

Exploration of Ma Xiangdong's Academic Insights and Mechanism in Treating Persistent Hiccups

Guangyi Xu¹, Ruizhen Lv², Xiangdong Ma^{1,*}

¹Baotou City Central Hospital, Baotou 014042, Inner Mongolia Autonomous Region, China

²Guyang County Chinese and Mongolian Hospital, Baotou 014000, Inner Mongolia Autonomous Region, China

*Correspondence Author

Abstract: *Intractable hiccup is a common clinical condition. Compared with common heavy-stimulation treatment methods, Director Ma Xiangdong has taken a different approach by adhering to the concept of mild treatment, achieving remarkable clinical results. Director Ma Xiangdong is a renowned traditional Chinese medicine practitioner in Baotou City. With over three decades of dedicated practice in acupuncture, he has developed unique insights and accumulated extensive clinical experience in diagnosing and treating a variety of difficult and complex diseases. In his long-term clinical practice, he emphasizes the diagnostic and therapeutic philosophy of "treating both the spirit and the body," and is particularly adept at using subcutaneous acupuncture to treat intractable hiccup, with significant efficacy. This paper integrates modern medical theories to analyze Director Ma Xiangdong's methods and mechanisms for treating intractable hiccup, aiming to share his valuable clinical experience with peers and provide new ideas and references for the application of acupuncture therapy in internal medicine.*

Keywords: Intractable Hiccup, Acupuncture, Fascia, Integrated Traditional Chinese and Western Medicine, Academic Experience.

1. Introduction

Persistent hiccups refer to hiccups lasting more than 48 hours, with complex pathogenesis. Modern medicine indicates that it is associated with encephalopathy, cervical spondylosis, pulmonary diseases, digestive system disorders, electrolyte disturbances and other conditions. Hiccups are sudden, involuntary spasmodic contractions of the diaphragm and intercostal muscles, accompanied by rapid closure of the glottis. The abrupt obstruction of airflow produces the characteristic hiccup sound. Essentially, it stems from pathological hyperactivity of the medullary hiccup center, and three key links are involved: the diaphragm, neural regulation, and central-peripheral stimulation. Hiccups are categorized into physiological and pathological types. Physiological hiccups are transient and harmless, whereas pathological hiccups can be triggered by multisystem diseases such as pneumonia, diaphragmatic tumors, and nerve compression caused by cervical spondylosis [1].

As a clinical symptom, hiccups exert adverse impacts on disorders of multiple systems. For instance, they may provoke ongoing hemorrhage in patients with gastric bleeding, patient-ventilator asynchrony in those with respiratory failure, and poor wound healing in postoperative patients. Clinically, sedatives, prokinetic agents or nerve-blocking injections are commonly administered, which can resolve most cases of hiccups. Nevertheless, a subset of patients cannot receive such therapies due to contraindications, or fail to respond to conventional pharmacotherapy; for these patients, traditional Chinese medicine (TCM) intervention is required [2,3].

Acupuncture of TCM exhibits unique therapeutic effects in treating persistent hiccups. This condition is mostly attributed to upward counterflow of stomach-qi and disordered qi movement [4,5]. Frequently-used acupoints include Geshu (BL17), Neiguan (PC6), Zusanli (ST36), Zhongwan (CV12), and Zanzhu (BL2) [6]. Acupoint selection should be flexible

according to different syndrome patterns. Combined therapies such as moxibustion, auricular point pressing with semen vaccariae, and acupoint injection can be adopted to enhance efficacy. The therapeutic mechanism lies in unblocking meridians, harmonizing the stomach to descend counterflow qi, and regulating visceral qi movement so as to terminate hiccups [7-9].

Director Ma Xiangdong, a renowned traditional Chinese medicine (TCM) practitioner in Baotou City, has long been engaged in clinical acupuncture practice and clinical mentoring, and has accumulated extensive clinical experience. In clinical practice, Director Ma upholds the diagnostic and therapeutic philosophy of treating both spirit and body.

First comes spirit regulation. As stated in *Huangdi Neijing (Yellow Emperor's Inner Canon)*: "All methods of acupuncture must be rooted in the spirit first." All treatments should be fundamentally based on regulating the spirit. The spirit is not an abstruse, esoteric concept; rather, it is a tangible entity that can be influenced and adjusted. The lifestyle differences between modern and ancient populations have led to a year-on-year rise in the number of diseases caused by spirit derangement. Therefore, spirit regulation has once again become the foremost priority in acupuncture treatment.

Second is external regulation of the physical body. The *Huangdi Neijing* also states: "When bones are straight and tendons are supple, qi and blood flow freely." Only when the peripheral framework is well constructed can internal functions operate normally. The author studied under Director Ma Xiangdong in clinical settings and has acquired a systematic understanding of the "simultaneous treatment of spirit and body" for various diseases. Taking persistent hiccups as the entry point, this paper explores Director Ma Xiangdong's academic experience in the treatment of persistent hiccups.

2. Clinical Thinking

In daily collaborative diagnosis and management with Western medicine departments, Director Ma Xiangdong has summed up rich experience in acupuncture treatment of hiccups, particularly postoperative hiccups and persistent hiccups that show poor response to pharmacotherapy. After years of clinical practice, Director Ma puts forward his view: “For hiccup disorder, the disease location is the diaphragm, its root lies in the spirit, and its pathological changes occur in the meridian sinews. Although there are various predisposing factors, the fundamental mechanism is that the systemic state surrounding the diaphragm affects the diaphragm’s physiological environment, resulting in diaphragmatic dysfunction. We can locate the problematic regions near the diaphragm and correct them.”

After identifying the problematic areas, Director Ma Xiangdong does not rigidly stick to traditional perpendicular needling with strong stimulation. Instead, he applies precise subcutaneous horizontal needling, combined with moderate attention guidance for the patient, to achieve **“light and agile spirit regulation”**. This technique not only complies with ancient records on the depth of acupoint manipulation, but also anatomically coincides with the therapeutic level of the most advanced Western fascial system therapy. The attention guidance also aligns with the brain’s regulatory function over the body. Based on knowledge of the fascial system and neuroscience, this paper attempts to present a modern interpretation of Director Ma Xiangdong’s academic experience in treating persistent hiccups.

3. Specific Procedures

1) The patient starts in a supine position, then sits up with the buttocks fixed to prevent positional shift. The practitioner places both palms on the skin over the erector spinae region of the patient’s back, palpates and locates the sites of fascial sliding obstruction that emerge with respiratory excursions; these sites are selected as needle insertion points. The filiform needle is inserted subcutaneously and horizontally at a 15° downward angle, with smooth, unobstructed insertion as the optimal standard. The patient then lies supine again. The practitioner places both hands near the inferior costal arch, palpates the sites with increased fascial sliding resistance that occur with hiccup episodes, and inserts the needle horizontally at a 15° angle parallel to the lower border of the ribs. The insertion should be smooth without resistance, and the patient should not experience any discomfort.

2) The patient is instructed to focus attention on the needling sites on the back.

3) According to the patient’s specific clinical manifestations, abnormally high-tension points can also be identified near the coracoid process, near the anterior superior iliac spine, and at abdominal scars. Horizontal needling can be performed at these points along the course of the bones or scars.

(All procedures above are performed with 0.35 × 50 mm acupuncture needles.)

4. Pathological Changes Lie in the Meridian Sinews

1) Director Ma Xiangdong holds that the physical framework formed by soft tissues and bones is of great importance. Normal physiological functions of any tissue or organ depend on proper spatial relationships. For example, for the intestinal tract, the space formed by abdominal muscles and bones is a prerequisite for normal peristalsis. Muscle tension generates abdominal pressure, and either excessively high or low abdominal pressure will impair the peristaltic function of the intestinal tract [10].

2) Director Ma Xiangdong believes that there are certain differences between acupuncture syndrome differentiation and herbal medicine syndrome differentiation. As stated in *Nanjing (Classic of Difficult Issues)*: “One who is skilled in acupuncture values the left [hand]; one who is unskilled in acupuncture values the right [hand].” Here, “valuing the left” does not merely refer to locating acupoints accurately through palpation, but more importantly serves as a guiding principle emphasizing palpation in acupuncture diagnosis. Therefore, in clinical acupoint selection, Director Ma Xiangdong relies more on the body’s manifestations upon palpation rather than rigidly adhering to the indicated functions of the acupoints themselves [11].

In the diagnosis and treatment of hiccups, emphasis is placed on using the palms to perceive tissue stiffness and incoordination, and such areas are selected as therapeutic points. Different from the superficial interpretation of “valuing the left” as treating the most tender point on pressure, this palpation approach that prioritizes tissue coordination better aligns with the ancient doctrine of “one skilled in acupuncture values the left [hand for palpation].”

The needling technique adopted is horizontal needling with minimal pain. It requires smooth, unobstructed needle insertion, which confirms that the needling reaches a consistent tissue layer rather than penetrating multiple layers. This is a method targeting the superficial layer, and is highly consistent with modern fascial theory. According to fascial theory, various pathological factors can cause hyaluronic acid between fascial layers to transform from a physiological sol state to a pathological gel state, which in turn triggers motor dysfunction and abnormal sensory afferent input, resulting in motor and sensory disturbances [12]. This horizontal needling can effectively increase the intensity of proprioceptive afferent input, promote the conversion of gel-state hyaluronic acid back to the sol state, and restore normal movement and sensory conduction of body tissues.

Similarly, for the diaphragm, its costosternal attachments are located at the parasternal costal cartilages and the inferior borders of the lower six pairs of ribs, which are the operational sites for many diaphragmatic relaxation techniques. Palpating this area to locate fascial obstruction points and applying needling can more precisely restore the mechanical balance of the diaphragm, eliminating the pathological triggers of hiccups from the peripheral level.

5. The Root Lies in the Spirit

Director Ma Xiangdong holds that the regulation of “spirit” in TCM treatment involves two dimensions: first, the holistic regulation of the physiological functions of human zang-fu organs and meridians; second, the intervention in human mental, conscious and cognitive activities.

During the treatment of hiccups, horizontal subcutaneous needling is first performed on the patient’s back with the needle retained, then the patient is assisted to lie supine so that the needle body is gently pressed under the body. On one hand, this maneuver prevents needle displacement caused by body twisting and reduces acupuncture risks; on the other hand, it allows the patient to continuously perceive the mild needling sensation on the back, achieving an “anchoring effect” of attention. Its essence is to actively focus the brain’s attention on a single somatic non-noxious sensory target.

At this point, the prefrontal cortex (the center for attention and emotion regulation) and the primary/secondary somatosensory cortices of the parietal lobe are highly activated, forming a stable cognitive-sensory focus. Through the corticobulbar descending inhibitory pathway, it exerts a strong descending inhibitory effect on the medullary hiccup center, stopping it from continuously issuing abnormal neural commands that trigger diaphragmatic spasm, thus interrupting the pathological reflex arc of hiccups at the central level.

6. Representative Clinical Cases

6.1 Case 1

Patient Zhang, male, 68 years old, was admitted to the Department of Critical Care Medicine (DCCM) of our hospital due to “severe pneumonia with type I respiratory failure”. On the 3rd day after admission, the patient developed sudden persistent hiccups at a frequency of 30–40 episodes per minute, accompanied by chest tightness and breath suppression. The hiccups severely impaired ventilator ventilation efficacy, resulting in insomnia at night and fluctuations in blood oxygen saturation (SpO₂). The DCCM successively administered conventional medications including metoclopramide and chlorpromazine for antispasmodic and sedative therapy. The hiccups ceased temporarily after medication but relapsed after the drug effect waned, with no reduction in frequency. A consultation from the acupuncture department was then requested.

On presentation, the patient was conscious but extremely fatigued, with frequent hiccup episodes. Physical examination: bilateral cun pulses were weak, and guan pulses were deep and forceful. Palpation around Zhongfu (LU2) and Yunmen (LU1) near the coracoid process revealed marked tenderness and increased tension. The patient was first placed supine then rolled to a lateral decubitus position. The practitioner placed palms on the skin over the erector spinae region of the patient’s back, and identified increased tone in the right paravertebral erector spinae at T7–9 and T12–L1 levels, corresponding to the patient’s hiccup rhythm. Subsequent palpation near the costal arch detected increased tension at the bilateral inferior costal borders and obvious impaired skin

gliding sensation synchronized with hiccup episodes. These three sites were determined as needle insertion targets.

Procedure: With the patient in lateral position, horizontal needling of 1.5 cun in length was performed along the course of the erector spinae from superior to inferior in the bilateral tense erector spinae regions. The patient was assisted back to supine position with the needles retained. Two needles were inserted horizontally at Yunmen (LU1) in an inferolateral direction. Two needles were inserted horizontally along the inferior border of the costal arch on each side, and one needle was inserted inferiorly and horizontally at the xiphoid process, with an insertion depth of 1.5 cun, for a total of 9 needles. The patient was instructed to focus attention on the needling sites. (Needle specification: 0.35 × 50 mm; manufacturer: Changchun Aikang Medical Instrument Co., Ltd.; medical device registration number: Jixie Zhuzhun 20222200599)

Outcome: After one session of acupuncture, the frequency of hiccups decreased significantly. Two additional consolidation sessions were given, and no recurrence was observed.

This is a typical case of hiccups secondary to severe respiratory disease. Severe pneumonia caused prolonged overloading of the respiratory muscles, which eventually led to respiratory rhythm imbalance under disease progression. This resulted in severe mechanical imbalance of the diaphragm and surrounding fascia, triggering diaphragmatic spasm. Zhongfu (LU2) and Yunmen (LU1) are the starting points of the Lung Meridian. In ancient medical classics, both are key acupoints for treating pulmonary diseases, especially lung distension and dyspnea with fullness. Modern studies have shown that beneath these two acupoints lie the pectoralis major and pectoralis minor muscles, which are important accessory respiratory muscles. Under high respiratory load, these muscles contract to compensate for respiratory function. However, in patients with chronic respiratory diseases, heavy respiratory load predisposes these muscles to strain, leading to decompensation and disease onset. Moreover, when shortened and tense, these two muscles restrict thoracic expansion, impair pulmonary ventilation, and increase the load on other respiratory muscles, making them important therapeutic targets for respiratory diseases.

When respiratory function is disrupted, the diaphragm — as the largest respiratory muscle — bears the heaviest burden. Frequent high-intensity use causes severe mechanical imbalance of the diaphragm and surrounding fascia, leading to local fascial adhesion and folding. This impairs conductivity from the abdominal to the thoracoabdominal fascial layers, resulting in diaphragmatic spasm. Meanwhile, mechanoreceptors around the diaphragm send abnormal signals to the central nervous system, keeping the medullary hiccup center in a state of hyperactive pathological reflex. Although conventional Western medicine can block nerve conduction, it cannot resolve local fascial densification, hence the high recurrence rate. In clinical practice, for patients with respiratory diseases, especially those who respond poorly to conventional oral Western medication, an alternative approach can be attempted: examining the tactile sensation and rhythm of respiratory muscles and treating superficial tissues at sites with abnormal palpation findings with acupuncture, which may yield unexpected therapeutic effects.

6.2 Case 2

Patient Li, female, 65 years old, presented with “intermittent hiccups for 1 year, aggravated for 7 days”. The patient reported that hiccups first occurred 1 year ago due to overexertion, with intermittent episodes relieved by oral *Shugan Hewei Pills*, belladonna tablets, mosapride, etc. Seven days prior, hiccups worsened and became persistent after overexertion from moving house, and the previous medications failed to relieve symptoms.

Current presentation: episodic hiccups, shortness of breath with low voice, poor appetite, disturbed sleep, normal bowel and bladder function.

Physical examination: red tongue with deviated fissures, white coating, wiry pulse. In standing position, the patient’s thoracic cage was rotated to the right, with abdominal distension. A 6-cm scar was visible in the right lower quadrant (from appendectomy 22 years prior), and a 10-cm scar was visible below the right costal margin (from cholecystectomy 20 years prior); both scars were deeply indented. Palpation of the right lower quadrant scar elicited pain radiating toward the umbilicus; palpation of the scar below the right costal margin caused distending pain radiating to the back, with increased skin tension below the costal arch. Scoliosis with left convexity was centered at T8, with increased tone of the left erector spinae from T6 to T10.

With the patient in sitting position, the practitioner placed palms on the erector spinae region of the back. Following the patient’s hiccup rhythm, abnormal tactile sensation was noted at the left erector spinae at T8, with significantly greater excursion than the paravertebral regions above and below. Thus, the positive point at the left erector spinae at T8, the tension points below the costal arch, and the surgical scars were identified as therapeutic sites.

Procedure: With the patient sitting, 2 needles were inserted horizontally along the course of the erector spinae from superior to inferior at the positive point of the left erector spinae at T8. The patient was assisted to supine position with needles retained. One needle was inserted horizontally along the costal arch direction on each side at the high-tension points below the costal arch, and one needle was inserted inferiorly and horizontally at the xiphoid process. Two needles were inserted horizontally on each side of the scars in the right upper and right lower abdomen, respectively, with an insertion depth of 1.5 cun, for a total of 13 needles. The patient was instructed to focus attention on the needling sites and perform slow deep breathing, fully expanding and relaxing the abdomen. (Needle specification: 0.35 × 50 mm; manufacturer: Changchun Aikang Medical Instrument Co., Ltd.; medical device registration number: Jixie Zhuzhun 20222200599)

Outcome: After one acupuncture session, the patient reported abdominal relaxation, back relief, and smooth breathing, and hiccups resolved, but relapsed at night. With continued treatment, the duration of hiccups gradually shortened. Hiccups resolved completely after 3 sessions, and poor appetite improved significantly after 5 sessions, accompanied by a louder voice, reduced abdominal distension, and gradual

correction of body posture. No recurrence was observed during 1-month follow-up.

This case of hiccups was precipitated by overexertion. Although overexertion was the trigger, the patient had a surgical history of more than 20 years with deep scars, and palpation elicited distal radiating sensations. Combined with rightward rotation of the thoracic cage, this indicates that the two scars exert significant traction on the body. To reduce the traction force of the scars, the body compensates with right rotation, leading to secondary scoliosis. When the body is in a twisted posture, the normal alignment between the thoracic cage and abdominal cavity is disrupted. As the partition between the thoracic and abdominal cavities, the diaphragm’s movement is impaired by the abnormal alignment. Meanwhile, the distorted spine also causes abnormal nerve impulses. The combination of these factors manifests as shortness of breath, low voice, and poor appetite. Overexertion from moving house was the precipitating factor, and excessive fatigue of the musculoskeletal system disrupted the original compensatory balance, resulting in hiccups.

For such conditions, treatment should focus not only on the symptoms themselves, but also on whether the body maintains a balanced state. As the classic maxim states: “When bones are straight and tendons are supple, qi and blood flow freely”. We can adjust the state of bones and tendons to regulate local qi and blood circulation; abundant qi and blood can in turn reduce disease recurrence. In this case, horizontal needling and release of the relevant positive points and scars at key sites reduced the traction force of the scars on the body. The reduction in abdominal distension and improvement in body posture both confirm that the body has achieved a new homeostatic balance.

7. Conclusion

These two cases fully demonstrate the clinical value of “treating both spirit and body”:

On one hand, “treating the body” adjusts physical form to resolve local compression. Through precise localization of fascial gliding obstruction by palpation, subcutaneous horizontal needling promotes the conversion of abnormally aggregated hyaluronic acid from gel to sol state, restores the mechanical balance of the diaphragmatic costosternal attachments, erector spinae, and intercostal muscles, and reconstructs normal proprioceptive afferent pathways. Case 2 particularly highlights the impact of postoperative scars on internal organ systems.

On the other hand, “regulating the spirit” suppresses central hyperactivity. Critically ill patients often experience severe anxiety and panic due to breath suppression and persistent hiccups, which further amplifies abnormal excitation of the central nervous system. Through the special posture of needle compression on the back and verbal guidance, reorientation of attention is achieved. This sustained peripheral non-noxious sensory stimulation rapidly activates the prefrontal cortex and parietal somatosensory cortex, and inhibits abnormal discharge of the medullary hiccup center via the corticobulbar descending inhibitory pathway. The entire treatment process requires no strong stimulation and does not increase the organ

burden of critically ill patients, reflecting the unique advantages of acupuncture in multidisciplinary collaboration within modern general hospitals.

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