

# Research Progress of Different Acupuncture and Moxibustion Methods in the Treatment of GERD (Gastro Esophageal Reflux Disease)

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**Abstract:** Over the past decade, there have been many clinical reports on acupuncture and moxibustion in the treatment of gastro esophageal reflux disease, which has been an increasing trend year by year. The authors use "acupuncture", "acupuncture and moxibustion" or "electric acupuncture" and "GERD" or "gastro esophageal reflux disease" as key words for retrieval. Through the clinical articles on acupuncture and moxibustion methods in the treatment of GERD indexed by China CNKI academic literature database, VPCS database and Wanfang database from 2006 to 2016, we find that: acupuncture and moxibustion methods in the treatment of GERD has definite curative effect and outstanding advantages. It can better improve the symptoms of patients and can effectively improve their quality of life. At present, in clinical applications, there are treatment ideas such as the method of acupuncture on governor vessel back segment, the old ten needles, and compatibility of five meridians in the aspect of acupoint selection; there are treatment ideas such as fire acupuncture, thread-embedding, and electric acupuncture in the aspect of method of needling and moxibustion; there are treatment ideas such as acupuncture and moxibustion combined with pinellia ternate Xiexin Decoction, Chinese herb bath, deanxit (flupentixol and melitracen tablets) in the aspect of acupuncture and medicinal treatment. This paper comb integration of the current variety of therapies, in order to allow readers to obtain a more comprehensive clinical diagnosis and treatment ideas of gastro esophageal reflux disease.

**Keywords:** GERD (Gastro esophageal reflux disease); Acupuncture and moxibustion; Review.

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## 1. Introduction

GERD (Gastro Esophageal Reflux Disease) refers to a disorder in which the contents of the stomach or duodenum flow back into the esophagus, causing discomfort and (or) complications<sup>[1]</sup>. The typical symptoms are acid reflux and anti-feeding. Pain in the heart and back of the sternum may present with foreign body sensations in the pharynx, difficulty in swallowing, noisiness, belching, heartburn, upper abdominal pain, and fullness of both ribs. Some lack the typical performance of the digestive tract, but the main performance outside the digestive tract, known as "resting reflux", and accompanied by esophageal symptoms, such as sinusitis, bad breath, dry mouth, biting teeth, upset, Pharyngitis, cough, irritability, glous hystericus, asthma, constipation, etc. GRED is already a kind of high-grade chronic disease. Its complexity is getting higher and higher, the symptoms often alternate, and it seriously affects the quality of life of patients. It has been

increasingly valued by clinicians. The pathogenesis of this disease in modern medicine has not yet been clearly studied. The treatment is mainly based on the suppression of acid, mucous membranes, and gastrointestinal motility. However, the symptoms are not significantly improved, the adverse drug reactions are obvious, and the high rate of disease recurrence is still difficult to overcome.<sup>[2]</sup> According to traditional Chinese medicine, GERD belongs to the category of "esophageal fistula" and "stomach" in Chinese medicine. The literature on traditional Chinese medicine and acupuncture for treating GERD has been reported more and more and has achieved good results. The authors now comb and summarize the treatment of gastro esophageal reflux disease using different acupuncture and moxibustion methods in recent years, and strive to summarize, explore and integrate the advantages of different acupuncture and moxibustion methods for the treatment of gastro esophageal reflux disease.

The authors use "acupuncture", "acupuncture and moxibustion" or "electric acupuncture" and "GERD" or "gastro esophageal reflux disease" as key words for retrieval. Through the clinical articles on acupuncture and moxibustion methods in the treatment of GERD indexed by China CNKI academic literature database, VPCS database and Wanfang database from 2006 to 2016, the summary is as follows.

## 2. Therapy Using Acupuncture Alone

Acupuncture and moxibustion have been widely used to treat gastro esophageal reflux disease, and their clinical effect is significant<sup>[3]</sup>. There are the Method of acupuncture on governor vessel back segment, acupuncture abdomen with the old ten needles or micro-abdominal needles,<sup>[4]</sup> Compatibility of Five Meridians Regulating Qi and other treatment ideas. Among them, the method of acupuncturing the back diverticulum back segment is based on the theory of classical acupuncture theory and modern nerve segment theory, which is simple and concise, according to the sympathetic origin of the stomach in the spinal cord T3 ~ T9, in this segment to find tender points, with pain as a The scope of application is wider, especially for those with obvious tenderness points. However, there are many patients in the clinic who have difficulty finding or finding tender points. This is a limitation of this program. Acupuncture on the old ten-needle abdomen or micro-abdomen abdomen acupuncture program is a classic prescription for teachers such as Mr. Leting Wang and Mr. Zhiyun Bo. Their direct action on the abdomen is more direct, and they have stronger gastrointestinal function. If combined with Du Duo back section, The two complement each other and further expand the scope of acupuncture treatment of gastro esophageal reflux disease. The combination of the Five Classics Regulatory Regulating Law mainly discusses that the disease is divided into two categories: the actual condition and the positive person who regulates the liver and regulates Qi to regulate the Qi and regulates the Qi. The deficiency of the invigorating spleen helps the patients to adjust their spleen to regulate the Qi. However, during the actual diagnosis and treatment of the disease, the organs are dirty and yang. The rise and fall of qi and blood, and the pathogenic factors are complex, and the rules of onset and transmission of the disease is not one end. Relatively speaking, application accuracy is not easy, and clinical practice is not easy to promote. Detailed literature is discussed as follows.

### 2.1 The Method of Acupuncture on Governor Vessel Back Segment

Lujiao Gao, et al.<sup>[5]</sup> proposed the treatment of gastroesoph-

ageal reflux disease mainly acupuncture T3-T9 segments under the dorsal spinous process treatment program, acupuncture group once every other day, 3 times a week, acupuncture Governor back T3-T9 Under the segmental spinous process (including acupoints and non-acupoints, a total of 8 weeks) and Western medicine group each time 20mg, 2 times daily omeprazole enteric-coated capsules for control (co-treatment for 8 weeks). The results showed that: After the acupuncture group, the scores of RDQ and GERD symptom scores after treatment were significantly lower than that of the simple western medicine group, and the acupuncture treatment group was superior to the western medicine group.

### 2.2 The old Ten Needles

Yin Xu, et al.<sup>[6]</sup> proposed the treatment program of the old ten needles, and the acupuncture mainly acupoints as "Shangwan, Zhongwan, Xiawan, Tianshu, Qihai, Neiguan, Zusanli". They observed the use of "old ten needles." The regimen was compared with monotherapy omeprazole treatment. The results showed that: In the observation group, heartburn, anti-eating and total symptom scores and GERD-Q scores were lower than the control group.

### 2.3 Governor Vessel-Guided Acupuncture

Juan Li, et al.<sup>[7]</sup> selected 60 patients with non-erosive reflux disease and observed the use of the Du Meridian acupuncture group and the Rabepazole sodium enteric-coated capsule group. The results showed that the total effective rate of using Du Meridian acupuncture method was as high as 90%, which was obviously higher than that of the administration of Rabepazole sodium enteric-coated capsule alone. It was more clearly demonstrated that the Du Meridian acupuncture method was not only effective To improve the clinical symptoms of gastro esophageal reflux patients such as anti-feeding, acid reflux, heartburn, and noncardiogenic chest pain, it is also effective in improving anxiety, depression, and quality of life in patients<sup>[8]</sup>. Better than Rabepazole, this program is worth promoting.

### 2.4 Compatibility of Five Meridians Regulating Qi

Shimin Pan, et al.<sup>[9]</sup> analyzed and discussed the application of the "Compatibility of Five Meridians Regulating Qi" proposed by the academic school of Huxiang acupuncture through the reference of ancient related literature. The results of the literature study showed that the disorder of visceral qi and qi is a pathogenesis of gastro esophageal reflux disease. "Compatibility of Five Meridians Regulating Qi" can not only relieve liver and qi, inhibit wood and regulate Qi to treat positive gastro esophageal reflux disease, but also use spleen and qi to treat earth-gastric

esophageal reflux disease with asthenia syndrome. The clinical treatment of esophageal reflux disease has provided new ideas, and further pointed out that the "five-combined gas adjustment method" can also be used for other gastrointestinal diseases due to gastrointestinal disorders.

### 3. Therapy that Combined with Multiple Acupuncture and Moxibustion Methods

Different acupuncture methods have different corresponding indications for the best indication or stage of illness due to their different clinical effects.<sup>[10]</sup> In response to different syndromes or stages of gastro esophageal reflux disease, doctors mainly proposed the use of fire acupuncture, heat-sensitive moxibustion method, massage, percutaneous nerve stimulation and other ideas. Fire acupuncture, moxibustion method, and heat-sensitive moxibustion all have a good effect of dredging meridians, especially for cold syndrome type gastro esophageal reflux disease. Fire acupuncture is easy to operate, but can easily cause patients' fears; moxibustion and heat-sensitive moxibustion are moderate, and are easy to be accepted, but the burning of moxa causes disgust, but it also limits application promotion to a certain extent. Hualan Wang et al. observed that massage therapy is better for the treatment of stomach-esophageal reflux with stomach-deficiency type. Transcutaneous electrical nerve stimulation can improve the patient's anxiety and depression and other accompanying symptoms. Detailed literature is discussed as follows.

#### 3.1 Fire Acupuncture Combined with Acupuncture

Yonghong Li, et al.<sup>[11]</sup> compared the combination of fire acupuncture with acupuncture and omeprazole. The results showed that the total effective rate of combination of fire acupuncture with acupuncture was 92.6% , which is higher than that of omeprazole group.

#### 3.2 Acupuncture Combined with Heat-Sensitive Moxibustion

Wang Ying<sup>[12]</sup> found that the total effective rate of acupuncture combined with heat-sensitive moxibustion treatment was as high as 94.0%, which was significantly higher than that of simple heat-sensitive moxibustion treatment (the total effective rate was 80.0%) and acupuncture treatment alone (the total effective rate was 82.0 %).

#### 3.3 Two-Mode Triple Therapy Combined with Heavy Moxibustion Method

Wang Hualan, et al.<sup>[13]</sup> used the two-mode triple therapy combined with heavy moxibustion method to compare with the conventional massage manipulation group. The results showed that the total effective rate of two-mode triple therapy combined with heavy moxibustion method

was 100.00%, and the total effective rate of conventional massage was 94.44%. There is a clear advantage of two-mode triple therapy combined with heavy moxibustion method compared to conventional massage.

#### 3.4 Transcutaneous Electrical Nerve Stimulation

Lingling Wu, et al.<sup>[14]</sup> found that transcutaneous nerve stimulation of Zusanli and Neiguan acupoints was combined with conventional medicine treatment and nursing, in the RDQ (reflux diagnostic questionnaire), SAS (self-rating anxiety scale), SDS (Self-Rating Depression Scale), and SF-36 (Brief health status questionnaire), which is better than that of conventional medications and nursing alone. This program can reduce the clinical symptoms of patients with gastro esophageal reflux disease, and significantly improve the patient's quality of life.

### 4. Therapy that combined Acupuncture and Moxibustion Methods with TCM (Traditional Chinese Medicine)

The clinical application of traditional Chinese medicine for gastro esophageal reflux disease is also very extensive. Clinical application includes immature bitter orange Xianxiong Decoction,<sup>[15]</sup> pinellia ternata Xiexin Decoction, Chaihu Guizhi Jiangtang Decoction, and proprietary Chinese medicine Dalitong Granules. The combination of ideas, acupuncture and traditional Chinese medicine on the one hand acupuncture and meridian channels can promote the arrival of traditional Chinese medicine to the disease, on the other hand the role of traditional Chinese medicine can also supplement the acupuncture and gas supplies and other basic materials to strengthen the role of acupuncture to clear the meridians, acupuncture and traditional Chinese medicine Relationships, such as the relationship between blood and blood, "Qi is the core of the blood, and blood is the mother of Qi", especially for some of the more serious and more typical conditions, acupuncture and traditional Chinese medicine combined often have a multiplier effect. Detailed literature is discussed as follows.

#### 4.1 Electric Acupuncture Combined with Immature Bitter Orange Xianxiong Decoction

Liu Qiquan, et al.<sup>[16]</sup> used electric acupuncture combined with immature bitter orange Xianxiong Decoction to treat hepatogastric phlegm-type gastro esophageal reflux disease<sup>[17]</sup> and compared to omeprazole combined with domperidone. The results showed that the recurrence rate of electric acupuncture combined with immature bitter orange Xianxiong Decoction was 20.00%, which was lower than the recurrence rate of omeprazole combined with domperidone (36.67%), and it could significantly improve



the anti-eating, acid reflux, heartburn, and poststernal pain in patients with gastro esophageal reflux disease. Even clinical symptoms such as two threats, dry mouth and dry stools, there was a statistically significant difference in symptom scores after treatment between the two groups.

#### **4.2 Pinellia Ternata Xiexin Decoction Combined with Abdominal Acupuncture**

Haiming He, et al.<sup>[18]</sup> observed pinellia ternata Xiexin Decoction (Formula: Chuanhuanglian, dried ginger, Zhigancao each 5g, Pinellia ternata 12g, Radix Astragali 10g, Codonopsis 15g, Syndrome addition and subtraction: stomach Deficiency Plus Ophiopogon japonicus, Lily, Shiqi, Adenophora each 19g; stomach dry heat plus dandelion, coke hawthorn, paeonol each 10g, and to dry ginger). Combined abdominal acupuncture (acupoint selection: Guanyuan, Zhongwan, and Tianshu, while Liangmen, Chengman, and Xiafu as auxiliary acupuncture sites) were used to treat gastroesophageal reflux disease and omeprazole combined with domperidone treatment group. The results showed that: pinellia ternata Xiexin Decoction<sup>[19]</sup> combined with abdominal acupuncture group in the improvement of acid reflux, chest pain and heartburn, gastroscopy grade, etc. are better than omeprazole combined with domperidone group.

#### **4.3 Chaihu Guizhi Ganjiang Decoction Combined with Acupoint Thread-Embedding Therapy**

Qingyun Ning, et al.<sup>[20]</sup> used Chaihu Guizhi Ganjiang Decoction Combined with acupoint thread-embedding therapy in the treatment of intermingling cold and heat gastro esophageal reflux disease, compared to Rabepazole tablets and Mosapride tablet oral treatment. The results showed that the Chaihu Guizhi Ganjiang Decoction Combined with acupoint thread-embedding therapy group can significantly improve the typical clinical symptoms such as heartburn, acid and anti-food in gastro esophageal reflux disease patients, and greatly relieve their contraction dysfunction of the lower esophageal sphincter<sup>[21]</sup>. In addition, the therapeutic effect is better than that of Rabepazole tablets and Mosapride tablet oral treatment group.

#### **4.4 Electric Acupuncture Combined with Dalitong Granules**

Chaoxian Zhang, et al.<sup>[22]</sup> used electric acupuncture (acupoint selection: Zusanli, Zhongwan, Neiguan, Taichong, Gongsun) combined with Dalitong granules for the treatment of gastro esophageal reflux disease, compared to electric acupuncture alone, simple Dalitong granule treatment, and Western Medicine treatment. (oral treatment: Mosapride, Omeprazole, Amitriptyline). The results showed that the electric acupuncture combined with Dal-

itong granules can significantly inhibit esophageal acid and bile reflux, reduce endoscopic score, relieve gastro esophageal reflux symptoms, inhibit gastric acid secretion, promote gastrointestinal motility and antidepressant function, improve the quality of life, and has a good safety and long-term efficacy.

### **5. Therapy that combined Acupuncture and Moxibustion Methods with WM (Western Medicine)**

The Western Medicine Deanxit,<sup>[23]</sup> Mosapride, colloidal bismuth pectin, Esomeprazole, Rabepazole, Omeprazole and other series of medicines are highly targeted for the treatment of this disease, and the disadvantage is that the relative side effects are relatively large. The lack of efficacy in improving gastrointestinal function, etc. is due to the combination of acupuncture and moxibustion, which can achieve rapid therapeutic effect while reducing the amount of Western Medicine used and taking time, thereby further reducing the side effects of Western Medicine and mutual use. This is a development direction of integrated traditional Chinese and western medicine. Detailed literature is discussed as follows.

#### **5.1 Acupuncture Combined with Deanxit**

Caihong Ma, et al.<sup>[24]</sup> proposed that Deanxit combined acupuncture treatment, compared to Esomeprazole + Mosapride + colloidal bismuth pectin treatment (as control group). The study found: Deanxit combined acupuncture treatment<sup>[25]</sup> group after the treatment the HAMA (Hamilton anxiety rating scale) index score ( $9.08 \pm 2.84$ ) was better than that before treatment ( $27.58 \pm 4.52$ ). The HAMD (Hamilton Depression Scale) index score after treatment ( $9.60 \pm 2.85$ ) was better than that before treatment ( $31.40 \pm 4.51$ ); the total effective rate (88.00%) was higher than the control group (60.00%).

#### **5.2 Electric Acupuncture Combined with Rabepazole**

Wang Ying and Peng Wei, et al.<sup>[26]</sup> used electric acupuncture combined with Rabepazole in the treatment of gastro esophageal reflux disease, compared to electric acupuncture, or Rabepazole alone (as control groups). The results of the study showed that: The serum GAS (gastrin) average level of electric acupuncture combined with Rabepazole group was significantly higher than that of both the electric acupuncture group and Rabepazole group alone.

#### **5.3 Finger-Pressure Therapy Combined with Esomeprazole and Mosapride**

Sheng Xie, et al.<sup>[27]</sup> use finger-pressure therapy combined with Esomeprazole and Mosapride in the treatment of extraesophageal symptoms<sup>[28]</sup> of gastro esophageal reflux disease, compared with Esomeprazole and Mosapride

oral treatment alone (as control group). The results of the study showed that: From the perspective of treating the effectiveness of gastro esophageal reflux disease and the extent of esophageal mucosal recovery, the finger-pressure therapy combined with Esomeprazole and Mosapride group is higher than that of Esomeprazole and Mosapride oral treatment group.<sup>[29]</sup>

#### **5.4 Regulating Stomach and Calm the Adverse-Rising Energy Acupuncture Method Combined with Omeprazole Enteric Capsules and Itopride Hydrochloride Tablets**

Liming Liu<sup>[30]</sup> observed regulating stomach and calm the adverse-rising energy acupuncture method (acupuncture at Zhongwan, Zusanli, Neiguan, etc.) combined with oral treatment of conventional medicines such as Omeprazole enteric capsules and Itopride hydrochloride tablets for gastro esophageal reflux disease, compared to oral treatment of Western medicines such as Omeprazole enteric capsules and Itopride hydrochloride tablets alone (as control group). The results showed that regulating stomach and calm the adverse-rising energy acupuncture method combined with Omeprazole enteric capsules and Itopride hydrochloride tablets group was significantly better than the western medicine oral treatment group in both clinical comprehensive efficacy and improvement of signs.

#### **5.5 Electric Acupuncture Combined with Moving Cupping Therapy with Oral Treatment of Esomeprazole enteric Tablets**

Zhipeng Hou, et al.<sup>[31]</sup> observed the electric acupuncture combined with moving cupping therapy with oral treatment of Esomeprazole enteric tablets, compared to the oral treatment of Esomeprazole enteric tablets alone (as control group). The results showed that: electric acupuncture combined with moving cupping therapy with oral treatment of Esomeprazole enteric tablets, whose comprehensive efficacy and total effective rate in improving patient's antacid, anti-eating, heartburn, non-cardiogenic sternal causal burning is obviously better than the oral treatment of Esomeprazole enteric tablets alone.

#### **5.6 Common Goldenrop Jiangni Decoction Combined with Acupuncture and Moxibustion with Oral Treatment of Omeprazole as Required**

Xiujian Li, et al.<sup>[32]</sup> observed common goldenrop Jiangni Decoction combined with acupuncture and moxibustion with oral treatment of Omeprazole as required, compared to oral treatment of Omeprazole alone (as control group). The results showed that: common goldenrop Jiangni Decoction combined with acupuncture and moxibustion with oral treatment of Omeprazole as required, which has ob-

vious therapeutic effect on GERD maintenance treatment patients, reduced the number of taking omeprazole in on-demand treatment, and has a significant decrease in the recurrence rate.

#### **5.7 Acupuncture and Moxibustion Medicine Bath Combined with Proton-Pump Inhibitor**

Yali Li, et al.<sup>[33]</sup> used acupuncture and moxibustion medicine bath combined with proton-pump Inhibitor in the treatment of gastro esophageal reflux disease, compared to proton-pump Inhibitor therapy alone (as control group). The results showed that: significant improvements in PSQI (Pittsburgh Sleep Quality Index) and HADS (Hospital Anxiety and Depression Scale) scores after the treatment of acupuncture and moxibustion medicine bath combined with proton-pump Inhibitor, compared to those before treatment, and significantly better than proton pump inhibitor treatment groups, which can be more effective relieving anxiety and reflux acid reflux and other reflux symptoms in patients with gastro esophageal reflux disease effectively avoids dependence on psychotropic drugs and drug reflux problems.

### **6. Conclusion**

From the literature search, the acupuncture, moxibustion, massage, and drugs all have reports of different syndromes or different stages of the treatment caused by different causes of gastro esophageal reflux disease, as described in "The Inner Canon of Huangdi · The Theory of Different Therapy" As stated in the article: "The sage is therefore heterozygous and healed, and each one has its own merits. Therefore, if the disease is different and the disease is cured, the condition of disease is also known, and the general condition of the disease is also known." Although the disease condition of gastro esophageal reflux disease is the same, it is caused by Different causes or diseases in different stages of development or differences in the patient's constitution, and there are different accompanying symptoms, clinical choice of what method of treatment should not be dull, but should be based on the specificity of the disease, the level of disease, physical specificity Specific methods of sexual and acupuncture moxibustion are selected and used flexibly<sup>[34]</sup>. How to make accurate choices based on the condition is our next research direction. In addition, the use of traditional Chinese medicine therapy, it should not ignore the role of some Western medicine, especially in some difficult conditions; the rational use of Western medicine is also a good idea.

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