MEDS Chinese Medicine (2025)
Clausius Scientific Press, Canada

DOI: 10.23977/medcm.2025.070402
ISSN 2616-1753 Vol. 7 Num. 4

A Brief Analysis of the Connection between Acupoint Sensitisation and "Qi Reaching the Affected Area"

Ruidan Luo[1], Haifa Qiao[2,*]

[1]Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, China
[2]College of Acupuncture and Tuina, Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, China
**Corresponding author*

Keywords: Acupoint sensitisation, qi reaching the site of disease, acupuncture, Mechanism of action, clinical application

Abstract: Acupoint sensitization and “qi reaching the affected area” are interrelated core propositions in acupuncture research, sharing a tight intrinsic logic in both theoretical implications and clinical practice. This paper systematically analyzes their relationship across four dimensions: fundamental concepts, manifestations, mechanisms of action, and therapeutic outcomes. It reveals that acupoint sensitization and “qi reaching the affected site” share a common regulatory network involving meridians, zang-fu organs, and the body surface. Furthermore, sensitized acupoints serve as “specific targets” for meridian qi transmission, significantly enhancing the targeting precision and efficacy of “qi reaching the affected site.” Research indicates that integrating both approaches in clinical acupuncture treatment enables precise targeting of therapeutic points and optimizes meridian qi transmission effects. This effectively enhances the accuracy and clinical efficacy of acupuncture therapy, providing reference for theoretical research and practical application in acupuncture “precision medicine.”

1. Introduction

In recent years, acupuncture has seen widespread application throughout the nation. As scholars both domestically and internationally deepen their research, some have proposed that acupoints are "living" entities. The size, morphology, colouration, local skin sensations, and functional states of acupoints undergo corresponding changes with the onset and progression of disease. The phenomenon of acupoint sensitisation refers to the process whereby, when organ function is impaired, the functional activity of an acupoint shifts from a physiological state of quiescence to a pathological state of activation[1] .This phenomenon not only provides crucial reference for clinical diagnosis and treatment but also offers new research perspectives for deepening understanding of Traditional Chinese Medicine meridian theory. As stated in Ling Shu: Nine Needles and Twelve Sources, "The essence of needling lies in the arrival of qi to achieve efficacy." Here, "qi" refers to the sensation of qi obtained beneath the needle."Qi reaching the diseased area" signifies that this response, through specific techniques, has reached the pathological site. Due to the stimulation and propulsion of the needle insertion, meridian qi flows towards the diseased area to exert therapeutic effects[2] . Research

by Chen Rixin et al[3] suggests that moxibustion applied to heat-sensitive acupoints can efficiently stimulate meridian qi, enabling qi to reach the diseased area.The Golden Needle Treatise states: "When qi reaches the site of pain, employ the method of qi reception: insert the needle straight with support, then draw it downwards to prevent qi from retreating." Presently, research on "qi reaching the site of disease" and acupoint sensitisation is largely conducted independently, lacking systematic correlative studies. This paper shall briefly analyse their relationship by integrating relevant scientific and clinical research.

2. Overview of Acupoint Sensitisation Research

The holistic concept of Traditional Chinese Medicine emphasises that the human body constitutes an integrated organic whole, wherein organs, meridians, and viscera maintain close interconnections in structure, function, and pathology. When pathological changes occur within the viscera, corresponding acupoints on the body surface undergo concomitant alterations. Acupoint sensitisation denotes changes in sensation, morphology, and function occurring at acupoints associated with pathological conditions.For instance, during pathological conditions, acupoints and the surrounding skin may exhibit dimpling, maculopapular eruptions, desquamation, subcutaneous nodules, or ecchymoses, termed morphological sensitisation. Acupoints along the relevant meridians or in associated regions may demonstrate a lowered pain threshold to stimuli, with markedly heightened sensitivity to pain, termed pain sensitisation. Inconsistencies in skin temperature at acupoints, which evolve with disease progression, constitute thermal sensitisation.Beyond these, acupoint sensitisation encompasses electrical, photic, acoustic, and microcirculatory sensitisation, exhibiting diverse characteristics[4] .

Recent research indicates that the mechanisms underlying acupoint sensitisation involve multiple levels: at the neurological level, neurogenic responses mediate the formation of acupoint sensitisation during visceral pathology. The key neurons transmitting information and triggering cutaneous sensitisation formation are C-type sensory receptors[5] .This primarily manifests as heightened excitability in C-type neurons and sensory nerve endings, increased levels of neurotransmitters such as substance P and bradykinin, and facilitation of pain conduction pathways. At the immunological and microcirculatory levels, Zhu Bing's team[6] observed elevated levels of pain-inducing substances including 5-HT, SP, calcitonin gene-related peptide (CGRP), TVPV-1, HA, and bradykinin receptors in sensitised areas via immunohistochemical analysis.Infiltration of immune cells such as mast cells and macrophages increased, alongside the release of inflammatory mediators including prostaglandin E2, interleukin-1β, and tumour necrosis factor-α. Collectively, these factors alter the local micro-physicochemical environment.

Research indicates that the degree of acupoint sensitisation correlates closely with disease nature, duration, and severity. The form and extent of sensitisation vary with disease progression yet correspond to distinct disease states[7], serving as crucial indicators for disease assessment. This phenomenon finds widespread application in diagnosis, acupoint selection, and therapeutic efficacy evaluation.For instance, in patients with chronic gastritis, pronounced sensitisation frequently occurs at acupoints along the Stomach Meridian such as Zusanli (ST36) and Zhongwan (CV12). The degree of sensitisation at these points can serve as a basis for assessing disease severity and guiding treatment. Nevertheless, current research faces several challenges: the molecular biological basis of sensitisation mechanisms remains incompletely elucidated; unified standards for quantitatively evaluating sensitisation levels are lacking; and the precision and reproducibility of detection methods require improvement. These represent key areas requiring breakthroughs in future research.

3. Explanation of the "Qi Reaches the Site of Disease" Theory

"Qi Reaching the Site of Disease" constitutes one of the fundamental theoretical pillars of Traditional Chinese Acupuncture. Its earliest documented appearance is found in the Huangdi Neijing (The Yellow Emperor's Inner Canon). The Ling Shu chapter Nine Needles and Twelve Sources vividly depicts this phenomenon: "When qi reaches the site, the effect is evident; the efficacy is assured, like wind blowing clouds, clear as seeing the azure sky."The Nan Jing: The Sixty-Eighth Difficulty further emphasises that "the essence of acupuncture lies in the efficacy achieved when qi reaches the affected area," underscoring the critical importance of obtaining qi in acupuncture treatment. These ancient texts provide the earliest documented basis for understanding the theory of "qi reaching the affected area."

Theoretically, the "qi reaching the diseased site" principle is grounded in Traditional Chinese Medicine's theories of qi and blood, and meridian pathways. Regarding qi and blood circulation, it emphasises that qi is the commander of blood, while blood is the mother of qi—the two mutually depend on and promote each other. The ascending, descending, entering, and exiting movements of qi determine the direction of blood flow, while blood circulation provides the material foundation for qi's movement. In pathological states, abnormal qi and blood circulation leads to local or systemic pathological changes.As articulated in the Suwen: On Raising Pain, "Where there is free passage, there is no pain; where there is pain, there is no free passage," underscoring the critical importance of unimpeded qi and blood circulation for maintaining normal physiological functions. Regarding meridian transmission, the orderly course of meridians and the regular flow of qi and blood enable the meridian system—through its intricate network of collateral vessels—to connect all tissues and organs into a unified whole.During acupuncture treatment, once the qi is obtained upon needle insertion, it may conduct along the meridians, producing the phenomenon of sensation transmission along the meridians[8] . Dou Hanqing proposed in his "Ode to the Subtle": "When qi arrives swiftly, the effect is swift; when qi arrives slowly, it cannot be treated"[9] . This demonstrates that the treatment of disease is closely related to the speed at which qi reaches the affected site.Meridian qi travels along the meridians to the diseased site. This transmission manifests not only as the conveyance of sensation but, more significantly, as the delivery of therapeutic information. It reaches the diseased site to exert its curative effect.

From a neurological perspective, the mechanism of action whereby "qi reaches the site of disease" can be elucidated through principles of modern neurophysiology. By regulating the flow of qi and blood within the body via neural transmission and neuromodulation, therapeutic effects are achieved. Numerous studies confirm that the sensation of qi acquisition exerts significant influence on the limbic or parahippocampal systems and subcortical structures, with acupuncture affecting central nervous function through peripheral neural pathways[10] .In acupuncture therapy, needling disease-related points activates sensory nerve endings in the skin, muscles, and meridians, generating local reflexes. Via neural reflex pathways, stimulus signals are transmitted to the spinal cord and brain, thereby regulating nervous system function[11] .This process promotes local blood circulation, alleviates stagnation of qi and blood, and achieves therapeutic effects. The nervous and immune systems exhibit close interactions; acupuncture stimulates the nervous system to regulate neurotransmitter release (e.g., endorphins, noradrenaline)[12] . These neurotransmitters play crucial roles in modulating immune responses, alleviating pain, and promoting self-healing.

The theory of "qi reaching the affected area" holds significant guiding importance for the clinical application of acupuncture therapy. Gao Kun[13] Combined with modern clinical acupuncture research, it is evident that the arrival of qi at the affected site is pivotal to achieving therapeutic efficacy. This theory provides the rationale for selecting points along meridian pathways, guiding practitioners to choose appropriate treatment points based on meridian course and pathological

location. Regarding therapeutic techniques, emphasis is placed on employing appropriate manual stimulation to guide qi and blood circulation, thereby regulating both local and systemic functions.

4. The Connection Between Acupoint Sensitisation and "Qi Reaching the Site of Disease"

Ancient physicians observed in clinical practice that during disease states, dysfunction of the zang-fu organs and abnormal qi and blood circulation manifest as specific reactive points on the body surface (termed "Ashi points"). This phenomenon is regarded as the precursor to the theory of acupoint sensitisation[14] .Zhang Xiaoping[15] and colleagues propose that needling Ah-shi points stimulates qi and blood circulation, unblocks meridian pathways, and facilitates the "arrival of qi at the site of disease" to achieve therapeutic effects. The phenomenon of acupoint sensitisation provides the foundation for this "arrival of qi at the site of disease". Needling sensitised points more effectively guides qi and blood directly to the diseased area, thereby treating the condition. The "arrival of qi at the site of disease" also represents the concrete manifestation of acupoint sensitisation.

The process of acupoint sensitisation necessitates the involvement of neural reflexes and various cytokines, which constitute essential mechanisms for achieving this sensitisation[16] . Stimulation of specific acupoints activates local nerve endings, potentially inducing sensory alterations such as numbness, distending pain, or warmth. These perceptual changes indicate modifications in neural conduction at the site[17] .Within the theory of "qi reaching the site of disease", the flow of qi and blood constitutes the therapeutic core. The nervous system, particularly the central nervous system, plays a pivotal role in this process. Neural signals are not confined locally but can also be transmitted to the central nervous system (spinal cord, brainstem, cerebral cortex). Through neural networks in the spinal cord and brain, they regulate the functions of organs or viscera distant from the pathological site, thereby improving the circulation of qi and blood.Acupoint sensitisation and "qi reaching the site of disease" constitute two interrelated stages. Acupoint sensitisation involves the formation of surface reaction points during pathological states, while intervention at sensitised points facilitates "qi reaching the site of disease" to enhance therapeutic efficacy. Their integration embodies Traditional Chinese Medicine's therapeutic principles of "correspondence between internal and external" and "holistic regulation".

During acupoint sensitisation, local tissue stimulation signals transmit via the nervous system to elicit systemic responses. This aligns with the meridian-based sensory transmission effect in "qi reaching the affected site"[18] .Moreover, both phenomena exhibit marked similarities in their dynamic patterns. The degree of acupoint sensitisation alters with disease progression, aligning with the emphasis on dynamic changes in qi and blood circulation within the "qi reaching the site of disease" concept. The intensity of acupoint sensitisation often reflects disease severity, providing objective evidence for assessing qi and blood abundance or deficiency[19] .

Acupoint sensitisation provides the theoretical foundation for "qi reaching the site of disease", while the latter represents its practical application in clinical settings. These concepts mutually reinforce each other, embodying the close integration of theoretical principles and clinical practice within Traditional Chinese Medicine.

5. The clinical significance of their combined application

The diagnostic value of acupoint sensitisation has been extensively validated by modern research. Zhang Wenliang et al[20] employed tenderness examination on relevant acupoints for patients with gastrointestinal disorders using acupoint pain sensitisation, comparing results with barium meal examinations. Findings demonstrated a high concordance rate of 90%.The distribution of sensitised points typically correlates closely with the location of pathological changes or the meridian pathways of associated viscera, exhibiting regular patterns[21] . In disease treatment, acupoint sensitisation

holds significant importance for guiding point selection. Sensitised points often constitute optimal therapeutic points; needling these sites not only enhances clinical efficacy but also aids in restoring the body's equilibrium[22] .Research indicates that the degree of acupoint sensitisation correlates with disease severity, serving as an objective indicator for assessing clinical condition.Yang Lijuan et al[23] observed a general increase in pain thresholds at relevant meridian points following acupuncture treatment for irritable bowel syndrome patients, indicating that pain sensitisation levels correlate closely with disease progression. Consequently, dynamic changes in acupoint sensitisation may reflect disease trajectory, providing reference for prognostic assessment.

The principle of "qi reaching the affected area" emphasises employing specific techniques during acupuncture to ensure that the sensation transmitted along the meridian[24] directly reaches the pathological site. Extensive clinical practice demonstrates that "qi reaching the affected area" significantly enhances the therapeutic efficacy of acupuncture. This theory exhibits systematic and holistic characteristics in guiding treatment. Following the attainment of qi through acupuncture, disease is treated by the transmission and regulation of qi and blood flow via the meridian, providing a rationale for selecting points along the meridian and determining therapeutic techniques.

The combined clinical application of acupoint sensitisation and "qi reaching the affected site" offers distinct advantages. Chen Rixin's research[25] suggests that moxibustion applied to thermally sensitised acupoints more readily stimulates meridian sensory transmission, promoting qi's arrival at the pathological site and thereby significantly enhancing clinical moxibustion efficacy. Objective indicators of acupoint sensitisation determine primary treatment points, while meridian pathways guide point selection, resulting in more precise treatment protocols.Treatment at sensitised points demonstrates the principle of "small stimulus, large response"[3][25], facilitating the "arrival of qi at the site of disease" and enhancing treatment efficacy. By observing the patterns of acupoint sensitisation alongside the "arrival of qi at the site of disease" approach, both rapid relief of local symptoms and sustained therapeutic outcomes can be achieved. Assessing immediate effects through changes in acupoint sensitisation levels, combined with symptom improvement evaluations, renders efficacy observation more objective.

6. Discussion

The integration of acupoint sensitisation with the "qi reaching the affected site" principle has been applied clinically, demonstrating favourable outcomes across multiple conditions. Professor Chen Rixin's thermosensitive moxibustion therapy, developed through over two decades of clinical practice and research innovation, is now widely adopted nationwide. However, to fully leverage this integrated approach, establishing standardised assessment criteria for acupoint sensitisation remains essential.

In summary, the integrated application of acupoint sensitisation and the "qi reaching the affected site" theory offers novel approaches to enhancing acupuncture efficacy, holding significant clinical value. As research deepens, this integrated model will provide more scientifically grounded guidance for the advancement of acupuncture treatment.

References

[1] Yu Xiaochun, Zhu Bing, Gao Junhong, et al. Scientific Basis of Acupoint Dynamic Processes [J]. Journal of Traditional Chinese Medicine, 2007, 56(11): 971–973.

[2] Liu Nongyu. "Deqi" and "Qi Zhi" [J]. Chinese Acupuncture & Moxibustion, 2014, 34(08): 828–830.

[3] Chen Rixin. Heat-Sensitive Moxibustion: Inheritance, Innovation, and Development of Traditional Chinese Moxibustion Techniques [J]. Chinese Acupuncture & Moxibustion, 2023, 43(04): 483–488.

[4] Ren Jingyu, Mou Qiujie, Wang Shun, et al. A Brief Analysis of Acupoint Sensitisation [J]. Journal of Acupuncture and Moxibustion, 2019, 35(07):1-4.

[5] Fu Hongjuan, Qi Wenchuan, Tang Yong, et al. Scientific Basis of the Dynamic Process of Acupoint Sensitisation [J]. World Science and Technology - Modernisation of Traditional Chinese Medicine, 2022, 24(11): 4378-4385.
[6] Zhu Bing. Acupoint Plasticity: A Crucial Feature of Acupoints' Intrinsic Nature [J]. Chinese Acupuncture & Moxibustion, 2015, 35(11): 1203-1208.
[7] Wan Min, Zhou Yumei, Zhou Jie, et al. Analysis of the Phenomenon and Patterns of Acupoint Sensitisation [J]. Journal of Acupuncture and Moxibustion, 2017, 33(03): 74-77.
[8] Su Meiling, Chen Ming, Xu Jinsen. "A Study on the Origins and Clinical Application of 'Qi Reaching the Site of Disease'." Journal of Chinese Medicine and Pharmacy 30.07 (2015): 2304-2306.
[9] Song Tingting, Wang Jun. Key Factors in Enhancing Acupuncture Efficacy: Insights from the Principle of "Effectiveness Upon Qi Arrival" [J]. Chinese Journal of Acupuncture and Moxibustion, 2019, 39(02): 197-200.
[10] Zhu Shipeng, Chen Huan, Li Xiaohong, et al. Overview of Research on Characteristics and Mechanisms of Qi Sensation in Acupuncture [J]. Journal of Traditional Chinese Medicine, 2015, 56(19): 1700-1703.
[11] Zhang Ji, Zhang Ning. An Exploration of the Mechanism of Acupuncture Analgesia [J]. Chinese Acupuncture & Moxibustion, 2007,(01):72-75.
[12] Wang Qingyong, Qu Yuanyuan, Feng Chuwen, et al. Analgesic Mechanism of Acupuncture in Neuropathic Pain [J]. Chinese Journal of Acupuncture and Moxibustion, 2020, 40(08): 907-912.
[13] Gao Kun. The Phenomenon of Meridian-Following Sensory Transmission and Clinical Efficacy [J]. Journal of Yunnan University of Chinese Medicine, 2001, (04): 37-38+50.
[14] Pan Wei, Lin Linan, Yu Xiaoshuai, et al. Pattern Summary and Application Analysis of Exploring Sensitised Points on the Body Surface [J]. Journal of Beijing University of Chinese Medicine, 2024, 47(11): 1623-1628.
[15] Zhang Xiaoping, Lin Xuexia, Li Haichao. Discussion on the Mechanism of Pain Relief at Ah-shi Points [J]. Journal of Acupuncture and Moxibustion, 2003, (07): 59.
[16] Cui Yimin, Tang Yanni, He Yifan, et al. An Analysis of Acupoint Sensitisation Research [J]. Journal of Acupuncture and Moxibustion, 2023, 39(07): 6-10.
[17] Xu Yucheng, Jin Zhisheng. Clinical research progress in acupuncture analgesia [J]. Modern Clinical Medicine, 2021, 47(05): 382-384.
[18] Lin Chi, Zheng Meifeng, Huang Tao, et al. Genealogical Examination of the Concept of "Meridian-Based Sensory Transmission" [J]. Journal of Chinese Medicine, 2017, 32(12): 5435-5438.
[19] Xu Guixing, Zhou Yumei, Sun Ning, et al. Characteristics and Patterns of Acupoint Sensitisation Revealed in Knee Osteoarthritis [J]. Chinese Journal of Acupuncture and Moxibustion, 2022, 42(01): 51-57.
[20] Zhang Wenliang. Clinical Observation on Diagnosis and Treatment of Common Gastrointestinal Diseases Using Meridian Point Tenderness [J]. Shanghai Journal of Acupuncture and Moxibustion, 1991,(03):13-15.
[21] Gao Yao. Research progress on the distribution patterns of sensitised acupoints [J]. Sichuan Journal of Traditional Chinese Medicine, 2018, 36(10): 212-214.
[22] Shen Yiwei, Wang Shun, Bai Yan, et al. Clinical Study on Acupuncture Treatment of Sensitised Points for Insomnia Due to Heart-Kidney Disharmony [J]. Journal of Acupuncture Clinical Medicine, 2025, 41(01): 41-46.
[23] Yang Lijuan, Wang Xiaoxin, Li Bin, et al. Effect of Acupuncture on Pain Threshold at Acupoints in Patients with Irritable Bowel Syndrome [J]. Shanghai Journal of Acupuncture and Moxibustion, 2018, 37(09): 1030-1036.
[24] Lin Chi, Zheng Meifeng, Huang Tao, et al. Genealogy of the Concept "Transmission Along Meridians" [J]. Journal of Chinese Medicine and Pharmacy, 2017, 32(12): 5435-5438.
[25] Chen Rixin, Kang Mingfei. The Essence of Moxibustion: Effectiveness Lies in Qi Arrival [J]. Chinese Acupuncture & Moxibustion, 2008,(01):44-46.