 inch, directed toward the oral cavity or jaw. Monitor the patient's mental state during the procedure, uses gentle techniques without twisting or lifting-thrusting. Do not retain the needle. Depending on the condition, perform 2–5 insertions per session.

4.7 Precautions

Avoid upward oblique or deep needling to prevent penetrating the foramen magnum and damaging the medulla. This acupoint is contraindicated for moxibustion, as it may exacerbate wind-related conditions.

5 Commonly Used Acupoints and Treatment Methods

5.1 Primary Acupoints

- **Dicang:** Enhances facial muscle function and coordination.
- **Jiache:** Promotes jaw muscle movement and chewing function.
- **Xiaguan:** Treats skewed mouth and restores facial symmetry.
- **Fengchi:** Expels wind, unblocks meridians, relieves symptoms, and improves facial sensation.
- **Yangbai:** Restores muscle coordination and facial expression.
- **Zusanli:** Tonifies qi, strengthens the spleen, aids recovery, and boosts stamina.
- **Houxi:** An intersecting point of the eight extraordinary meridians, connects to the Governor Vessel, unblocks facial and neck meridians, and promotes qi and blood flow.

5.2 Secondary Acupoints

- **Hegu:** Regulates hand-face nerve connections, promoting upper limb function recovery.
- **Taichong:** Soothes the liver, regulates qi, harmonizes blood, and improves systemic circulation.
- **Yingxiang:** Improves nasolabial fold symmetry and facial aesthetics.
- **Shuigou:** Treats nasolabial fold deviation and restores facial balance.
- **Zanzhu:** Promotes eye closure and improves eye health.

5.3 Acupuncture Techniques

Primarily use neutral reinforcing-reducing techniques to harmonize qi and blood and restore meridian function. When necessary, apply through-and-through needling to enhance therapeutic effects.

6 Clinical Experience Highlights

- **Early Intervention:** The optimal treatment window is within 1–2 weeks of onset.
- **Differentiated Treatment:** Tailor plans based on etiology, constitution, and disease stage.
- **Emphasis on Needle Sensation:** Ensure sensations like soreness, numbness, or distension reach the affected area.
- **Daily Care:** Avoid cold exposure, keep warm, and provide supportive care.

7 Conclusion

Acupuncture demonstrates significant efficacy in treating facial paralysis, effectively restoring facial muscle function and improving patients' quality of life. Clinical findings show that acupuncture at Fengfu alone or followed by other acupoints yields excellent results in the acute (within 1 week), recovery (1 week to 3 months), and sequelae (after 3 months) stages.

8 Case Study

Patient: Wu, male, 65 years old.

History: Sudden onset of skewed mouth and eyes, drooling, and slurred speech in the morning.

Symptoms: Loss of left forehead wrinkles, widened eye fissure, incomplete eye closure, shallow nasolabial fold, drooping mouth skewed to the right, inability to frown or puff cheeks. Floating and tight pulse, thin white tongue coating.

Diagnosis: Facial paralysis (wind-cold attacking meridians).

Treatment: Acupuncture at Fengfu, straight insertion to 1 inch, no needle retention.

Outcome: Post-treatment, facial function normalized, paralysis resolved.

Follow-up: No recurrence after one year.

Analysis: Fengfu expels wind, relieves the exterior, harmonizes qi and blood, regulates muscles, and clears wind pathogens from the face, effectively treating facial paralysis.

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 Experience Transmission

Professor Yang Guang' s Experience in Treating Herpes Zoster with Fire Needle and Abdominal Acupuncture

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Abstract

Herpes zoster is a common clinical disease that significantly impacts patients' physical and mental health. Through clinical practice under Professor Yang Guang, interviews, and analysis of medical records, the author systematically summarizes Professor Yang Guang' s understanding of the etiology and pathogenesis of this disease. This work also explores his unique academic perspectives and clinical experience in treating herpes zoster using fire needle combined with abdominal acupuncture, providing a reference for optimized treatment. Professor Yang Guang advocates for staged treatment (acute, recovery, and sequelae stages) combined with disease differentiation, meridian differentiation, and syndrome differentiation, utilizing fire needle and abdominal acupuncture. In the acute stage, fire needle therapy is employed to “draw out heat with heat,” “open the door to expel evil,” and “warm and unblock meridians to relieve pain.” Corresponding spinal points, herpes clusters, and surrounding ah-shi points are selected, with quick insertion and withdrawal of the fire needle. The depth and density of punctures are adjusted based on the extent of skin lesions, pain severity, and patient tolerance, aiming to rapidly detoxify, clear heat, unblock local qi and blood, halt disease progression, and significantly alleviate severe pain. In elderly patients, the recovery and sequelae stages are prolonged and often accompanied by weakened vital energy. Professor Yang Guang employs fire needle to unblock qi, blood, and meridians, followed by abdominal acupuncture with fine needles and shallow punctures to support vital energy, warm and unblock meridians, regulate zang-fu organs, consolidate the root, cultivate essence, and shorten the treatment course. His approach reflects the principle of “treating the symptoms in acute cases (fire needle to expel evil and relieve pain)” and “treating the root in chronic cases (abdominal acupuncture to regulate zang-fu organs' qi and blood),” achieving favorable clinical outcomes for various types of herpes zoster patients.

Keywords— Herpes Zoster, Fire Needle, Abdominal Acupuncture, Pain Relief, Meridian Unblocking

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 Experience Transmission

Formation, Application and Development of Tongzhen Therapy

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Abstract

To harness the therapeutic benefits of both sharp and blunt soft tissue release techniques while addressing their respective drawbacks, the first author developed an innovative approach known as Tongzhen therapy. This novel method seeks to combine the effectiveness of sharp soft tissue release, which excels in precise tissue dissection, with the safety profile of blunt release, which minimizes damage to surrounding structures. At the same time, it aims to mitigate the invasiveness associated with sharp techniques and the limited reach often encountered with blunt methods. The first author pioneered the design of a specialized medical tool—a needle knife and a blunt-tip needle integrated within a tubular needle—successfully creating Tongzhen (Through Needle). This versatile instrument enables simultaneous sharp and blunt release, offering a balanced and adaptable solution for soft tissue manipulation.

The theoretical foundation of Tongzhen therapy is built upon a comprehensive framework that integrates multiple principles. These include: 1) the Theory of Closed Surgery, which emphasizes minimally invasive procedures to reduce trauma; 2) the Theory of Sharp Soft Tissue Release, focusing on the precision and efficacy of cutting techniques; 3) the Theory of Blunt Soft Tissue Release, highlighting safety and reduced collateral damage; and 4) the Theory of Combined Sharp and Blunt Soft Tissue Release, which synthesizes the strengths of both approaches to optimize therapeutic outcomes. This multifaceted theoretical base provides a robust rationale for the therapy's application across various clinical scenarios.

In practice, Tongzhen techniques are categorized into two distinct modalities: 1) Deep Fascia Tongzhen Therapy, targeting deeper connective tissue layers to address chronic conditions or structural imbalances; and 2) Superficial Fascia Tongzhen Therapy, focusing on surface-level tissues to relieve tension and improve mobility. These techniques allow practitioners to tailor treatments to the specific needs of patients, enhancing both efficacy and safety. By bridging the gap between invasive and non-invasive methods, Tongzhen therapy represents a significant advancement in soft tissue management, offering a promising avenue for further research and clinical application in modern medical practice.

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Keywords— Soft tissue release, Sharp separation, Blunt separation, Tongzhen, Needle knife, Blunt-tip needle, Acupuncture

1 Introduction

In 1976, Professor Zhu Hanzhang designed the first needle knife and successfully promoted needle knife therapy[1]. Needle knife therapy significantly improved the treatment outcomes for conditions such as neck, shoulder, waist, and leg pain [2–4]. To minimize the damage to surrounding normal soft tissues during needle knife therapy, Chief Physician Zhou Jianbin developed and promoted blunt-tip needle therapy[5]. While blunt-tip needle therapy avoids damage to surrounding normal soft tissues, it cannot cut through dense connective tissues such as fascia and ligaments [5]. To combine the advantages of needle knife and blunt-tip needle therapies while addressing their respective shortcomings, Zhou Jianbin designed the Tongzhen[5]. To help more medical professionals understand Tongzhen therapy in detail, this article provides a comprehensive overview of its formation, application, and development.

2 Formation of Tongzhen Therapy

Needle knife therapy can effectively cut and separate loose connective tissues as well as dense connective tissues such as tendons and ligaments, offering unparalleled effectiveness in soft tissue release[2–4]. However, needle knife therapy also carries the risk of damaging surrounding critical nerves, blood vessels, and organs[6]. To reduce these risks, Zhou Jianbin invented the blunt-tip needle and obtained a patent from the National Intellectual Property Administration of China[7]. Blunt-tip needle therapy minimizes damage to surrounding critical nerves, blood vessels, and organs, providing unmatched safety[5]. However, it cannot cut through dense connective tissues like fascia and ligaments, nor can it penetrate the skin[5]. To harness the strengths of both needle knife and blunt-tip needle therapies while mitigating their drawbacks, Zhou Jianbin pioneered the integration of a needle knife and a blunt-tip needle within a tubular needle, successfully inventing the Tongzhen—a tool capable of simultaneous sharp and blunt release

3 Application of Tongzhen Therapy

3.1 Principles of Tongzhen Therapy

3.1.1 Pathological Theories of Tongzhen Therapy

Zhou Jianbin and colleagues proposed the following pathological theories for Tongzhen therapy: 1) Theory of unobstructed flow preventing pain; 2) Theory of chronic soft tissue injury; 3) Theory of mechanical imbalance; 4) Theory of soft tissue irritation; 5) Theory of fascial science; 6) Theory of chronic visceral diseases[5].

The theory of unobstructed flow preventing pain originates from the classic Chinese medical text Huangdi Neijing (Yellow Emperor's Inner Canon), and Tongzhen therapy inherits this foundational theory. As stated in the Suwen: Discourse on Pain, “When cold qi enters the channels...the qi becomes obstructed, leading to sudden pain.”

The theory of chronic soft tissue injury was first proposed by Professor Zhu Hanzhang, and Tongzhen therapy builds on Zhu's foundational theories of needle knife medicine. This theory posits that the cells of commonly injured soft tissues have weak or no regenerative capacity.

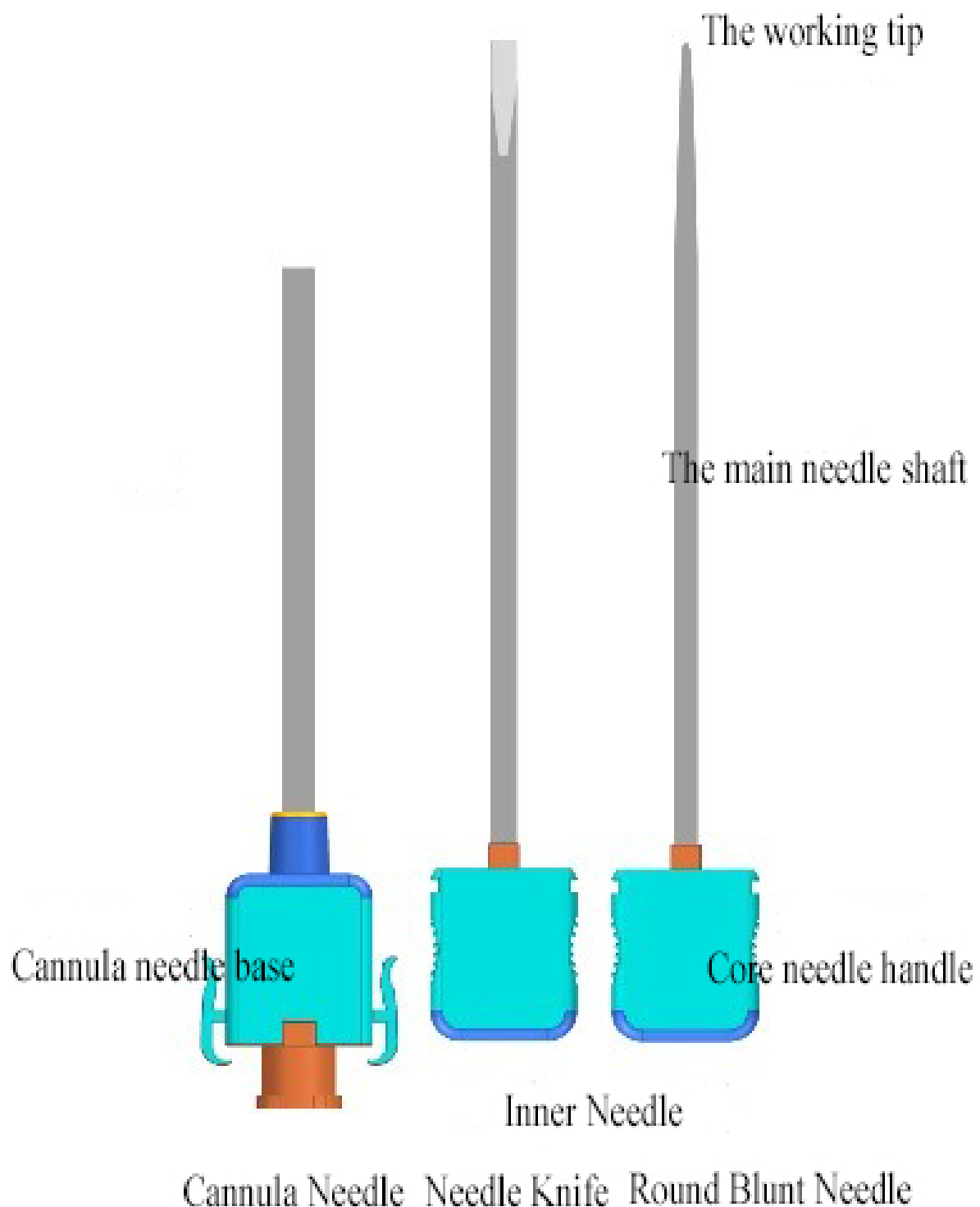


Figure 1: The shape of Tongzhen

Injured areas are repaired by granulation tissue, leading to adhesions, scarring, and contracture, which irritate surrounding nerves and result in a new condition—chronic soft tissue injury[6].

The theory of mechanical imbalance, also proposed by Zhu Hanzhang, is another foundation of Tongzhen therapy. It suggests that external trauma or cumulative strain disrupts the body's biomechanical system, causing an imbalance. If these changes are within the body's compensatory range, no significant clinical symptoms appear; however, if they exceed this range, disrupting biomechanical balance, symptoms and signs may emerge[6].

The theory of soft tissue irritation posits that soft tissue injury triggers an aseptic inflammatory response, leading to adhesions, scarring, and contracture, which irritate surrounding nerves. This causes pain and functional impairment at the injury site, triggering neural reflexes and humoral regulation mechanisms that further induce aseptic inflammation, creating a vicious cycle. The irritation of nerve tissues by aseptic inflammation following soft tissue injury is a key cause of painful conditions[5].

Fascial science theory, applied in the treatment of TCM-dominant conditions such as pain, subhealth, and degenerative diseases, suggests that localized or systemic Tongzhen stimulation can activate the body's post-injury repair mechanisms[5].

The theory of chronic visceral diseases proposes that various injuries causing biomechanical imbalance in the spine lead the body to adopt compensatory adjustments. These adjustments may deform the thoracic and pelvic cavities, causing misalignment of internal organs and subsequent dysfunction[1].

3.1.2 Therapeutic Theories of Tongzhen Therapy

Zhou Jianbin and colleagues proposed the following therapeutic theories for Tongzhen therapy: 1) Theory of closed surgery; 2) Theory of sharp soft tissue release; 3) Theory of blunt soft tissue release; 4) Theory of combined sharp and blunt soft tissue release; 5) Theory of Tongzhen stimulation[5].

The theory of closed surgery, first proposed by Zhu Hanzhang, is inherited by Tongzhen therapy[1].

The theory of sharp soft tissue release suggests that Tongzhen's sharp release is achieved through vertical lifting and thrusting of the sharp release core needle, avoiding sharp longitudinal or transverse separation techniques[5].

The theory of blunt soft tissue release posits that Tongzhen's blunt release is performed by thrusting the blunt release core needle, avoiding deep sweeping blunt release techniques while allowing superficial sweeping blunt release[5].

The theory of combined sharp and blunt soft tissue release asserts that Tongzhen therapy inherits the essence of sharp soft tissue release, using sharp separation to thoroughly release adhesions, scars, and contractures caused by chronic soft tissue injuries, thereby relieving pressure and irritation on nerves and blood vessels. It also inherits the essence of blunt soft tissue release, using blunt separation on loose connective tissues to avoid damaging surrounding blood vessels, nerves, and organs[5].

The theory of Tongzhen stimulation suggests that Tongzhen therapy generates strong acupoint stimulation. Embedding threads through the tubular needle allows for prolonged acupoint stimulation[5].

4 Application Methods of Tongzhen Therapy

4.1 Deep Fascia Tongzhen Therapy

The tubular needle is equipped with a needle knife, locked in place, with the needle knife tip extending 0.5 cm beyond the tubular needle's front end. Holding the needle with the right hand, press the needle knife tip onto the entry point. Depending on the anatomical importance, align the blade edge parallel to critical nerves, blood vessels, and muscle fibers as much as possible. Pierce the skin and advance the needle knife steadily to the target treatment site. This is the first incision.

Using the left index finger and thumb, pinch the clips on both sides of the tubular needle's base to secure it. With the right index finger and thumb, pinch the handle of the needle knife and withdraw it from the tubular needle. Ensure no blood flows from the rear end of the tubular needle; use a syringe to aspirate and confirm the absence of blood before proceeding. If blood flows from the rear end or is aspirated, stop the procedure. Withdraw the blood using the syringe while simultaneously retracting the tubular needle with the left hand, then apply pressure to the target site with the palm for 5 minutes. Apply a sterile dressing to conclude the procedure.

Using the right index finger and thumb, grasp the handle of the blunt-tip needle and insert its tip through the tubular needle, extending 0.5 cm beyond the front end. Perform a single thrust with the blunt-tip needle.

Secure the tubular needle as before with the left hand, and withdraw the blunt-tip needle with the right hand. Confirm no blood flows from the rear end of the tubular needle, and aspirate with a syringe to ensure no blood is present before proceeding. If blood is detected, stop the procedure, withdraw the blood with a syringe, retract the tubular needle, apply pressure for 5 minutes, and apply a sterile dressing to conclude.

The above steps constitute one deep fascia Tongzhen operation.

Move the entry point up and down along the incision line by the length of one incision, and repeat the deep fascia Tongzhen operation at each position once. This completes one deep fascia Tongzhen treatment.

4.2 Superficial Fascia Tongzhen Therapy

After completing deep fascia Tongzhen therapy, retract the blunt-tip needle (still inside the tubular needle) to the subcutaneous level. Based on preoperative assessments—either the direction of pain radiation during resistance contraction tests of the injured muscle or the direction of pain radiation when pressing tender points—advance the blunt-tip needle 4 cm along the subcutaneous fascia in that direction. Use the right index and middle fingers, along with the thumb, to hold the core needle's handle and the tubular needle's base. Using the puncture point as a pivot, perform a fan-shaped motion with the Tongzhen needle in the subcutaneous fascia. During this motion, have the patient perform resistance contraction of the injured muscle as per preoperative tests. Stop the procedure when the patient's pain disappears or when pressing the tender point no longer reduces pain. Secure the tubular needle with the left hand, withdraw the core needle with the right hand, and fix the tubular needle's base with sterile dressing and tape. Withdraw the tubular needle after 24 hours. During withdrawal, aspirate with a syringe while retracting the needle. If blood is present, aspirate the hematoma; if no blood is present,

apply a sterile dressing and press for 5 minutes. This concludes the superficial fascia Tongzhen treatment.

5 Development of Tongzhen Therapy

Professor Zhu Hanzhang invented a series of needle knife patents[8–12]. Chief Physician Zhou Jianbin invented a series of Tongzhen patents, including Medical Multifunctional Tongzhen[13–17]. To simplify the operation and promote Tongzhen therapy, Zhou Jianbin further developed the therapy, primarily improving deep fascia Tongzhen treatment.

During deep fascia Tongzhen treatment, repeatedly switching between the needle knife and blunt-tip needle increases procedural complexity and reduces efficiency. Thus, a simplified version of deep fascia Tongzhen treatment was developed.

In the simplified version, advance the needle knife within the tubular needle to the target site and make the first incision. Move along the incision line to both sides by the length of one incision, repeating the needle knife operation once at each position. Then, withdraw the needle knife from the tubular needle, insert the blunt-tip needle, and extend it 0.5 cm beyond the tubular needle for a single thrust. Move along the incision line to both sides by the length of one incision, repeating the blunt-tip needle operation once at each position.

6 Discussion

The greatest advantage of needle knife therapy lies in the effectiveness of sharp soft tissue release[18, 19]. The needle knife serves as a surgical scalpel in Traditional Chinese Medicine (TCM). Needle knife therapy uses the blade edge in a short linear manner to perform sharp separation of target tissues. It can cut and separate the superficial fascia between the skin and muscles, as well as loose connective tissues between fascia, and can also cut dense connective tissues such as skin, fascia, and ligaments. Needle knife therapy effectively separates adhesions and contracted scars caused by chronic soft tissue injuries, relieving pressure and irritation on blood vessels and nerves, thus addressing the root cause of chronic soft tissue injuries.

The drawback of needle knife therapy lies in the invasiveness of sharp soft tissue release[5]. While it effectively cuts and separates chronically injured soft tissues, it may inadvertently cut surrounding critical structures such as nerves, blood vessels, and organs, causing unintended damage.

The greatest advantage of blunt-tip needle therapy is the safety of blunt soft tissue release[20, 21]. The blunt-tip needle uses thrusting to perform blunt separation of adhered loose connective tissues following chronic injury, avoiding damage to surrounding critical blood vessels, nerves, and organs.

The major limitation of blunt-tip needle therapy is the restricted scope of blunt soft tissue release[5]. It can separate adhered loose connective tissues but cannot penetrate skin, fascia, or ligaments, limiting its applicability.

Given the strengths and weaknesses of needle knife and blunt-tip needle therapies, Tongzhen therapy was developed. Tongzhen therapy combines the effectiveness of sharp soft tissue release with the safety of blunt release, while mitigating the invasiveness of sharp release and the limitations of blunt release. Additionally, the hollow tubular structure of the Tongzhen needle allows blood from damaged vessels at the needle tip to be visible at the tail end, serving as a monitoring mechanism. The outer wall of the tubular needle has 1 cm increment markings, providing a positioning function for treatment[6]. Current minimally invasive TCM needles are classified

into three categories based on their purpose: 1) Sharp release needle knives; 2) Blunt release blunt-tip needles; 3) Tongzhen needles for combined sharp and blunt release[6]. In summary, Tongzhen therapy represents an advancement and evolution of needle knife therapy.

Current Tongzhen therapy can be used more precisely under ultrasound or X-ray guidance but still falls short of direct visualization[22–24]. Needle knife endoscopy, an endoscopic-assisted minimally invasive surgery, enables visualization [25]. With advancements in science and technology, Tongzhen therapy is poised for further development.

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 Experience Transmission

A semi-automatic temperature-controlled moxibustion device for pressure injuries

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Abstract

This paper presents a semi-automatic temperature-controlled moxibustion device designed specifically for pressure injuries. It addresses the shortcomings in clinical moxibustion treatment efficacy for pressure injuries, reduces the risk of burns during procedures, and enhances healthcare professionals' time efficiency. The device adopts a modular design, comprising a housing, combustion unit, and lifting mechanism. It features semi-automatic temperature control and effective burn prevention, improving clinical outcomes and patient experience. The device can be applied in clinical research for wound healing in conditions such as pressure injuries.

Keywords— moxibustion, moxibustion device, pressure injury, device development, patent

1 Introduction

Moxibustion therapy combines the effects of heat and smoke, integrating the benefits of fumigation and moxibustion. Fumigation promotes warming of meridians, improves blood circulation, and regulates skin texture, while moxibustion warms meridians, alleviates cold and pain, supports yang energy, and lifts prolapsed organs [1]. Research indicates that the thermal effect and moxa smoke are critical for wound healing [2]. The thermal effect reduces wound exudation, promotes dryness, shrinks wound size, and facilitates healing and repair. Moxa smoke exhibits antiseptic, anti-aging, and anti-inflammatory properties, applicable for indoor air disinfection and treatment of wounds, ulcers, and fungal infections [3–7]. Moxibustion therapy is widely

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used in clinical practice for conditions such as neurodermatitis and postoperative recovery of perianal diseases, achieving significant therapeutic outcomes.

Moxibustion has a long history, with the earliest records found in the *Fifty-Two Prescriptions* unearthed from the Mawangdui Han Tomb, documenting the use of moxa for fumigation to treat diseases. In the Jin Dynasty, Ge Hong's *Elbow Reserve Emergency Prescriptions* described moxibustion for pain relief using dried moxa. Pressure injuries, also known as bedsores, result from prolonged bed rest, impaired mobility, and blood deficiency, leading to tissue necrosis due to sustained pressure and poor nourishment [8, 9]. Clinical studies show that moxibustion promotes local blood circulation, reduces swelling, and supports wound closure and tissue regeneration [10–13].

However, traditional moxibustion requires healthcare professionals to manually hold moxa sticks or boxes, leading to uncontrolled smoke emissions that pollute indoor air and waste the pharmacological benefits of moxa smoke. The temperature and distance from the treatment site rely on subjective judgment, increasing the risk of burns [2]. Existing moxibustion devices focus primarily on thermal effects, neglecting the role of smoke. This paper introduces a novel semi-automatic temperature-controlled moxibustion device that integrates both heat and smoke effects to enhance treatment efficiency and reduce burn risks.

2 Design Concept and Structure

The device is a semi-automatic temperature-controlled moxibustion apparatus for pressure injuries, adopting a modular design with three main components: housing, combustion unit, and lifting mechanism. The housing features a sealed top cover to prevent moxa smoke leakage and indoor air pollution. The cover includes a gear adjustment mechanism connected to an internal threaded rod for adjusting moxa stick height. A handle on the housing side facilitates operation, equipped with buttons for height adjustment and a display screen for monitoring moxibustion temperature, with an alarm for excessive temperatures. The handle's hollow structure houses a battery to power the temperature alarm and smoke extraction system. The lower part of the housing connects to a silicone contact device via threads for precise treatment targeting. An internal filter ring captures ash drawn by an exhaust fan. The combustion unit includes a barbed holder to secure the moxa stick and a detachable metal mesh at the base to collect ash and prevent accidental burns. A smoke extraction system with a fan collects moxa smoke into a storage chamber, directing it to the affected area to leverage the synergistic effects of heat and smoke.

3 Innovative Features and Advantages

- **Semi-Automated Design:** Buttons adjust the distance between the moxa stick and skin, reducing temperature instability and improving treatment efficiency.
- **Circular Silicone Contact Ring:** Detachable and adaptable to various wound sizes, easy to clean and store.
- **Barbed Moxa Stick Holder:** Secures the moxa stick, minimizing the risk of detachment and burns.
- **Temperature Detection and Alarm:** Real-time temperature monitoring with alarms for high temperatures, reducing burn risks.

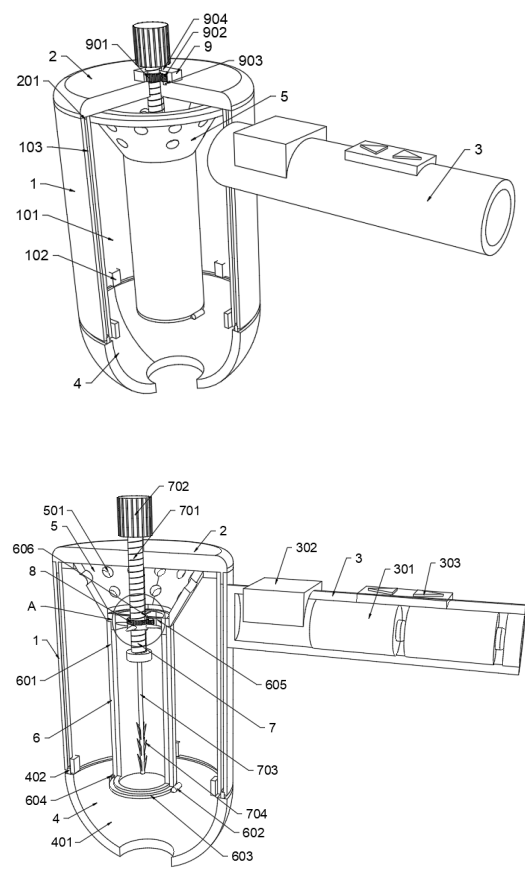


Figure 1: Structure of Device

4 Conclusion

Moxibustion therapy demonstrates significant efficacy in treating pressure injuries and similar wounds, offering astringent, anti-inflammatory, and regenerative effects with minimal side effects and cost-effectiveness, improving patients' quality of life. This semi-automatic temperature-controlled device is user-friendly, combining the benefits of moxa heat and smoke to reduce burn risks, enhance healthcare efficiency, and improve therapeutic outcomes, making it suitable for various clinical conditions.

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 Experience Transmission

The Theoretical Basis and Clinical Application of Abdominal Acupuncture for Invigorating Qi

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Abstract

Objective: Acupuncture therapy has the function of bidirectional regulation of tonifying and purging. Bo's Abdominal Acupuncture Therapy is based on the location of the acupoints and the operation characteristics, which is more suitable for tonifying qi in treatment. The theory of abdominal acupuncture to invigorate qi is derived from the *Huang Di Nei Jing* and has been enriched and developed in the clinical practice of modern medical scientists. This paper systematically expounds the theoretical basis and clinical application of the theory of abdominal acupuncture for invigorating qi from five aspects: the source of theory, mechanism of action, operation method, selection principle of acupoints, and application prospects. Combined with modern research to explore its scientific connotation, in order to provide a reference for the clinic.

Methods: This study reviews ancient medical texts and modern research to analyze the theoretical framework and clinical efficacy of abdominal acupuncture.

Results: The therapy demonstrates significant efficacy in treating qi deficiency syndromes by regulating qi and blood circulation.

Conclusion: Abdominal acupuncture offers a promising approach for invigorating qi, supported by TCM theory and modern science, with potential for further international development.

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Keywords— Bo's Abdominal Acupuncture; Acupuncture to tonify Qi; Theory of Acupuncture; Clinical application

1 Introduction

"Qi" is a concept from ancient Chinese philosophy, regarded as the fundamental substance from which all things in heaven and earth originate. It is an extremely refined and subtle material that, within the human body, constitutes its structure and sustains life activities. In Traditional Chinese Medicine (TCM), qi deficiency is a specific condition characterized by reduced bodily function, diminished disease resistance, and even abnormal ascending, descending, and circulating patterns of qi. The Kidney is considered the foundation of prenatal essence, while the Spleen and Stomach are the foundation of postnatal essence, serving as the primary organs maintaining normal bodily functions. Bo's Abdominal Acupuncture emphasizes the regulation of Spleen and Kidney meridian points, developing a needling therapy centered on Shenque (CV8) with abdominal acupoints as the main focus, grounded in TCM theory and modern physiology. This paper combines ancient medical texts with modern research to systematically explore the theoretical system and clinical application of abdominal acupuncture for invigorating qi [1].

2 Theoretical Origin of Abdominal Acupuncture for Invigorating Qi

2.1 Theoretical Foundation

The **Cihai** defines qi as "the transformation that gives rise to all things, with the beginning of all things rooted in qi transformation." Ancient scholars applied this concept to TCM, forming a worldview and methodology for understanding life movement. TCM attributes five major functions to qi: propulsion, warming, defense, consolidation, and transformation. **Su Wen: Ci Fa Lun** states, "When righteous qi resides within, evil cannot invade," highlighting qi's defensive role [2]. **Su Wen: Ci Zhi Lun** notes, "Qi deficiency leads to cold," underscoring its warming function. Qi deficiency can result from inadequate prenatal endowment, prolonged fatigue, or irregular diet, leading to reduced energy and function. **Ling Shu: Tian Nian** explains that prenatal Kidney qi originates from parents: "The beginning of human life is short... based on the mother, shielded by the father" [3]. **Su Wen: Ju Tong Lun** points out that overexertion depletes qi: "Overwork consumes qi... leading to panting, sweating, and qi exhaustion" [2]. **Su Wen: Bi Lun** warns, "Excessive eating injures the intestines and stomach," indicating that dietary imbalance can damage the postnatal foundation, resulting in qi deficiency. Qi deficiency manifests in various symptoms, such as "nasal congestion and shortness of breath in lung qi deficiency," "limb weakness and organ unrest in Spleen qi deficiency," and "diminished vision in early liver qi decline" [1]. TCM treatment principles focus on reinforcing the righteous and expelling evil, with "tonifying the deficient" as a key approach. Invigorating qi emphasizes the Spleen and Stomach's transportive function, as **Su Wen: Yu Ji Zhen Zang Lun** states, "All five Zang organs receive qi from the Stomach" [2]. **Lei Jing** suggests that treating deficiency involves "tonifying the upper (Lung and Spleen) for qi deficiency and the lower (Kidney) for essence deficiency," prioritizing the reinforcement of the original foundation and strengthening the Spleen and Lung [4].

2.2 Transmission of Abdominal Acupuncture

The *Nan Jing* refers to the navel as "the root of the twelve meridians," and modern embryology has identified a "navel circulation" phenomenon around the umbilicus. Abdominal acupoints, centered on the navel and dominated by Kidney and Stomach meridians, align with the principle of regulating prenatal and postnatal foundations. Bo's Abdominal Acupuncture proposes a prenatal meridian theory, emphasizing that the Shenque system transmits qi and blood from the mother to the fetus via the umbilical cord, making it the earliest regulatory system, the source of the body's material foundation, and a driver of qi and blood circulation, immune regulation, and growth promotion. The Stomach meridian, rich in qi and blood, is crucial for regulating qi and blood and improving navel circulation in this therapy. As "the Kidney is the gate of the Stomach," proper Kidney opening and closing ensure adequate qi, blood, and fluid, supporting normal transformation. Thus, abdominal acupuncture primarily targets navel-adjacent Stomach and Kidney acupoints [5].

3 Mechanism of Action of Abdominal Acupuncture for Invigorating Qi

3.1 Connection of Meridians to Internal Organs and External Limbs

Abdominal acupuncture views the abdomen as the "palace city of the five Zang and six Fu organs," with the navel area as a convergence point of prenatal energy. Stimulating these acupoints activates the meridian qi of the Spleen and Kidney, promoting qi and blood generation and storage. The foundational prescription, "Heaven and Earth Needles," combines Zhongwan (CV12) and Guanyuan (CV4), where Zhongwan is the alarm point of the Stomach and "sea of water and grain," and Guanyuan is the alarm point of the Small Intestine, a key point for reinforcing the original foundation. Together, they tonify the Spleen and Kidney, supporting prenatal and postnatal qi, particularly effective for qi deficiency or Spleen and Kidney Yang deficiency [5].

3.2 Physiological Role of Shenque

Shenque, the anatomical navel, plays a significant role from the embryonic stage. Modern physiology confirms that by day 15 of embryonic development, blood islands appear in the yolk sac wall, marking the origin of hematopoietic stem cells. Embryonic hematopoietic stem or progenitor cells transform from endothelial cells [6]. Fetal blood circulates from the placenta via the umbilical vein to the fetus, returning through the umbilical artery. While it is commonly believed that umbilical function ceases post-birth with the ligation and cutting of the cord, replaced by independent respiration and digestion, recent studies show that adult umbilical vein endothelial cells can proliferate, migrate, adhere, and form new vessels under certain influences [7]. These cells exhibit differentiation potential and characteristics similar to human vascular endothelial cells [8]. The navel area's nervous system, comprising somatic and autonomic nerves, regulates abdominal wall movement, sensation, and visceral functions. A rich lymphatic network, including mesenteric lymph nodes and superficial abdominal lymph structures, connects to abdominal organ lymphatics, forming a lymphatic circulation network linked to the thoracic lymphatic system or lower limb lymph return. Centered on Shenque, the abdomen's extensive vascular, neural, and lymphatic distribution enables holistic body regulation [6–8].

3.3 Regulation of the Gut-Brain Axis

Interdisciplinary research in neurology and microbiology highlights a bidirectional regulatory network between the brain and gut via the nervous, endocrine, and immune systems, influencing physical and mental health. Studies indicate that abdominal acupuncture can normalize abnormal functional connectivity in the brain's default mode network, achieving antidepressant effects, possibly linked to increased activity and neurotransmitter levels in the medial prefrontal cortex [9]. In adult liver cirrhosis, the reopening of the round ligament and umbilical vein recanalization in some patients further support the theory of self-repair via navel circulation [10].

4 Operation and Acupoint Selection for Abdominal Acupuncture

Abdominal acupuncture tailors needle selection to the patient's condition and body type: short needles for thin individuals, long needles for obese ones; fine needles for deficiency, coarse needles for excess. For qi-deficient patients, fine needles with a cannula insertion method are used, offering quick skin penetration and minimal pain. The cannula's length difference with the acupuncture needle aligns with shallow insertion, aiding depth control. The technique is simple, avoiding lifting, thrusting, or twisting, or using light twisting and slow lifting and thrusting, without aiming for sensations like soreness, numbness, or distension. Efficacy is measured by symptom improvement rather than these sensations.

The prescription "Yin Qi Gui Yuan" tonifies the Spleen and Kidney, using Zhongwan, Xiawan, Qihai, and Guanyuan. Zhongwan and Xiawan, Stomach-related points, reinforce the postnatal foundation and address heart conditions; Qihai, the "sea of qi," treats lower jiao cold and Yang deficiency; Guanyuan, governing prenatal qi, addresses various deficiencies. Together, they embody the concept of postnatal nourishing prenatal qi [5].

5 Application and Prospects

Abdominal acupuncture's bidirectional regulation fully mobilizes the body's self-healing capacity, avoiding the biases of medicinal qi and flavor, improving qi deficiency symptoms while preventing "excess tonification causing heat." Its fine needles and the abdomen's thicker fat layer reduce pain, enhancing patient acceptance. However, precise acupoint location is crucial for efficacy. Qi and blood generation should progress gradually, with a recommended regimen of three sessions weekly for 2-3 months.

Clinicians should explore broader and deeper clinical applications of abdominal acupuncture. Utilizing modern research equipment to analyze its molecular networks can further elucidate its mechanisms.

6 Conclusion

Abdominal acupuncture for invigorating qi, rooted in *Huang Di Nei Jing* theory, uses specific acupoint selection and techniques to regulate qi and blood circulation, enhance organ function, and stimulate self-healing. It demonstrates significant efficacy in treating qi deficiency syndromes and provides a modern scientific basis for TCM's "preventive treatment" philosophy. Future integration with modern medicine can further explore its mechanisms, promoting the international development of abdominal acupuncture.

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 Experience Transmission

Fire-Needle and Abdominal Acupuncture for Treating Vertigo

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Abstract

Vertigo is a common symptom with complex causes. Modern medicine classifies it into rotational vertigo and general dizziness. Rotational vertigo, related to the vestibular system, includes central and peripheral types, with peripheral vertigo often linked to inner ear disorders. General dizziness may stem from abnormal blood pressure, blood, cardiopulmonary function, eye disorders, or cervical spondylosis. A clear Western medical diagnosis aids in identifying lesion sites for targeted acupoint selection. Acupuncture emphasizes syndrome differentiation, categorizing vertigo into wind-yang disturbing upward, phlegm-turbidity clouding upward, qi-blood deficiency, and liver-kidney yin deficiency. The first two are excess syndromes, effectively treated with fire needles, which dispel wind, release yang, resolve phlegm, open orifices, and dredge brain collaterals. The latter two are deficiency syndromes, better addressed with abdominal acupuncture, which regulates spleen and kidney, generates qi-blood, and nourishes brain marrow. Combining both rapidly alleviates most vertigo symptoms.

Keywords— Vertigo; Fire Needle; Abdominal Acupuncture; Acupuncture Treatment; Syndrome Differentiation

1 Diagnostic Key Points

Vertigo is a subjective sensory abnormality caused by various diseases, presenting as chronic progressive, acute, or recurrent episodes. Symptoms include dizziness, spinning vision, mild cases ceasing upon eye closure, severe cases feeling like being on a vehicle, or even fainting, with nausea, vomiting, nystagmus, tinnitus, deafness, sweating, or pale complexion. Vertigo is classified into:

1.1 Rotational Vertigo

Related to the vestibular nerve pathway, divided into:

- **Peripheral Vertigo:** Caused by inner ear labyrinth or vestibular nerve lesions, e.g., Ménière's disease, benign paroxysmal positional vertigo, labyrinthitis, drug-induced vertigo (ototoxic drugs), vestibular neuritis.

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- **Central Vertigo:** Caused by brainstem, cerebellum, cerebrum, or spinal cord lesions, e.g., vertebrobasilar insufficiency, intracranial tumors, infections, multiple sclerosis, vertiginous epilepsy, traumatic vertigo.

Rotational vertigo features a falling sensation, with swaying or spinning surroundings.

1.2 General Dizziness

Caused by systemic diseases, including:

- **Cardiogenic:** Arrhythmia, heart failure.
- **Pulmonary:** Pulmonary insufficiency.
- **Ocular:** Refractive errors, fundus arteriosclerosis, hemorrhage, ophthalmoplegia.
- **Hypertensive/Hypotensive:** High or low blood pressure.
- **Others:** Anemia, cervical spondylosis, acute fever, gastroenteritis, endocrine disorders, neurosis.

General dizziness features lightheadedness, with a heavy head and light feet.

Blood pressure, hemoglobin, red blood cell count, ECG, audiometry, brainstem evoked potentials, electronystagmography, cervical X-ray, transcranial Doppler, CT, and MRI aid diagnosis, ruling out tumors and severe blood disorders.

2 Syndrome Differentiation

1. **Wind-Yang Disturbing Upward:** Dizziness, tinnitus, distending headache, irritability, insomnia with dreams, flushed face, red eyes, bitter taste. Red tongue, yellow coating, taut-slippery pulse.
2. **Phlegm-Turbidity Clouding Upward:** Heavy head, spinning vision, chest tightness, nausea, phlegm vomiting. White greasy coating, taut-slippery pulse.
3. **Qi-Blood Deficiency:** Dizziness, blurred vision, pale complexion, fatigue, palpitations, insomnia. Pale tongue, thin white coating, weak pulse.
4. **Liver-Kidney Yin Deficiency:** Persistent dizziness, reduced vision, insomnia, forgetfulness, irritability, dry mouth, tinnitus, fatigue, weak waist/knees. Red tongue, thin coating, taut-fine pulse.

3 Acupuncture Treatment

3.1 Fire Needle and Filiform Needle

Main Acupoints: Baihui or Sishencong, Shenting, Yintang.

Secondary Acupoints:

- Wind-Yang Disturbing: Add Taiyang, Taichong.
- Phlegm-Turbidity Clouding: Add Zhongwan, Fenglong, Yinlingquan.
- Qi-Blood Deficiency: Add Xinshu, Pishu, Zusanli.
- Liver-Kidney Yin Deficiency: Add Ganshu, Shenshu, Taixi.

- Cervical Spondylosis: Add Fengchi, Tianzhu, Dazhui.
- Ear-Related: Add Tinggong, Yifeng.
- Eye Diseases: Add Taiyang, Cuanzhu, Jingming.

3.2 Abdominal Acupuncture

Main Acupoints: Four Points for Guiding Qi Back (Zhongwan, Xiawan, Qihai, Guanyuan).

Secondary Acupoints: Shangqu, Huaroumen.

Additions/Substitutions:

- Wind-Yang Disturbing: Add Zhongwan Shang.
- Phlegm-Turbidity Clouding: Add Yindu.
- Qi-Blood Deficiency: Add Qihai Pang.
- Liver-Kidney Yin Deficiency: Add Qixue.

Abdominal acupuncture is effective for deficiency-type vertigo.

4 Operation Method

Disinfect scalp: Use 2% iodine tincture in concentric circles from Baihui outward to 3-4 cm beyond Sishencong, then 75% alcohol to remove iodine; other acupoints use conventional disinfection. Heat single- or multi-head fire needle over an alcohol lamp until red-hot, then rapidly puncture Sishencong, Shenting, Yintang, or Baihui. Excess heat requires more bleeding; deficiency heat requires less. Movements must be steady, accurate, fast, with force adjusted per condition. Secondary acupoints use filiform needles with tonification for deficiency, purgation for excess, or shallow fire needle puncture.

5 Key Points and Precautions

For head acupoint fire needling, excess syndromes require heavier puncture with bleeding (amount based on heat/stasis); deficiency syndromes require lighter puncture without bleeding. For deficiency vertigo, use Professor He Puren's moxibustion at Shenting or abdominal acupuncture.

6 Clinical Considerations

TCM attributes vertigo to the liver, involving kidney, heart, and spleen, with wind, phlegm, fire, or deficiency, and excess or deficiency nature. Multiple factors often coexist. Liver-yang hyperactivity is common but often linked to liver-kidney yin deficiency. Zhu Danxi noted, "No phlegm, no vertigo"; Zhang Jiebin stated, "No deficiency, no vertigo" for chronic cases. Acupuncture differentiates excess (short course, episodic, triggered by emotions, severe spinning, phlegm, robust patient) vs. deficiency (long course, recurrent/persistent, post-illness/postpartum, fatigue-triggered, non-spinning dizziness, weakness).

Fire needling targets Governor Vessel head acupoints (Baihui, Sishencong, Shenting, Yintang) to unblock, awaken spirit, and treat lesions directly, with bleeding calming liver and wind.

Shenting, a Governor Vessel-Bladder-Stomach meridian junction, is favored by He Puren for vertigo. Abdominal acupuncture excels for deficiency vertigo. Detailed syndrome differentiation is needed for complex cases.

Patients should stay calm; doctors should explain to reduce tension. During attacks, rest in a quiet, ventilated, dimly lit room. Diet should be light, avoiding spicy foods, alcohol, tobacco. Avoid solo outings during remission to prevent falls. For cervical spondylosis vertigo, use proper pillows and avoid prolonged head-down work. For hypertension/arteriosclerosis vertigo, monitor blood pressure, control diet, and lipids.

 Experience Transmission

Experience Discussion on Treating Herpes Zoster with the “Trinity” Method

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Abstract

With changing lifestyles and increasing work pressure, the incidence of herpes zoster (HZ) and postherpetic neuralgia (PHN) is rising. During clinical practice under tutor Du Yanjun, the “trinity” method was found to target HZ pathogenesis while combining the advantages of various acupuncture techniques. The orderly integration of electroacupuncture with TDP, blood-pricking cupping, and local circular moxibustion effectively treats acute HZ and reduces PHN.

Keywords— Herpes Zoster; “Trinity” Method; Electroacupuncture; Blood-pricking Cupping; Moxibustion

1 Introduction

Varicella-zoster virus (VZV), a member of the human α -herpesvirus family, exhibits neurotropism and infectivity [1]. After causing varicella, VZV establishes lifelong latency in cranial nerve ganglia (e.g., trigeminal) and spinal dorsal root ganglia [2]. Reactivation leads to herpes zoster (HZ) [3], characterized by painful, dermatomal vesicular rashes. Post-healing, persistent neuropathic pain, termed postherpetic neuralgia (PHN), may persist beyond 90 days [4]. In Traditional Chinese Medicine (TCM), HZ is classified as “chan yao huo dan” or “she chuan chuang,” a common dermatological condition with PHN as a frequent complication, where pain severity and duration correlate with age. Chronic PHN often leads to anxiety, depression, and reduced quality of life [5]. Globally, HZ affects millions of elderly individuals annually [5], with rising incidence in healthy adults [6]. Western treatments (e.g., antivirals, analgesics, nerve blocks) carry risks of CNS side effects, hepatotoxicity, or dependency [7, 8]. Thus, effective, rapid pain relief methods are crucial for improving quality of life and reducing socioeconomic burdens.

TCM attributes HZ to “heat,” “dampness,” and “stasis.” Ming dynasty’s Wang Kentang noted in *Zheng Zhi Zhun Sheng*: “Chan yao huo dan arises from disharmony between heart and kidney, with internal liver fire...affecting the belt vessel.” *Wai Ke Zheng Zong* states: “Huo dan results from heart fire and triple energizer wind-heat manifesting on the skin.” HZ is seen as fire-toxin accumulation and stasis manifesting externally. Ming-Qing scholars distinguished “dry” (red, itchy, heart-liver related) and “damp” (yellow-white vesicles, purulent, painful, spleen-lung damp-heat) types. HZ involves heart, liver, spleen, and lung.

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HZ pathogenesis involves liver fire, spleen dampness, and qi-blood stasis. Emotional stress causes liver qi stagnation, transforming into fire, leading to painful, red vesicles, irritability, thirst, constipation, red tongue, yellow coating, and wiry-rapid pulse. Spleen-stomach weakness or dietary imbalance causes dampness, transforming into damp-heat, with severe pain, pale-red vesicles, bloating, loose stools, poor appetite, pale tongue with greasy coating, and soggy-rapid pulse. Modern lifestyles make damp-heat predominant. Post-HZ, residual toxins in ganglia and insufficient qi cause PHN due to “malnourishment causing obstruction.”

Following Professor Du Yanjun, the “trinity” method effectively treats acute HZ and reduces PHN, alleviating physical and psychological burdens with high patient acceptance.

2 “Trinity” Method

The “trinity” method integrates electroacupuncture with TDP, blood-pricking cupping, and local circular moxibustion, targeting HZ pathogenesis and combining acupuncture advantages.

1) Electroacupuncture with TDP: Electroacupuncture provides clear analgesia [9], selecting Huatuojiagi points along affected dermatomes, A-shi points at lesion ends, and meridian points (2 – 3 groups, dense-sparse wave). TDP irradiates Zhiyang acupoint for 20 minutes. Stimulating Huatuojiagi points releases sympathetic nerve mediators for pain relief [10]. Zhiyang, on the Du meridian near the heart and Xuehui-Diaphragm point, promotes yang qi, invigorates heart yang, and enhances circulation.

2) Blood-pricking Cupping: Per *Su Wen*: “Attack evil, expel excess blood to restore true qi...bloodletting cures instantly.” After electroacupuncture, pricking with dermal or lancet needles removes toxic blood, expelling pathogens; cupping’s negative pressure clears superficial and internal stasis, achieving detoxification, blood activation, and pain relief [11].

3) Local Circular Moxibustion: At bleeding sites post-cupping, multiple moxa sticks are applied in circular or linear motions, 3cm above skin, for 15 minutes until lesions dry. Circular moxibustion maintains constant heat, covering large areas, enhancing histamine-like substance effects, promoting repair, preventing inflammation, and accelerating crusting and analgesia [12].

3 Case Study

Female, 37, electronics engineer, presented on November 7, 2024, with irregular diet/sleep and cold drink preference. Two days prior, she experienced axillary pain extending to right chest, scapula, and inner upper arm, with burning and vesicles. Topical mupirocin was ineffective; pain was severe, with fatigue, poor sleep, reduced appetite, loose stools, and yellow urine. Examination showed bright yellow, tense vesicles in right axilla, 4th intercostal space, scapula, and inner upper arm, with red, painful, untouchable skin. She had a sallow complexion, red tongue with greasy yellow coating, teeth marks, and slippery-rapid pulse. Diagnosed with acute HZ (damp-heat type), treatment focused on clearing heat, resolving dampness, and detoxification.

Procedure: After local disinfection, disposable needles rapidly punctured bilateral C6, T1, T4 Huatuojiagi points, Zhiyang, Quchi, Xuehai, Fenglong, Zusanli, and surrounded severe lesion areas. Quchi, Xuehai, Fenglong, Zusanli used reducing techniques; C6, T4 were con-

nected to electroacupuncture (dense-sparse wave); Zhiyang received TDP for 20 minutes. Post-electroacupuncture, lesions were disinfected, pricked with lancets to release fluid/blood, and cupped for 5–8 minutes, with sterile cotton wiping post-cupping. Multiple moxa sticks applied circular moxibustion for 15 minutes until lesions collapsed/dried, every other day. By day 2, lesions crusted, and pain reduced. After 6 treatments, the patient recovered; follow-up showed no relapse or significant PHN, with normal life/work.

4 Discussion

HZ, caused by VZV, has acute, recovery, and PHN phases. TCM external therapies effectively treat HZ and PHN [9, 11–13]. Acupuncture, electroacupuncture, fire needling, blood-pricking, and moxibustion improve crusting and pain, but optimal technique combinations enhance efficacy. Professor Du emphasizes addressing “obstruction” (acute phase, pain from qi-blood stasis) and “malnourishment” (recovery/PHN, pain from weak qi), preventing the former from becoming the latter. The “trinity” method—clearing channels, detoxifying, nourishing—uses Huatuojiagi and Zhiyang points to resolve stasis, clear heat-dampness, accelerate crusting, and enhance analgesia. For recovery/PHN, treatment considers age, pain severity, duration, and lesion color, alongside emotional care. The method is effective; futurae clinical trials will provide further evidence.

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 Experience Transmission

The 3C Technique for Rapid Pain Relief

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Abstract

In treating pain at a specific area of the body, there are many acupuncture points that can be used. The core idea of this article is how to find the one acupuncture point that can relieve pain most quickly and effectively. Based on our research, the human body exhibits a very important phenomenon called Cross and Corporeal Correspondence (3C). When three principles are simultaneously followed, pain can be significantly reduced or even eliminated immediately. These three principles are:

- The Same Track Principle
- The Cross Principle
- The Corporeal Correspondence Principle

There is a precise correspondence between two symmetrically related limbs. All areas that correspond to one another form a complete system, known as the Cross and Corporeal Correspondence (3C) System. By using this system, we can alleviate or completely eliminate pain through massage or acupuncture in an extremely short time—sometimes within zero to tens of seconds, and at most within a few minutes. Remarkably, some types of pain that had lasted for years, even up to thirty years, were made to disappear in a very short time—without recurrence.

Using this system, we can very precisely locate the points that eliminate pain. Thanks to the accuracy in selecting points, certain types of pain actually “escape”; by applying the 3C technique, we successfully track and pursue the pain until it is completely eradicated in one go—a first in the history of acupuncture. Therefore, the 3C System is an invisible human body system that is even more effective, faster, more distinctly curative, and simpler than the meridian system and the holographic system.

This system is also very easy for the general public to understand and accept. Once promoted, it has the potential to greatly reduce human suffering.

Keywords— Acupuncture, Massage, Self-Massage, Rapid Pain Relief, 3C Technique, Cross and Correspondence

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 Case Report

Case Reports: Treatment of Chronic Knee Pain with Acupuncture

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Abstract

Knee pain is a very common condition that affects about 25% of people, and the number has been increasing. A NIH data showing 65% increase over the last 20 years.

Depending on the severity of knee pain, it can be debilitating and affect normal functioning of life.

The pathophysiology behind knee pain is extensive and complex, with osteoarthritis being the most common cause in people of age 50 or older. Current management regimen for knee pain include medications, physical therapy, lifestyle modifications, knee braces, nerve blocks, steroid injections, radiofrequency ablation, surgery.

In more recent years, acupuncture has been used to treat knee pain and other pain conditionals at an increasing rate. Acupuncture is an ancient treatment technique that originated in Ancient China, and has been used for thousands of years. It is a proven technique for treating various conditions, from acute pain to chronic illnesses, and it produces minimal side effects.

We have seen successful results of treating knee pain with acupuncture. Patients reported significant improvement of knee pain symptoms and overall functioning after doing regular acupuncture sessions. Their knees' range of motion increased and pain level decreased. Here we will present a few knee pain cases that have experienced noticeable clinical improvement after regular acupuncture treatments. These cases show that acupuncture is a potentially promising management for knee pain.

Keywords— Head acupuncture, ear therapy, Master Tung acupuncture, knee pain, osteoarthritis

1 Case 1: MA (68, M) Right knee pain for 3 months

MA is a 68-year-old man with right knee pain and swelling for 3 months. The symptoms reduced patient's range of motion of the right knee. MRI of the right knee showed moderate to severe osteoarthritis at medial patellofemoral joint, along with mild osteoarthritis at lateral patellofemoral joint. Large joint fluid effusion was shown. Grade 1 medial collateral ligament

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(MCL) sprain is noted. Radial tear at posterior root attachment and inferior surface flap tear of adjacent posterior horn.

Initial assessment showed light red tongue with thin white coating. Overall moderate pulse, wiry at Guan on left side. BP: 138/76 mmHg HR: 78 BPM. Initial pattern was identified as Kidney Qi Deficiency and local Qi and Blood stagnation.

Patient has been coming for acupuncture treatment at New York College of Traditional Chinese Medicine Teaching Clinic on a weekly basis for the past year.

Acupuncture protocol applied to this patient included a mix of local and distal points. Points were selected from classic points from 14 main channels, Extraordinary Points, Jiao' s Head Acupuncture, Master Tung' s Acupuncture, plus some local knee points as needed. Treatments include points including ST35, Xiyan (Ex.), Heding (Ex.), SP9, ST36, GB34, GB39, KI3, Tian Huang (T77.17), Ren Huang (T77.21), Di Huang (T77.19), LR3, Xiao Gu Kong, Dan Nang (T11.13), Xin Xi (T11.13), Huo Xi (T11.16), plus some local points around the right knee. We also use Motor, Sensory, Foot zones from Jiao' s scalp acupuncture (Left side in this patient). After each acupuncture sessions we applied ear seeds (Based on vaccaria herbs) to Knee, Liver, Kidney, Shenmen points in the ear.

The patient has been coming on a weekly basis. Each time patient reported improvement in pain. After the first month of treatment, patient reported noticeable improvement, with improved knee range of motion and less pain, with pain score decreasing from 8/10 initially to 5/10. By the third month the pain score went down even lower to 3/10. Knee range of motion, and reduction in knee pain, pain score 3/10 compared to 8/10 a year ago.

Patient continued to receive treatment at New York College of Traditional Chinese Medicine (NYCTCM) Teaching Clinic on a weekly basis for maintenance.

2 Case 2: JB (81, M) Bilateral knee pain 10 years

JB is a 81-year-old man with bilateral knee pain and stiffness for 10 years, with decreased range of motion. Imaging studies showed loss of cartilage cushion between knee bones (Known as “bone on bone”) osteoarthritis of both knees.

Initial assessment showed light red tongue with thin white coating. Overall moderate pulse. BP: 141/73 mmHg HR: 71 BPM. Initial pattern was identified as Kidney Qi Deficiency and local Qi and Blood stagnation.

Patient has been coming for acupuncture treatment at New York College of Traditional Chinese Medicine Teaching Clinic on a weekly basis for approximately 6 months. Now he notices significant improvement in stiffness and knee range of motion, and reduction in knee pain. Pain score is now just 2/10 compared to 9/10 in the beginning.

Acupuncture protocol applied to this patient included a mix of local and distal points. Points were selected from classic points from 14 main channels, Extraordinary Points, Jiao' s Head Acupuncture, Master Tung' s Acupuncture, and some local points. Treatments include points including ST35, Xiyan (Ex.), Heding (Ex.), SP9, ST36, GB34, GB39, KI3, Tian Huang (T77.17), Ren Huang (T77.21), Di Huang (T77.19), LR3, Xiao Gu Kong, Dan Nang (T11.13), Xin Xi (T11.13), Huo Xi (T11.16), plus some local trigger points around the knees. We also use Motor, Sensory, Foot zones from Jiao' s scalp acupuncture (Both sides in this patient). After each acupuncture session we applied ear seeds (Based on vaccaria herbs) to Knee, Liver, Kidney, Shenmen points in the ear.

The patient has been coming on a weekly basis. After 1 month of treatment the patient reported noticeable improvement, with improved knee range of motion and less pain. Pain score was decreased from 9/10 initially to 6/10 after a month, and pain went further down to 4/10 after 3 more months. By the sixth month he reported a pain score of just 2/10.

3 Discussion and Conclusion

Acupuncture has been widely used in modern days in managing various chronic pain conditions, including chronic knee pain. Many researches have demonstrated acupuncture's promising efficacy for managing chronic knee pain. The results show promising potential for acupuncture management of knee pain. Not only does acupuncture provide quick pain relief, but also efficacious for managing chronic pain.

Acupuncture is an ancient treatment modality that has been around for thousands of years. It has been recorded to effectively treat various conditions from all systems, acute or chronic. The mechanism behind how acupuncture works is still not fully understood from modern science perspective, but studies have suggested that acupuncture might have the ability to modulate neurotransmitters such as serotonin, norepinephrine, endorphin, cyclooxygenase-2 (COX-2) and prostaglandin E2 (PGE-2). We believe the modulation of neurotransmitters plays important role in pain management, and possibly improve patients' overall functioning.

Jiao Head Acupuncture was invented by Dr. Shunfa Jiao in China in 1971. Dr. Jiao utilized the neuroscience representative areas of the cerebral cortex, believing that acupuncture would stimulate the cortex of corresponding areas and enhance corresponding functions. Based on Traditional Chinese Medicine theory, the scalp is where Yang meridians meet together. Treating scalp will regulate the organs and the circulation systems. Therefore, Head Acupuncture is considered a powerful treatment protocol for various conditions [1, 2].

In the cases we treated, we applied Head Acupuncture on Motor and Sensory zones, areas that correspond to motor and sensory cortex. We also needled the Foot zone, which is about 1cm lateral to the midline of the head. Hand manipulation of needles were applied to these areas. Combination of treatment of these zones, alongside ear seeds on auricular points and body acupuncture helped improve the patients' daily functioning, the recovery of knee function and pain management.

Auricular acupuncture has been used in China in history, and in the late 1950s, French doctor Dr. Paul Nogier developed a phrenological method of projection of a fetal homunculus [3]. For auricular points, there's hologram within the ear, with different areas of the ears corresponding to different parts or regions of the body. This gives people a clearer concept of how auricular therapy works, and how it can be applied to treat different conditions.

Our results showed that acupuncture with combination of ear therapy, head and classic body and Master Tung Acupuncture being efficacious treatment protocol. In our practice experience, acupuncture protocol with combination of different systems (Head Acupuncture, Auricular therapy and body acupuncture points) have proved great efficacy in treating different conditions, such as pain management (including knee pain), post stroke rehabilitation, etc. Not only does the combination provide quick relief for people's pain, but also improves patient's mobility and functioning. For the patients we mentioned in this article, we once again proved acupuncture's efficacy in managing chronic knee pain. We believe that combinations of different systems (Head Acupuncture, Auricular therapy and body acupuncture points) have synergistic effects on treatment efficacy.

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 Case Report

A Case Report on Acupuncture Treatment for Post-Stroke Aphasia

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Abstract

Background: Post-stroke aphasia is a common sequela that severely impacts a patient's quality of life and social function. While conventional treatment primarily relies on speech therapy, acupuncture is gaining attention as a complementary intervention. This report presents a case of acute ischemic stroke with aphasia that showed significant improvement following syndrome-based traditional Chinese medicine (TCM) diagnosis and acupuncture treatment.

Case Description: The patient was a 63-year-old male who was hospitalized in February 2025 due to a left middle cerebral artery infarction. Upon discharge, he exhibited motor aphasia and right-sided limb weakness (Modified Rankin Scale: 5), and was unable to state his own name. On April 19, 2025, he visited our TCM clinic for the first time. Pulse diagnosis revealed a faint pulse at the left cun position and a floating, slippery, and large pulse at the left guan and chi positions. The pattern was diagnosed as deficiency of heart qi with concomitant phlegm and blood stasis obstruction.

Intervention: The patient received acupuncture combined with herbal medicine. The selected acupoints included Zusanli (ST36), Fenglong (ST40), Xingjian (LR2) through Tai-chong (LR3), Sanyinjiao (SP6), Shuifen (KI5), Shangjuxu (ST37), Xiajuxu (ST39), Neiguan (PC6), Jianshi (PC5), Shenmen (HT7), Lingdao (HT4), Hegu (LI4), and Taiyuan (LU9). Scalp acupuncture targeting the motor and language areas based on Dr. Jiao's method was also applied. A total of three sessions were administered, with needle selection adjusted according to clinical progress.

Results: After the first session, the patient was able to clearly state his name. Before the second treatment, he could address the physician with slight prompting. By the third session, he was able to sing songs with clearly understandable lyrics. Cognitive functions, including picture card recognition, showed steady improvement. A tongue examination on May 5 revealed thick greasy coating and distended sublingual veins, further supporting the diagnosis of phlegm and blood stasis obstruction.

Discussion: This case emphasizes the integration of syndrome differentiation and targeted cerebral stimulation. Scalp acupuncture in the language area may promote recovery by acti-

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vating cortical functional zones, enhancing collateral circulation, and facilitating neuroplasticity. The acupoints selected were aimed at qi tonification (e.g., ST36, LU9), heart support and orifice opening (e.g., PC6, PC5, HT7, HT4), and resolving phlegm and stasis (e.g., LR2 through LR3, ST40), addressing both root deficiency and branch excess. Although this is a single case, the rapid recovery observed warrants further investigation through prospective clinical studies.

Conclusion: This case suggests that acupuncture, when combined with TCM pattern diagnosis and scalp acupuncture techniques, may be a feasible and effective approach for enhancing language recovery in patients with post-acute stroke aphasia. Acupuncture tends to have better results. The detailed mechanisms can be further clarified through prospective studies.

Keywords— stroke; aphasia; acupuncture

1 Case Description

The patient was a 63-year-old male who was hospitalized in February 2025 due to a left middle cerebral artery infarction. Upon discharge, he exhibited motor aphasia and right-sided limb weakness (Modified Rankin Scale: 5), and was unable to state his own name. On April 19, 2025, he visited our TCM clinic for the first time. Pulse diagnosis revealed a faint pulse at the left cun position and a floating, slippery, and large pulse at the left guan and chi positions. The pattern was diagnosed as deficiency of heart qi with concomitant phlegm and blood stasis obstruction.

2 Intervention

The patient received acupuncture combined with herbal medicine. The selected acupoints included Zusanli (ST36), Fenglong (ST40), Xingjian (LR2) through Taichong (LR3), Sanyinjiao (SP6), Shuifen (KI5), Shangjuxu (ST37), Xiajuxu (ST39), Neiguan (PC6), Jianshi (PC5), Shenmen (HT7), Lingdao (HT4), Hegu (LI4), and Taiyuan (LU9). Scalp acupuncture targeting the motor and language areas based on Dr. Jiao's method was also applied. A total of three sessions were administered, with needle selection adjusted according to clinical progress.

3 Results

After the first session, the patient was able to clearly state his name. Before the second treatment, he could address the physician with slight prompting. By the third session, he was able to sing songs with clearly understandable lyrics. Cognitive functions, including picture card recognition, showed steady improvement. A tongue examination on May 5 revealed thick greasy coating and distended sublingual veins, further supporting the diagnosis of phlegm and blood stasis obstruction.

4 Discussion

This case emphasizes the integration of syndrome differentiation and targeted cerebral stimulation. Scalp acupuncture in the language area may promote recovery by activating cortical functional zones, enhancing collateral circulation, and facilitating neuroplasticity. The acupoints

selected were aimed at qi tonification (e.g., ST36, LU9), heart support and orifice opening (e.g., PC6, PC5, HT7, HT4), and resolving phlegm and stasis (e.g., LR2 through LR3, ST40), addressing both root deficiency and branch excess. Although this is a single case, the rapid recovery observed warrants further investigation through prospective clinical studies.

5 Conclusion

This case suggests that acupuncture, when combined with TCM pattern diagnosis and scalp acupuncture techniques, may be a feasible and effective approach for enhancing language recovery in patients with post-acute stroke aphasia. acupuncture tend to have better results. The detailed mechanisms can be further clarified through prospective studies.

 Case Report

Scalp Acupuncture Combined with Back-Shu and Front-Mu Point Stimulation for Alzheimer's Disease

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Abstract

Background: Alzheimer's disease (AD) is a progressive neurodegenerative disorder characterized by cognitive decline, memory impairment, and functional disability. Current pharmacological treatments provide limited symptomatic relief without altering disease progression. Traditional Chinese Medicine (TCM) offers a complementary approach to enhance cognitive function and quality of life. This study evaluates an integrated acupuncture protocol combining scalp acupuncture, distal point stimulation, and Back-Shu/Front-Mu techniques.

Methods: The protocol targets neurocognitive pathways through high-frequency stimulation in the therapeutic diamond region around DU20 (Baihui) (within 2 cun left/right/anterior/posterior), empirically selected memory-enhancing Jing-Well hand/foot reflex points, and simultaneous Back-Shu/Front-Mu point activation. A seven-year case study of a 76-year-old male with moderate AD was conducted.

Results: After 2.5 weeks of treatment, the patient's Mini-Mental State Examination (MMSE) score increased from 18 to 22 (+22.2%), agitation decreased by 63%, and sleep latency reduced from 90 to 30 minutes. Maintenance therapy sustained MMSE scores at 21–23 over seven years, with a 68% slower cognitive decline compared to typical AD progression. No adverse effects were reported.

Conclusion: This TCM-based protocol shows promise as a complementary intervention for AD, warranting further randomized controlled trials.

Keywords— Alzheimer's disease, acupuncture therapy, scalp acupuncture, Back-Shu points, Front-Mu points, Traditional Chinese Medicine

1 Introduction

Alzheimer's disease (AD) is a leading cause of dementia, accounting for 60–80% of neurodegenerative cases globally, with an estimated prevalence of over 13 million in the United States by 2050 [1]. Neuropathologically, AD is characterized by amyloid-beta (A β) plaques, hyperphosphorylated tau protein tangles, and synaptic degeneration, leading to memory impairment,

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executive dysfunction, and functional dependence [2]. Current FDA-approved treatments, such as cholinesterase inhibitors (e.g., donepezil) and NMDA receptor antagonists (e.g., memantine), offer limited symptomatic relief without modifying disease progression and are often limited by side effects like gastrointestinal or cardiovascular issues [1]. This underscores the need for complementary therapies.

Traditional Chinese Medicine (TCM), particularly acupuncture, emphasizes systemic balance and offers a holistic approach to managing cognitive disorders [3]. This study introduces an integrated acupuncture protocol combining scalp acupuncture, targeting cortical reflex zones around DU20 (Baihui), with distal Jing-Well hand/foot reflex points and a novel Back-Shu/Front-Mu technique to modulate neurocognitive pathways. Functional MRI studies show that scalp acupuncture enhances connectivity in the default mode network, a region affected early in AD [2]. Acupuncture also upregulates brain-derived neurotrophic factor (BDNF) and reduces pro-inflammatory cytokines (e.g., IL-6, TNF- α) [4]. The Back-Shu/Front-Mu coordination, combined with memory-enhancing Jing-Well points (occipital region, Huato Jiaji at T3/T5, and big toe brain reflex points), aims to regulate visceral and central nervous system functions [5]. This multi-target approach aligns with TCM's holistic principles and may offer a complementary strategy for AD management.

2 Case Presentation

A 76-year-old male with moderate AD (MMSE 18/30) underwent an integrated acupuncture protocol combining scalp acupuncture in the diamond region around DU20 (Baihui) (2 cun left/right/anterior/posterior), Back-Shu/Front-Mu point coordination, and memory-enhancing Jing-Well hand/foot reflex points. Treatment consisted of three weekly sessions for two weeks, followed by maintenance therapy.

After 2.5 weeks, the patient's MMSE score increased to 22/30 (+22.2%), agitation scores decreased by 63%, and sleep latency reduced from 90 to 30 minutes. Over seven years of follow-up, MMSE scores stabilized at 21–23, with activities of daily living (ADL) scores ranging from 42–46, indicating no significant functional decline. Compared to typical AD progression, cognitive decline was 68% slower, delaying severe dementia onset by approximately three years [1]. No adverse effects were reported, and caregivers noted improved communication and social engagement. This case suggests both symptomatic and potential disease-modifying effects, warranting further investigation.

3 Discussion

This case study highlights the therapeutic potential of an integrated acupuncture protocol for moderate AD, with notable improvements in cognitive function (+22.2% MMSE), emotional stability (63% agitation reduction), and sleep quality (66.7% reduction in sleep latency). The sustained cognitive stability over seven years suggests possible neuroprotective effects, aligning with studies showing acupuncture's modulation of AD-related neuropathology via enhanced cerebral perfusion and BDNF upregulation [2, 4].

The protocol's design leverages neurophysiologically plausible mechanisms. Scalp acupuncture at DU20 targets the default mode network, disrupted early in AD [2]. Back-Shu/Front-Mu coordination creates a closed-loop regulatory effect, potentially enhancing central-peripheral nervous system communication [5]. Jing-Well point stimulation may promote alertness and autonomic regulation, contributing to improved sleep and emotional outcomes

[3]. This multi-target approach contrasts with conventional pharmacotherapy's focus on single neurotransmitter systems, potentially explaining the sustained effects without tolerance development.

Limitations include the single-case design, which limits causal inferences, and the lack of a control group, making placebo effects possible. The intensive treatment schedule may also reduce accessibility. Future randomized controlled trials with neuroimaging and biomarker analyses are needed to validate these findings and elucidate mechanisms [3].

4 Conclusion

This integrated acupuncture protocol, combining scalp acupuncture, distal point stimulation, and Back-Shu/Front-Mu coordination, demonstrates promising results in stabilizing cognitive function and improving quality of life in AD patients. Its multi-target approach warrants further investigation through controlled clinical trials to confirm efficacy and explore underlying mechanisms.

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 Case Report

Treatment of Ischemic Cerebrovascular Accident (Stroke) Through Traditional Chinese Medicine: A Case Study

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Abstract

Objective: To report a clinical case of ischemic stroke treated with Traditional Chinese Medicine (TCM) techniques.

Subjects and Methods: This case study details a 58-year-old male patient with ischemic stroke, treated with acupuncture over 28 weeks, using Xing Nao Kai Qiao, Jiao Shun Fa scalp acupuncture, electroacupuncture, and moxibustion, following TCM diagnostic principles.

Results: After 28 weeks and 60 sessions, the patient achieved 90% recovery, with significant improvements in hemiplegia, aphasia, dysphagia, and mental clarity, demonstrating acupuncture's efficacy in stroke rehabilitation.

Conclusion: Acupuncture is a potentially effective complementary therapy for stroke sequelae, particularly when initiated early post-stroke.

Keywords— Cardiovascular disease, stroke, acupuncture, Traditional Chinese Medicine, case study

1 Introduction

Cardiovascular diseases are leading causes of death and disability globally, including Brazil. The GBD (Global Burden of Disease, 2019) study ranks ischemic heart disease first, followed by stroke, in Brazil for 2019 [1]. Stroke, a medical emergency, is a neurological syndrome from sudden cerebral blood flow interruption, classified as ischemic stroke (IS) or hemorrhagic stroke (HS) [2]. Symptoms include focal or global neurological disturbances lasting over 24 hours, causing cognitive and sensorimotor changes based on lesion extent and location. Risk factors are modifiable (e.g., hypertension, smoking, diabetes), non-modifiable (e.g., age, gender, race), and potential (e.g., inactivity, obesity, alcoholism) [ministry2013]. Conventional treatments include physical, occupational, and speech therapies to restore function and independence [3]. Despite intensive rehabilitation, over 30% of patients remain moderately to severely disabled [4], prompting interest in complementary therapies.

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In Traditional Chinese Medicine (TCM), stroke is termed Zhong Feng (Wind Stroke), first mentioned in the *Huang Di Nei Jing* over 2,000 years ago. The “wind” label reflects its sudden onset, variable symptoms, and unpredictable evolution, akin to natural wind effects [5]. Acupuncture adjusts cerebral artery tone, dilates vessels, enhances circulation, nourishes neurons, and aids brain repair, reducing sequelae. The Xing Nao Kai Qiao method (“Activate the Brain and Open the Orifices”) increases blood perfusion, modifies cell structure, and boosts RNA/DNA activity. Jiao Shun Fa scalp acupuncture integrates TCM with neuroanatomy, targeting cortex areas for paralysis or speech issues. Electroacupuncture amplifies effects via electrical currents, altering membrane potential and releasing endorphins.

2 Clinical Case Report

A 58-year-old male public employee, sedentary, overweight, and mildly hypertensive (hydrochlorothiazide 25 mg), experienced malaise, fainting, and one-minute unconsciousness at home on a Saturday afternoon. He awoke with mental confusion, speech difficulty, tingling, and right hemiplegia, prompting emergency care. Brain CT confirmed ischemic stroke in the left temporal cortex. Hospitalized for four days with anticoagulants, antihypertensives, and rosuvastatin, he was discharged with sequelae: dysphagia, aphasia, mental confusion, emotional instability, dizziness, and total right hemiplegia.

Acupuncture began five days post-stroke. Initially bedridden with flaccid hemiplegia, facial paralysis (mouth deviation, eye closure difficulty), severe aphasia, dysphagia (pureed foods only), mental confusion, emotional instability, and irregular sleep, he required laxatives for defecation. Energy evaluation revealed a cold body, flaccid tone, deep weak pulse, and a purplish, deviated, swollen tongue with moist yellow coating.



Tongue at first session



tongue after 2 weeks
of treatment

Figure 1: Tongue picture changes before and after treatment

Diagnosis: Ischemic stroke from Wind rising and Phlegm obstructing the mind, followed by Yang Qi exhaustion.

Treatment Principles:

- Primary: Eliminate phlegm, extinguish wind, open the brain, restore consciousness.
- Secondary: Rescue Yang Qi, remove obstructions, activate meridian circulation.

2.1 Treatment Protocols

1. Xing Nao Kai Qiao –Activate the Brain and Open the Orifices

- Mind-awakening points: PC6 (Neiguan), GV26 (Renzhong), SP6 (Sanyinjiao).
- Meridian-activation points: CV14 (Jueque), LU5 (Chize), LI4 (Hegu), BL40 (Weizhong), SP6 (Sanyinjiao), GB40 (Qiu xu) (affected side, radiating to extremities).
- Additional points: Aphasia (Shanlingquan, HT5 [Tongli], GV15 [Yamen]); Dysphagia (GB20 [Fengchi], GB12 [Wangu], TE17 [Yifeng]).

2. Jiao Shun Fa –Chinese Scalp Acupuncture

- Speech areas 2 and 3 (contralateral), motor areas for lower limbs, upper limbs, and face (contralateral).
- Electroacupuncture: continuous wave, 200 Hz.

3. Electroacupuncture on Affected Limbs

- Continuous wave, 30 Hz.
- LI11 (Quchi) –LI4 (Hegu), ST36 (Zusanli) –LV3 (Taichong).

4. Points to Restore Yang Qi

- CV6 (Qihai), CV4 (Guanyuan), CV8 (Shenqu) with moxibustion.

Protocols 1–4 were applied for 44 sessions, then 1 was discontinued, with 2–4 continuing until session 60. Needles retained for 30 minutes. Schedule: 3 sessions/week (first 3 months), 2 sessions/week (next 2 months), 1 session/week (final 2 months); total 60 sessions over 28 weeks.

3 Results

Week 1: Hand movement initiated. Week 2: Arm movement, foot flexion/extension, knee bending; speech and comprehension improved; solid food and liquids tolerated; tongue lightened to red with thin white coating.

Week 4: Sat, stood with help, moved legs unsteadily; arm nearly recovered; face symmetrical; speech therapy discontinued. Week 8: Walked with cane; near-full arm/hand recovery; normalized speech/swallowing; began physical therapy. Week 12: Steadier walk with slight gait issues. Week 20: Independent standing/sitting, minor gait fault, stair climbing. Week 28: 90% recovery with mild gait fault and emotional reactivity; resumed driving and daily activities.

4 Conclusion

Acupuncture was potentially effective for stroke sequelae, significantly enhancing recovery and quality of life, especially when started within 100 days post-stroke.

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 Case Report

Infertility and Endometriosis

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Abstract

Female infertility is defined as the inability of a woman to conceive after two or more years of trying without using contraceptive methods and considering that her partner has no reproductive dysfunction.

Endometriosis is a disease characterized by the presence of endometrial tissue—the lining of the uterus—outside the uterine cavity, i.e., in other pelvic organs such as the fallopian tubes, ovaries, intestines, rectum, ureters, bladder, and peritoneum. It affects about 15% of women and accounts for 50% of infertility cases.

This study presents a case report of a patient suffering from infertility caused by endometriosis, and the result after 10 months of treatment.

Keywords— infertility, endometriosis, adenomiosis, acupuncture

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 Case Report

Acupuncture Support Activities Following the 2024 Noto Peninsula Earthquake

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Abstract

The Disaster Support Acupuncture Masseur Joint Committee (DSAM) provides acupuncture and moxibustion treatment to evacuees and support workers in affected areas during large-scale disasters. Following the 2024 Noto Peninsula Earthquake, which struck on January 1st with a maximum seismic intensity of 7, DSAM conducted acupuncture support activities. This report outlines the implementation and outcomes of those activities.

Keywords— Acupuncture, Evacuation Shelter, Earthquake

1 Background and Objective

The Disaster Support Acupuncture Masseur Joint Committee (DSAM) provides acupuncture and moxibustion treatment to evacuees and support workers in affected areas during large-scale disasters. Following the 2024 Noto Peninsula Earthquake, which struck on January 1st with a maximum seismic intensity of 7, DSAM conducted acupuncture support activities. This report outlines the implementation and outcomes of those activities.

2 Methods

Between January 14 and March 31, 2024, acupuncture and moxibustion support activities were conducted on a total of 12 non-consecutive days at the Ishikawa General Sports Center, which had been designated as an evacuation shelter. All treatments were provided by licensed practitioners. Depending on the patient's condition and consent, the following treatments were offered: acupuncture, smokeless indirect moxibustion, massage, stretching, and press tack needles. Data collected included gender, age, location of symptoms (multiple responses allowed), type of treatment administered, and a 10-point self-assessment of symptom severity before and after treatment. Symptom scores were analyzed using paired t-tests and expressed as mean $\pm$ standard deviation (SD).

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3 Results

A total of 339 individuals (160 males and 179 females) received treatment. Participants were categorized by age as follows: 69 were aged 20–49, 163 were aged 50–79, and 106 were aged 80 or older. One participant did not provide age information. Low back pain was the most frequently reported complaint, observed in 150 participants (44.2

4 Discussion

Prolonged evacuation living conditions impose both mental and physical burdens, with many evacuees presenting multiple complaints. Even within the limitations of a shelter environment, the treatments provided—tailored for safety and feasibility—appeared effective in alleviating symptoms. Given the known risk of disaster-related deaths due to the deterioration of physical condition, acupuncture may serve as a valuable intervention for maintaining health in disaster settings. Additionally, growing demand was observed not only among evacuees but also among support personnel, indicating the need to expand future research to include relief workers.

5 Conclusion and Outlook

Acupuncture demonstrated measurable benefits in alleviating prolonged physical discomfort during disaster recovery. Future initiatives will aim to extend support services and research to include relief workers, thereby contributing to broader health support efforts in disaster-affected regions.

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 Case Report

Wine-Acupuncture Treatment Method: A Preliminary Study on Clinical Application and Mechanism

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Abstract

In traditional Chinese medicine, combining acupuncture with herbal medicine is a key approach. While wine and acupuncture are distinct modalities, their combined use in clinical practice is rare. Drawing on ancient texts such as *Huangdi Neijing* and *Bencao Gangmu* and acupuncture meridian theory, the author developed the “Wine-Acupuncture” therapy. This paper explores its clinical application, mechanisms, and efficacy, supported by case studies, aiming to contribute to acupuncture innovation and invite peer feedback.

Keywords— Wine-Acupuncture, Therapy and Mechanism, Case Study

1 History and Medicinal Value of Wine

Wine is a vital part of Chinese culture, embodying both material and spiritual significance. The *Han Shu* states: “Wine is the chief of all medicines” [1], highlighting its role in Chinese medicine. Used internally or externally, wine serves as a medicinal catalyst, in herbal infusions, or in processing herbs like wine-processed rhubarb or polygonatum. Considered a pure yang substance, wine warms the body, dispels cold, promotes blood circulation, soothes the liver, regulates qi, and relieves pain, making it suitable for various conditions [2]. Moderate consumption enhances circulation, metabolism, and relaxation.

The *Huangdi Neijing: Suwen* discusses “tang ye lao li” (decoctions and medicinal wines), noting their use in ancient times for preparation, with increased necessity in later eras to counter pathogenic qi [3]. The *Bencao Gangmu* elaborates that moderate wine consumption promotes blood and qi flow, strengthens vitality, and resists cold, but excess harms the spirit and stomach [2]. Proper use maximizes benefits while minimizing risks.

2 Overview of Acupuncture in Clinical Practice

Acupuncture, a cornerstone of Chinese medicine, has spread to nearly 200 countries. The *Huangdi Neijing: Lingshu* establishes the theoretical foundation of meridian-based acupuncture, guiding modern practices [3]. It regulates qi and blood, unblocks meridians, and treats various conditions.

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3 Integration of Wine and Acupuncture

The *Huangdi Neijing: Suwen* advocates combining internal herbal medicine with external acupuncture [3]. Modern medicine often equates wine with alcohol, associating it with liver and kidney damage, overlooking its traditional medicinal value. The author developed “Wine-Acupuncture” therapy, integrating moderate consumption of 53° sauce-flavored baijiu with acupuncture to enhance efficacy, based on ancient wisdom and clinical experience.

4 Clinical Case Studies

4.1 Case 1: Mr. Qi, Male, 68

Initial visit: July 24, 2023. Complaint: Left shoulder pain and limited mobility for over a year, unrelieved by prior treatments. Healthy otherwise, normal diet and bowels, pain on left-side sleeping. Red tongue, yellow coating, wiry pulse. Examination: Limited left arm elevation, restricted back movement, unable to touch opposite scapula, tender points, and muscle knots around the shoulder. History: Sports injury, regular baijiu consumption (4-5 liang). Diagnosis: Cold-stasis obstructing meridians, causing pain. Treatment: Warm meridians, promote blood flow, relieve pain.

Protocol: Wine-acupuncture. Patient consumed 40 ml sauce-flavored baijiu, rested 5 minutes. Filiform needles: Waiguan (left), Shousanli (left), Quchi (left), shoulder three needles (bilateral); blade needle for muscle knots. Post-treatment, patient lifted arm to functional position, reporting stronger sensation than regular acupuncture.

Second visit: July 28, 2023. Patient reported near-complete pain relief, daily exercises, occasional mild night pain. Repeated protocol: 40 ml baijiu, same needles. Post-treatment, patient performed large arm circles. Advised to continue exercise, avoid cold foods, and heavy lifting. Follow-up: No recurrence after returning to China.

4.2 Case 2: Ms. Wei, Female, 45

Initial visit: December 7, 2022. Complaint: Facial swelling, fatigue, eye swelling post-vaccination (three doses). Pale tongue, white coating with teeth marks, weak pulse, cold feet. Diagnosis: Yang deficiency, qi and blood deficiency. Treatment: Warm kidney yang, tonify qi and blood. Protocol: Fuguibawei pills, twice daily, 20-25 pills, for 3 weeks, avoid cold foods and drinks.

Second visit: December 16, 2022. Complaint: Reduced swelling but new dizziness, fatigue, headache, neck stiffness, shoulder/back/waist pain due to work. Examination: Fatigued appearance, low voice, pale complexion, cool limbs, pale tongue, white coating, weak pulse. Diagnosis: Yang deficiency, qi and blood deficiency, meridian obstruction. Treatment: Warm yang, tonify qi and blood, unblock meridians.

Protocol: Wine-acupuncture. Patient consumed 20 ml baijiu, treated after 10 minutes (slight facial flush). Supine: Yintang, Sishencong, Touwei (bilateral), Taiyang (bilateral), Hegu (bilateral), Zusanli (bilateral), needle retention 20 minutes, mild manipulation once, TDP lamp on Yongquan. Prone: Sishencong, Fengchi (bilateral), Dazhui, Zhiyang, Yaoyangguan, Huatuojiagi, Weizhong (bilateral), needle retention 20 minutes, mild manipulation, TDP lamp on Yongquan. Feedback: 4 hours post-treatment, patient felt clear-headed, comfortable, with mild eye discomfort, planned next visit.

4.3 Case 3: Linda, Female, 46

Initial visit: March 26, 2024. Complaint: Chronic dizziness, headache, cervical spondylosis, post-partum neglect, cold intolerance, limb coldness, recent waist/leg pain, unrelieved by treatments. Examination: Obese, facial swelling, cool limbs, pale tongue, white coating with teeth marks, weak-sunken pulse. Diagnosis: Yang deficiency, qi and blood deficiency, meridian obstruction. Treatment: Warm yang, tonify qi and blood, unblock meridians.

Protocol: Wine-acupuncture. Patient consumed 20 ml baijiu, treated after 10 minutes (slight flush). Supine: Yintang, Sishencong, Touwei (bilateral), Taiyang (bilateral), Hegu (bilateral), Zusanli (bilateral), Xuehai (bilateral), Sanyinjiao (bilateral), needle retention 20 minutes, mild manipulation, TDP lamp on Yongquan. Prone: Sishencong, Fengchi (bilateral), Dazhui, Zhiyang, Yaoyangguan, Huatuojiagi, Weizhong (bilateral), needle retention 20 minutes, mild manipulation, TDP lamp. Seated: Blade needle for neck/shoulder knots. Post-treatment, neck mobility improved significantly. After three sessions, symptoms improved, swelling resolved, mental state improved, switched to Chinese medicine for further regulation.

4.4 Case 4: Ms. Wang, Female, 42

Initial visit: April 8, 2024. Complaint: Insomnia, dizziness, headache due to work stress. Examination: Facial swelling, bloodshot eyes, pale tongue, white coating with teeth marks, weak pulse. Diagnosis: Yang deficiency, qi and blood deficiency, blood failing to nourish the heart. Treatment: Warm yang, tonify qi and blood, calm the mind.

Protocol: Wine-acupuncture. Patient consumed 20 ml baijiu, treated after 10 minutes (slight flush). Supine on sofa: Yintang, Sishencong, Touwei (bilateral), Taiyang (bilateral), Neiguan (bilateral), Shenmen (bilateral), Sanyinjiao (bilateral), needle retention 30 minutes, mild manipulation, dim lighting, soft music. Patient fell asleep after 5 minutes with mild snoring, felt relaxed post-treatment.

5 Mechanism of Wine-Acupuncture

1. As a pure yang substance, wine mobilizes yang qi, promoting qi and blood circulation along meridians [2].
2. Wine warms yang, dispels cold, promotes blood flow, soothes the liver, regulates qi, and relieves pain, aiding relaxation and metabolism [2].
3. Sauce-flavored baijiu, made with the 12987 process, minimizes harmful substances (e.g., methanol) while retaining beneficial microbes and enzymes, enhancing efficacy without harm.

5.1 Indications

Suitable for disorders due to wind, cold, stasis, phlegm, dampness, or qi stagnation causing organ dysfunction, liver qi stagnation, or meridian obstruction, especially in cold seasons.

5.2 Contraindications

Not suitable for pregnant women, children, cancer patients, those allergic to alcohol, or deemed unsuitable by clinicians.

5.3 Environment

Treatment requires a warm, draft-free indoor setting.

6 Discussion

Wine holds significant material and cultural value in human history [4]. Modern medicine often equates wine with alcohol, associating it with organ damage, but this overlooks its medicinal value in TCM. Wine-acupuncture, grounded in ancient texts and clinical practice, enhances efficacy compared to conventional acupuncture, aligning with principles of yin-yang balance and meridian unblocking [2, 3].

7 Conclusion

Wine-acupuncture is an emerging therapy requiring further clinical research to refine and systematize. Combining wine and acupuncture yields faster, more effective results, embodying TCM's balance of tradition and innovation. Clinicians are encouraged to advance this approach responsibly.

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 Case Report

Motion Acupuncture Therapy for Upper Limb Paresthesia Caused by Pectoralis Minor and Medial Epicondyle Nerve Compression: A Case Report

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Abstract

This study reports a case of a 62-year-old female with upper limb paresthesia due to dual nerve compression at the pectoralis minor and medial epicondyle. She presented with persistent numbness in the right middle, ring, and little fingers for three months, worsening at night. Physical examination revealed right-sided rounded shoulder posture, tenderness with cord-like induration at the pectoralis minor coracoid insertion, tenderness at the medial epicondyle's common flexor tendon, grip strength of 3 kg, and limited shoulder abduction. Treatment involved Motion Acupuncture Therapy: (1) pectoralis minor release using a 75 mm Motion Acupuncture Needle with retention and traction (effective + maximal traction); (2) cross-needle release at the medial epicondyle; and (3) guided movement therapy (chest expansion, flexion-extension, resistance training). After the first session, numbness decreased from VAS 8/10 to 4/10. After three sessions, symptoms resolved, grip strength increased to 5 kg (67% improvement), and VAS score dropped from 6 to 1. Motion Acupuncture Therapy, via proximal-distal synchronous release, effectively treats upper limb nerve compression, likely by restoring fascial balance and neural gliding, offering precise targeting, rapid efficacy, and high safety.

Keywords— Motion Acupuncture Therapy, pectoralis minor, medial epicondyle, nerve compression, needle retention and traction

1 Overview of Golfer's Elbow

Medial epicondylitis (golfer's elbow) is a chronic musculoskeletal overuse disorder characterized by degenerative changes at the flexor tendon insertion of the medial epicondyle. It is prevalent in occupations requiring repetitive wrist flexion, athletes, and homemakers, presenting with progressive medial elbow pain, weakened grip, and positive physical examination findings [1]. Motion Acupuncture Therapy, an innovative approach, integrates traditional acupuncture with modern rehabilitation principles, forming a “four-dimensional” system: specialized needles, unique techniques, needle retention and traction, and a theoretical framework. Using specialized

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needles, it precisely targets the medial epicondyle for release [2, 3]. Combining needle traction with functional resistance exercises, it significantly reduces pain within 1-3 sessions, improving microcirculation and tendon repair [4, 5].

2 Introduction to Motion Acupuncture Therapy

Developed by Dr. Decheng Chen over 30 years, Motion Acupuncture Therapy is a novel acupuncture method using specialized Motion Acupuncture Needles and specific techniques, with patients performing active, passive, or loaded movements during needle retention [6]. Integrating meridian theory, acupuncture, myofascial principles, anatomy, and kinesiology, it treats soft tissue injuries and certain visceral conditions [7]. The patented needle features a five-edged, spiral shaft with a standard tip [8]. Treatment targets lesion-specific “motion points,” with needle retention, traction, and guided movement as key to efficacy [9].

3 Case Report

A 62-year-old retired homemaker presented with persistent numbness in the right middle, ring, and little fingers for three months, worsening at night with aching. Symptoms progressed, triggered by repetitive tasks like dishwashing. Medical history included 5-year hypertension (well-controlled with amlodipine) and resolved left idiopathic facial paralysis (2021). Daily activities involved 3 hours of cooking and habitual one-sided heavy carrying. Examination showed right-sided rounded shoulder posture, anterior shoulder displacement, tenderness with cord-like induration at the pectoralis minor coracoid insertion, tenderness at the medial epicondyle's flexor tendon, grip strength of 3 kg, and limited shoulder abduction. Diagnosis: Proximal brachial plexus compression due to pectoralis minor tension, with distal ulnar/median nerve branch compression at the medial epicondyle.

4 Anatomical Basis

The pectoralis minor originates from the 3rd-5th ribs, inserting at the coracoid process, innervated by the medial pectoral nerve (C8-T1). It facilitates shoulder protraction, downward rotation, and respiration, forming a neurovascular channel with the clavipectoral fascia, prone to brachial plexus compression [1]. The medial epicondyle is the origin of flexor muscles (pronator teres, flexor carpi ulnaris, flexor digitorum superficialis), with the ulnar nerve passing through the cubital tunnel (1 cm from the epicondyle) and the median nerve between pronator teres heads, susceptible to myofascial compression.

5 Treatment Methods

1. Pectoralis minor release: Supine position, targeting the coracoid insertion (Jianqian point) with a 75 mm Motion Acupuncture Needle, using retention and traction (effective + maximal traction) with deep breathing, producing fascial release sounds.

2. Medial epicondyle release: Two 50 mm Motion Acupuncture Needles inserted crosswise into the flexor tendon, with retention and traction, synchronized with deep breathing, producing release sounds.

3. Guided movement: Chest expansion (8 sets), arm flexion-extension (8 sets), and “fist clench-supination” resistance training (8 reps).

Post-first session, VAS score dropped from 8 to 4. After three sessions, numbness resolved, nighttime symptoms ceased, grip strength increased to 5 kg (67% improvement), and medial epicondyle tenderness reduced to VAS 1.

6 Discussion

Motion Acupuncture Therapy relieved nerve compression by releasing proximal (pectoralis minor) and distal (flexor tendon) fascial tension, improving neural gliding and blood supply [2, 4]. Combining needle traction with guided movement reflects its “four-dimensional” approach, targeting motion points with dynamic detection and layered release to address fascial adhesions [5]. This enhances immediate pain relief and functional recovery, improving microcirculation and muscle control, reducing recurrence [10]. The therapy addresses limitations of traditional acupuncture in soft tissue intervention, ideal for complex chronic pain and myofascial imbalances.

7 Conclusion

Motion Acupuncture Therapy effectively treats upper limb nerve compression syndrome, using spiral-structured needles for enhanced fascial traction, combined with retention, traction, and dynamic movement to release tension, restore balance, and improve function with high safety and low recurrence [5, 10]. Integrating acupuncture and rehabilitation, it offers new approaches for complex myofascial disorders and compression syndromes, with future research poised to enhance its clinical value.

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 Case Report

Acupotomy Combined with Korean Medicine Treatment in a Patient with Sacroiliac Joint Dysfunction: A Case Report

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Abstract

Objectives: Sacroiliac joint (SIJ) dysfunction is a common cause of pain in the lower back accompanied by sciatica.

Methods and Results: This case report presents acupotomy combined with integrative Korean medicine treatment administered to a patient suffering from persistent low back pain and radiating pain, diagnosed with SIJ dysfunction. The treatment included acupuncture, cupping, bee venom pharmacopuncture, and acupotomy. Pain intensity and functional ability were assessed using the Numeric Rating Scale (NRS), Oswestry Disability Index (ODI), and Manual Muscle Testing (MMT). After a total of six treatment sessions, including three acupotomy treatments, the patient's pain scores significantly decreased, and functional status improved markedly.

Conclusions: These findings suggest that acupotomy treatment may be an effective method for managing persistent low back pain associated with SIJ dysfunction.

Keywords— Low back pain; Sacroiliac joint dysfunction; Acupotomy; Korean medicine treatment; Case report

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 Case Report

Treatment and Pathogenesis of Cervicogenic Amenorrhea

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Abstract

Amenorrhea, a common gynecological condition, arises from various causes. Clinical observations indicate that some cases of amenorrhea are associated with cervical spondylosis, and treatment with acupuncture and spinal manipulation yields significant results. This article explores the treatment methods and pathogenesis of cervicogenic amenorrhea for peer reference.

Keywords— Amenorrhea, Cervical spondylosis, Cervicogenic amenorrhea

1 Introduction

Amenorrhea is classified as primary or secondary. Primary amenorrhea refers to women over 18 years or with mature secondary sexual characteristics for over two years without menstruation. Secondary amenorrhea involves cessation of an established menstrual cycle for over 6 months or three cycles [1]. Cervicogenic amenorrhea, discussed here, falls under secondary amenorrhea. Modern medicine posits that normal menstruation requires coordinated neuroendocrine interactions within the hypothalamus-pituitary-ovarian axis [1]. Clinically, many amenorrhea patients present with neck discomfort, dizziness, and headaches, with tenderness at Fengfu, Fengchi, and Yifeng acupoints. Acupuncture and manual therapy improve neck symptoms and restore menstruation. The mechanism likely involves cervical spondylosis, particularly atlanto-occipital and atlanto-axial joint misalignment, impairing brain function, suppressing hypothalamic and pituitary activity, and disrupting the hypothalamus-pituitary-ovarian axis, leading to amenorrhea [2].

2 TCM Theory and Pathogenesis

In Traditional Chinese Medicine (TCM), amenorrhea is termed “jingbi” (blocked menstruation), “buyue” (no menstruation), or “yuejingbutong” (menstrual fluid obstruction). *Renzhai Zhizhi Fang* identifies three causes: excessive blood and qi blocking meridians, emaciation drying meridians, or wind-cold and emotional stress obstructing meridians. *Fu Qingzhu’s Gynecology* states, “Menstruation originates from the kidney” and “menstrual fluid comes from the kidney” [1]. Modern TCM proposes the kidney qi-Tianguai-Chong-Ren-Baogong axis [1]. Tianguai, undefined by ancients, is interpreted as essence-qi, kidney-internal qi, celestial

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qi, female essence, or menstrual fluid. *Leijing* explains: “Tianguì is the yin qi of heaven, transforming into water...in the body, it is Yuanyin or Yuanqi” [3]. Tianguì, the material basis for menstruation, requires balanced organ, qi, blood, and meridian functions [3]. Cervicogenic amenorrhea results from Du channel obstruction, marrow sea malnutrition, kidney qi deficiency, Tianguì disorder, and Chong-Ren imbalance [2].

3 Diagnosis

1. Amenorrhea with neck discomfort, dizziness, headache, and fatigue.
2. Imaging studies, though often not directly indicative of causation, requiring clinical correlation.
3. Manual examination: Tenderness, nodules, or cords at neck occipital areas (Fengfu, Fengchi, Yifeng), tenderness around C1-C2 joints, and asymmetric transverse processes [2].

4 Treatment Methods

Pre-treatment involves imaging and palpation to confirm treatment sites.

4.1 Acupuncture Treatment

Main acupoints: Fengchi, Tianzhu, Yamen, Guanyuan, Zigong, Guilai.

Complementary acupoints: Based on syndrome differentiation, e.g., wind-cold-dampness: Houxi, Kunlun, Yinlingquan; qi stagnation-blood stasis: Geshu, Hegu, Sanyinjiao, Xuanzhong, Taichong; liver-kidney deficiency: Ganshu, Shenshu, Baihui, Zusanli, Taixi; severe cold: moxibustion at Dazhui.

4.2 Manual Therapy

Relax soft tissues in the occipital region, knead Baihui, Sishencong, Fengchi, and C1-C2 transverse processes, perform neck traction, and adjust the atlanto-axial joint via head shaking.

Frequency: Twice weekly, 15 sessions per course.

5 Typical Case

A 25-year-old female student presented in September 2024 with late menstruation, amenorrhea, 8-year weight gain, and 6-month memory decline. Menarche occurred at 13; at 17, menstrual volume decreased, with cycles delayed initially by 1 week, later by 20 days, untreated. At 18, weight doubled (70 kg), considered normal development, untreated. At 19, menstruation ceased for 6 months. At 20, a Western diagnosis of endocrine disorder led to Yasmin (1 tablet daily), restoring normal cycles for 3 years. At 24, after discontinuing Yasmin, irregular menstruation resumed, followed by intermittent amenorrhea. Symptoms included 3-month amenorrhea, neck discomfort, heavy head, dizziness, memory loss, fatigue, postprandial gastric discomfort, obesity, low voice, insomnia, and loose stools (daily). Past history: childhood head injury. Examination: fat tongue with teeth marks, white greasy coating, soggy pulse. Diagnosis: Obstructed Du channel, unfilled marrow sea, spleen deficiency with dampness, obscured clear orifices, qi-blood damage, and unnourished Baogong. Treatment: Clear Du channel, nourish marrow sea,

strengthen spleen, eliminate dampness, and nourish qi-blood. After two courses (acupuncture + manipulation), menstruation normalized for 4 months, with moderate flow and 2-3 day duration. Neck symptoms resolved, and memory improved significantly.

6 Conclusion

Cervicogenic amenorrhea is linked to cervical spondylosis, potentially due to atlanto-occipital/atlando-axial misalignment disrupting the hypothalamus-pituitary-ovarian axis or Du channel obstruction and marrow sea malnutrition causing Tiangui disorder. Acupuncture and spinal manipulation restore menstruation by correcting cervical alignment and regulating qi-blood. This case demonstrates significant efficacy, warranting further research and clinical application.

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 Case Report

Case Report: Treatment of Recurring Lower Back Pain and Sciatic Pain with Acupuncture

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Abstract

Lower back pain is a prevalent musculoskeletal condition worldwide, significantly impairing quality of life and contributing to disability. Sciatica, a common manifestation, involves pain along the sciatic nerve, often due to lumbar disc herniation or spinal stenosis. This case report describes the acupuncture treatment of EJ, a 62-year-old male with recurrent lower back pain and sciatica from an L4/L5 disc herniation. EJ's medical history includes a 1987 knee injury causing chronic stiffness and limited motion. Intermittent sciatica from 2017 to 2021 was managed with chiropractic care. In 2022, a laminectomy for severe pain (VAS 10/10) provided relief but left residual numbness in the right shin and toe. Sciatica recurred in late 2024 (VAS 3-5). Seeking non-invasive options, EJ chose acupuncture, targeting Qi and Blood flow in the Bladder and Gallbladder meridians, addressing Kidney deficiency and local stagnation. After several sessions, pain reduced, mobility improved, numbness decreased, and daily activities became easier. This case suggests acupuncture's efficacy for chronic sciatica and supports an integrated approach to pain management and functional restoration.

Keywords— Head acupuncture, Ear therapy, Master Tung acupuncture, sciatica, Lower back pain disorder

1 Introduction

Lower back pain is a leading global musculoskeletal disorder, reducing quality of life and causing disability [1]. Sciatica, characterized by pain radiating along the sciatic nerve, often results from lumbar disc herniation or spinal stenosis [2]. This case report details the acupuncture treatment of EJ, a 62-year-old male with recurrent lower back pain and sciatica due to L4/L5 disc herniation, evaluating its efficacy and clinical implications.

2 Case Report

EJ, a 62-year-old male, presented with recurrent lower back pain and sciatica. Medical history includes a 1987 knee injury causing chronic stiffness and limited motion. Intermittent sciatica from 2017 to 2021 was temporarily relieved by chiropractic care. In 2022, severe pain (VAS

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10/10) led to an L4/L5 laminectomy, reducing symptoms but leaving right shin and toe numbness. In late 2024, sciatica recurred (VAS 3-5). Due to limited prior treatment efficacy, EJ sought non-invasive acupuncture.

3 Treatment Methods

Acupuncture aimed to harmonize Qi and Blood in the Bladder and Gallbladder meridians, addressing Kidney deficiency and local stagnation. Techniques included head acupuncture, ear therapy, and Master Tung acupuncture, with acupoints selected based on syndrome differentiation [3]. Treatments occurred 2-3 times weekly, 30 minutes per session, for 8 sessions, supplemented by light movement guidance to enhance Qi and Blood flow.

4 Treatment Outcomes

After several sessions, EJ reported significant pain reduction (VAS from 3-5 to 1-2), decreased numbness in the right leg, improved mobility, and greater ease in daily activities (e.g., walking, bending). Quality of life improved markedly with no notable side effects.

5 Discussion

Acupuncture alleviated sciatica and lower back pain by regulating meridian Qi and Blood, strengthening Kidney function, and relieving local stagnation [3]. The combination of head acupuncture, ear therapy, and Master Tung techniques likely enhanced neural function and local blood supply [2]. Compared to chiropractic care and surgery, acupuncture's non-invasive nature and safety make it suitable for chronic pain management. Limitations include the single-case design, necessitating further studies to confirm efficacy and mechanisms.

6 Conclusion

This case demonstrates acupuncture's effectiveness for chronic sciatica and lower back pain, improving pain, numbness, and function. As a non-invasive therapy, acupuncture is a valuable component of integrated pain management, warranting clinical adoption and further research [1, 3].

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 Case Report

A case report of Korean Medicine treatments including electroacupuncture for a patient with multiple joint pain caused by Rheumatoid arthritis

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Abstract

Objectives: The purpose of this study is to report the effects of combined Korean Medicine treatments including acupuncture, electroacupuncture, and herbal medicine for a patient with multiple joint pain and digestive symptoms caused by rheumatoid arthritis.

Methods: A 68-year-old female patient was treated with combined Korean Medicine treatment (acupuncture, electroacupuncture, and herbal medicine) for 26 days. Changes of the symptoms were evaluated by numerical rating scale (NRS) for multiple joint pain, EuroQol-5 dimension(EQ-5D-5L) index and visual analog scale (VAS) for digestive symptoms.

Results: After treatment, NRS, EQ-5D-5L, and digestive symptoms were improved.

Conclusions: This case study suggests that Korean medicine treatment could be effective for multiple joint pain and digestive symptoms caused by rheumatoid arthritis and further studies are needed to clarify the therapeutic effect.

Keywords— Rheumatoid arthritis, multiple joint pain, electroacupuncture, Korean Medicine, case report

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 Case Report

The Effect of Korean Medicine Treatment Including Acupotomy for a Patient with Facet Joint Syndrome with Cervicalgia and Radicular Pain in the Upper Limb

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Abstract

Objectives: This study investigates the effect of integrated Korean medicine treatment including acupotomy for a patient with cervical facet joint syndrome, presenting cervicalgia and upper extremity radicular pain.

Methods and Results: A 43-year-old female outpatient was treated with acupotomy, acupuncture, electroacupuncture, and pharmacopuncture. Pain was assessed using the NRS scale, NDI (Neck Disability Index), and physical examination. The patient was treated and observed from September 13th to October 21st, 2024. After the treatment, scores of the NRS and NDI scales decreased. Furthermore, the range of movement and physical examination tests showed improvement as well.

Conclusions: This case demonstrates the potential efficacy of acupotomy in patients with chronic and recurrent cervical pain induced by facet joint degeneration. Further clinical studies are required to clearly define the scope and effectiveness of acupotomy.

Keywords— Acupotomy, Facet joint syndrome, Cervicalgia, Korean medicine, Case report

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 Keynote Speech

Integrating High-Tech Acupuncture and Traditional Chinese Medicine into the Digital Age: Update 2025

Gerhard Litscher¹✉

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Abstract

This keynote lecture explores the integration of High-Tech Acupuncture and Traditional Chinese Medicine (TCM) with modern technological innovations, leading to the development of Digital Chinese Medicine (DCM). It highlights pioneering advancements and international collaborations involving Switzerland, Austria, China, and other countries.

The presentation begins with an introduction to DCM, outlining its evolution and practical applications in both Europe and China. A concise overview of high-tech acupuncture follows, providing insight into fundamental concepts and selected technological innovations.

Several major breakthroughs are discussed, including robot-assisted acupuncture, which increases treatment precision through automation. The lecture also examines computer-controlled laser acupuncture, a promising non-invasive stimulation method realized through cooperation with Asia.

Another key focus is teleacupuncture —a cutting-edge approach that enables real-time remote treatments across international sites such as Graz, Bad Zurzach, Beijing, Wuhan, Harbin, and Shanghai.

The lecture concludes with a forward-looking analysis of future prospects, emphasizing the growing potential of digital technologies to further enhance acupuncture and TCM. These innovations mark a significant step toward a more interconnected, evidence-based, and technologically advanced approach to integrative medicine.

Keywords— Digital Chinese Medicine, High-Tech Acupuncture, Teleacupuncture, Robot-Assisted Acupuncture

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 Keynote Speech

Inn-Iang by George Soulié de Morant

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1. *International Council of Medical Acupuncture and Related Techniques (ICMART)*

Abstract

George Soulié de Morant, the pioneer of French acupuncture and a foundational figure in contemporary acupuncture, proposed water as a metaphor to explain the Taoist concept of Yin-Yang (Inn-Iang). This fundamental notion of Chinese civilization is illustrated through the water cycle, encompassing its three states—gas, liquid, and solid—and its transformations across four stages, akin to the four seasons. These stages include vapor in the sky, rain, flowing water, and crystallized water (snow, ice). The water molecule (H₂O) exemplifies Yin-Yang through its physical and chemical properties. Water's critical role in life, human physiology, and acupuncture points, such as Kidney-1 (Yongquan, Gushing Spring), is highlighted. Additionally, water's significance is reflected in Lao Zi's Dao De Jing, the Celsius scale, meteorology, and modern challenges like the Anthropocene and global warming. This lecture underscores the relevance of Soulié de Morant's water-based Yin-Yang illustration in understanding life, acupuncture, and environmental dynamics.

Keywords— Yin-Yang, Acupuncture, Water Cycle, Taoism, George Soulié de Morant

1 Introduction

George Soulié de Morant, father of French acupuncture and grandfather of contemporary acupuncture—traditional, medical, scientific, and integrated—proposed to explain and illustrate the basis of Taoism and acupuncture, Inn-Iang (Yin-Yang), using the metaphor of water.

2 Development

To make the concept of Yin-Yang (Inn-Iang), Taoist Taijitu (Supreme Peak), accessible to early 20th-century French and European audiences, George Soulié de Morant chose water as an illustration. Water exists in three states—gas, liquid, and solid—and its cycle can be divided into four steps, corresponding to the four seasons:

- **Iang of Iang:** “The blue sky,” where water exists as invisible vapor (blue color), ranging from light clouds to massive cumulonimbus, and mist or fog near the ground.
- **Inn of Iang:** “The water that falls from the sky,” encompassing rain of varying intensities, from drizzle to monsoon storms.

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- **Iang of Inn:** “Water in motion in nature” (mountain streams, rivers, seas, oceans) or controlled by humans (dams, running water, drinking water).
- **Inn of Inn:** “Crystallized water” (white color), such as snow, hail, and ice.

The water molecule (H_2O) serves as a Yin-Yang structure:

- **Physical perspective:** One heavy oxygen atom (Yin, 16 protons, 8 neutrons, 8 electrons) and two light hydrogen atoms (Yang, 1 proton, 1 electron).
- **Chemical perspective:** Oxygen (Yang, oxidation, catabolism) and hydrogen (Yin, anabolism, reduction).

Antoine de Lavoisier (1743–1794) pioneered water electrolysis and synthesis, naming hydrogen, oxygen, and nitrogen, and famously stated, “Nothing is created, nothing is lost, everything is transformed,” reflecting Yin-Yang principles.

Water covers 72% of Earth’s surface and is essential to life, constituting 70% of the human body. It is critical in cellular organization and acupuncture points like Kidney-1 (Yongquan, Gushing Spring), Small Intestine-1 (Shao Ze, Lesser Marsh), and Small Intestine-8 (Xiao Hai, Small Sea). Lao Zi’s Dao De Jing (Chapter 78) emphasizes water’s flexibility and strength. The Celsius scale defines water’s freezing ($0^{\circ}C$) and boiling ($100^{\circ}C$) points. Water’s role extends to meteorology, rainbows, the Anthropocene, industrial applications (e.g., nuclear plants, rocket fuel), and global warming, where human activity impacts the water cycle through melting glaciers and extreme weather.

3 Conclusion

George Soulié de Morant’s use of the water cycle to illustrate Yin-Yang is profoundly relevant. Water, a fundamental element of life, reflects the cyclical transformations of Taoism, acupuncture, and modern environmental challenges like the Anthropocene and global warming.



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