

Integrated Traditional Chinese and Western Medicine Therapy in Treating Gastroesophageal Reflux Cough*

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Abstract: In the present paper, the authors introduce chief physician HUANG Zi-ping's experience in treating gastroesophageal reflux cough from (1) understandings of the etiology and pathogenesis, (2) Clinical integrated application of *Chinese Materia Medica*, western agents as well as acumoxa therapy, (3) case report. With the satisfactory therapeutic effect, low side-toxic effects and high practicability, it's worthy of being further developed and popularized in clinic.

Key words: gastroesophageal reflux cough; integrated traditional Chinese and Western medicine therapy; clinical experience; syndrome differentiation and treatment

Gastroesophageal reflux cough, abbreviated to GERD, refers to an obstinate cough due to stimulation by the reflux of the acid gastric contents to the esophagus and occurrence of vagus reflection mechanism. According to the statistics, among the patients from the out-patient department who suffer from chronic cough, about 10% to 40% are diagnosed as GERD^[1]. Clinically, its manifestations are as follows: long-term dry cough, no or little sputum, mainly occurring at night, even aggravating while changing the body posture or taking the spicy or acid food, accompanied with the stuffiness of the lower portion of the retrosternum, acid regurgitation, belch and hiccup. Even some patients could feel burning sensation at the xyphoid process. In TCM, it may belongs to the categories of "retching", "acid regurgitation", etc. Having been engaged in clinical practice and research for over 20 years, Chief physician HUANG Zi-ping from Jieyang Municipal Hospital of Chinese Medicine, Guangdong province, is good at treating intractable diseases and excels in the treatment of GERD with satisfactory therapeutic effect. Now Dr. Huang's experience is introduced as follows.

ETIOLOGY AND PATHOGENESIS

In Dr. HUANG's view, GERD always shows deficiency in origin and excess in superficiality, with a mixture of the deficiency and excess, which is mainly caused by improper food intake or internal emotional impairment, leading to dysfunction of the zang-fu organs. The uncontrolled diet, overindulgence of cigarettes and alcohol, excessive pungent and greasy food may impair the anti-reflux function of esophagus and stomach, which

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consequently would transform heat into fire and dryness and impair the yin-fluid, resulting in heartburn and retch. The greasy flavour would generate dampness and heat. With the accumulation of dampness-heat, the phlegm is formed and the qi is obstructed, leading to the failure of the stomach qi in descending hence the occurrence of this disease. As was stated in Chapter 38 of Plain Questions, the disorders of five-zang and six-fu organs could cause cough, not only the lung's^[2], we shouldn't just focus cough on the pulmonary system. It also points out that the cough is stagnant in the stomach and obstructed in the lung^[2], which emphasizes that the cough symptom is closely related with the lung and stomach. In Dr. HUANG's view, as a chronic disease due to internal impairment, GERC is not located in the lung, but in the stomach. The stomach, as a fu-organ, is taking descending and unobstruction as its normal function. Meanwhile, the lung's functions lie in dispersing and descending. From the theories of Five Elements, the lung and the stomach are related as child-organ and mother-organ^[3]. If the stomach qi doesn't descend, consequently the lung qi would fail to descend and cause cough. The stomach, as the reservoir of the five-zang and the six-fu organs, is to receive, digest and transform water and food. With the ascending of the spleen qi, the water and food is transported to the lung and distributed to the whole body with the lung qi. If there are some problems in the production of the substances or the route of the transportation, the related symptoms of lung and stomach would manifest.

As for the depressive emotions, it would usually cause liver qi depression. Consequently, the liver fails to convey and disperse. As is known that the functions of upward and outward movement, conveyance and dispersion of the liver qi contribute a lot to the purification and descending of the lung qi, ascending of the spleen qi and descending of the stomach qi. The dysfunction of conveyance and dispersion of the liver would lead to the disharmony of the liver and stomach. As a result, the liver qi transversely invades the stomach and the stomach qi fails to descend. With the gastric contents, the stomach qi reversely flows upwards and causes the vomit and cough. Dr. Huang thinks that the origin of the pathogenesis is the disharmony of the liver and stomach leading to the disorder of ascending and descending qi movement; while the superficiality of it is the upward reverse flow of lung qi and the cough. If it misses timely proper treatment, after a certain period, the liver disorder would transmit to the spleen, resulting in the dysfunction of the spleen hence the occurrence of the spleen deficiency, with the mixture of deficiency-excess syndrome. In clinic, based on the above theories, Dr. Huang always lays stress on the special therapeutic principle, that is to apply the methods of tonification and purgation and herbs with cold and hot properties to the treatment to recover the normal ascending and descending function. Clinically, the therapeutic methods are descending counterflow of qi to relieve cough and soothing liver to harmonize stomach.

THE BASIC TCM PRESCRIPTION AND IT'S MODIFICATIONS

In view of the above-mentioned pathogenesis and therapeutic principle of GERC, Dr. HUANG designs a basic prescription called Jiangni Zhike Tang (Decoction for descending counterflow of qi to relieve cough), which consists of Shan Yao (Rhizoma Dioscoreae) 20 g, Bai Shao (Radix Paeoniae Alba) 15 g, Zhi Kuan Dong Hua (Flos Farfarae Preparata) 15 g, Fa Ban Xia (Rhizoma Pinelliae Preparata) 15 g, Chen Pi (Pericarpium Citri Reticulatae) 10 g, Fu Ling (Poria) 10 g, Gan Jiang (Rhizoma Zingiberis) 10 g, Zi Wan (Radix Asteris) 10 g, Bai Qian (Rhizoma Cynanchi Stauntonii) 10 g, Gan Cao (Radix Glycyrrhizae) 10 g, Chai Hu (Radix Bupleuri) 5 g and Huang Lian (Rhizoma Coptidis) 3 g^[4]. In the recipe, Fa Ban Xia (Rhizoma Pinelliae Preparata) combined with Gan Jiang (Rhizoma Zingiberis) and Huang Lian (Rhizoma Coptidis) are applied for descending the stomach qi and clearing the heat accumulated in the stomach, which corresponds with the physiological characteristics of the

six-fu organs, i.e. unobstruction and descending. Being pungent in flavour and hot in nature, Gan Jiang (Rhizoma Zingiberis) is used to inhibit the cold nature of Huang Lian (Rhizoma Coptidis). In addition, Fa Ban Xia (Rhizoma Pinelliae Preparata) is effective in resolving phlegm and checking vomit. Modern pharmacological research indicates that it can not only give the effects of checking cough and expelling phlegm, but also activate the efferent activity of the vagus thus arresting vomit, decreasing the acidity of stomach and protecting the gastric mucosa^[5]. Chai Hu (Radix Bupleuri) combined with Bai Shao (Radix Paeoniae Alba) are used to soothe and regulate the liver qi. The stomach would be harmonized on condition that the liver is in normal function. The combined use of the following drugs such as Shan Yao (Rhizoma Dioscoreae), Chen Pi (Pericarpium Citri Reticulatae) and Fu Ling (Poria) can produce the joint effect of invigorating the spleen and stomach hence treating the origin. Drugs such as Zi Wan (Radix Asteris), Zhi Kuan Dong Hua (Flos Farfarae Preparata) and Bai Qian (Rhizoma Cynanchi Stauntonii) can complement each other in moistening and descending the lung qi and treat the superficiality. The prescription, taken as a whole, can give the effects of soothing liver qi, descending stomach qi and moistening lung qi, with the simultaneous treatment of the origin and the superficiality.

For those with heartburn, Zuojin Wan (Coptis-Evodia Pill) can be added; for patients with frequent belching, herbs such as Zhu Ru (Caulis Bambusae in Taeniam), Zhi Pi Pa Ye (Folium Eriobotryae Preparata), Xuan Fu Hua (Flos Inulae), Dai Zhe Shi (Haematitum) could be added; for those with serious acid regurgitation, Hai Piao Xiao (Os Sepiae Seu Sepiellae) is properly added; for patients with little sputum and difficult expectoration, Chuan Bei Mu (Bulbus Fritillariae Cirrhosae) and Gua Lou Pi (Pericarpium Trichosanthis) could be applied to consolidate the effects of clearing lung-fire and eliminating phlegm; for those with scorching pain of the stomach, Pu Gong Ying (Herba Taraxaci), which is bitter in flavour without impairing yin and cold in nature without impairing stomach, is accordingly added; for those accompanied with sore throat and dry tongue, Dr. Huang prefers to use Xuan Shen (Radix Scrophulariae) combined with Chan Tui (Periostracum Cicadae) to nourish yin and soothe the throat; for patients with stabbing pain behind the sternum with a long duration, which indicates that the blood stasis exists, Shui Zhi (Hirudo), Dan Shen (Radix Salviae Miltiorrhizae), Wu Ling Zhi (Faeces Trogopterori) and Pu Huang (Pollen Typhae) are often used; for those with weak constitution and spleen deficiency manifested as lassitude, bland taste in the mouth, sloppy stool, pale tongue proper with white coating, etc, Dang Shen (Radix Codonopsis) and Bai Zhu (Rhizoma Atractylodis Macrocephalae) should be added combined with the Chinese patent drug Qiwei Yiqi Jiaonang (Seven-Ingredient Capsules for Invigorating Qi) to consolidate the therapeutic effect of invigorating spleen; for patients with stomach-yin deficiency manifested as dry throat, red tongue proper with little coating and thready-rapid pulse, the basic prescription should be given up. Instead, modified Maimendong Tang (Decoction of Radix Ophiopogonis) is applied, which contains Mai Dong (Radix Ophiopogonis) 20 g, Bei Sha Shen (Radix Glehniae) 15 g, Fa Ban Xia (Rhizoma Pinelliae Preparata) 15 g, Yu Zhu (Rhizoma Polygonati Odorati) 15 g, Zi Wan (Radix Asteris) 15 g, Sheng Jiang (Rhizoma Zingiberis Recens) 3 slices about 0.2-0.3 cm thick, Da Zao (Fructus Jujubae) 4 grains and Gan Cao (Radix Glycyrrhizae) 6 g. The recipe, taken as a whole, can produce the joint effects of nourishing stomach-yin, descending up-flow of qi, moistening lung and arresting cough.

INTEGRATED TREATMENT BY BOTH TRADITIONAL CHINESE AND WESTERN MEDICINE

Based on the long-term clinical experience, due to the susceptibility to relapse and the complicated

pathogenesis of GERC, Dr. HUANG thinks that the integrated treatment of both Chinese and western medicine should be taken as the top priority. The western agents such as proton pump inhibitor (PPI) combined with prokinetic drug could increase lower esophageal sphincter (LES) pressure, improve the gastric emptying as well as stop the secretion of the gastric acid by specially inhibiting the proton pump system of the cells in the gastric wall, which could rapidly relieve the clinical symptoms such as acid regurgitation, belching and heartburn. In clinic, Omeprazole combined with Motilium or Cisapride are often applied, with Omeprazole 20 mg once a day; Motilium or Cisapride 10mg each time and three times a day, taken before each meal. The dosage is sustained for 8 weeks, then is gradually reduced until they are discontinued. During the whole process of the medication treatment, the Chinese herbs should be flexibly modified according to the changing symptoms as what has been mentioned above. After withdrawal of the oral administration of the agents, the Chinese herbs should be continuously applied for about one month for consolidating the therapeutic effects.

ACUMOXIA THERAPY FOR ENHANCING THE THERAPEUTIC EFFECTS

Dr. HUANG is also good at acumoxia therapy to the treatment of the obstinate diseases. To GERC, he doesn't select the points such as Feishu (BL13), Taiyuan (LU9) or Lieque (LU7), which are traditionally effective to the cough symptom. Instead, he pays attention to the points on the Stomach Meridian and the Conception Vessel, such as Zusanli (ST36), Zhongwan (CV12) and Tiantu (CV22). He explained in details that the lung and the stomach meridians connect with each other. The Lung Meridian of Hand-taiyin originates from the Middle Energizer, goes along the upper orifice of the stomach. The stomach is located at the Middle Energizer, and its meridian starts from the lateral side of ala nasi (Yingxiang, LI20) and ascends to the bridge of the nose. Chapter 17 of *Spiritual Pivot* points out, the lung qi communicates with the nose^[2]. From the literatures above we know that the meridians of stomach and lung connect with each other. Once the stomach dysfunctions, through the meridian transmission, it could invade the lung and give rise to cough. Since the origin of the disease is the stomach and the two meridians directly connect with each other, clinically we could regulate the stomach qi to check cough. As the sea point and lower sea point of the Stomach Meridian, Zusanli (ST36) could be used to regulate the stomach qi. Modern animal experimental research indicates that Zusanli (ST 36) electro-needling could correct the functional disorder of the alimentary canal and remarkably improve the serum motilin level thus improve the functional recovery of the LES, increase the LES pressure, prevent the occurrence of the reflux and improve the recovery of the disease^[2]. As the front-Mu point of the stomach and influential point of the fu-organ, Zhongwan (CV12) is applied to treat the disorder of the stomach. The combined use of the two points above has the function of descending the abnormal stomach qi. Tiantu (CV22), as the point with adjacent therapeutic property, is applied to descend qi and stop cough. With the stomach qi regulated and the meridians dredged, the lung qi disperses and the cough symptom disappears.

In clinic, Zusanli (ST36) is always punctured with a 1.5-cun filiform needle, taken by reducing technique. Zhongwan (CV12) is taken with ginger-isolated moxibustion, which lasts for 20 to 30 minutes. Tiantu (CV22) is inserted perpendicularly 0.2-0.3 cun and then the needle tip is pushed 0.5-1 cun slowly downward along the posterior aspect of the manubrium of the sternum and the anterior aspect of the trachea. Other points such as Neiguan (PC6), Weishu (BL21), Ganshu (BL18), Pishu (BL20), Gongsun (SP4), Tanzhong (CV17), Hegu (LI4), Taichong (LR3), etc, are flexibly selected owing to the individual difference. Due to the convenient manipulation and the non-toxic-side effect, acumoxia therapy is always taken into account. In Dr. HUANG's view, this therapy

could remarkably decrease the recurrence rate of the disease and enhance the therapeutic effect combined with the Chinese Herbs.

TYPICAL CASE

Miss CHEN, age 32, paid her first visit on June 5, 2007, with the chief complaint of having suffered from cough for about 2 months. She had been to the local hospital and was diagnosed as suffering from common cough. Without any curative effects, she visited here. At that moment, her symptoms were cough with little sputum, even more aggravating after taking food or lying down onto the bed at night, belching, acid regurgitation, heartburn sometimes, wiry-thready pulse and pale tongue proper with white-greasy coating. The chest radiography didn't reveal any abnormal signs and the esophageal barium meal radiography showed the reflux through the esophagus, even more increasing when slightly press the abdomen or cough with strength. Comprehensive analysis showed that her illness belonged to liver-qi depression and obstruction of the phlegm-turbid at the Middle Energizer, leading to the failure of stomach qi in harmonizing and descending hence the upflows of the reverse qi. Her illness was treated with combination of TCM and western medicine, with the principle of soothing liver to harmonize stomach and descending qi to check cough. The TCM recipe consisted of Shan Yao (Rhizoma Dioscoreae) 20 g, Bai Shao (Radix Paeoniae Alba) 15 g, Zhi Kuan Dong Hua (Flos Farfarae Preparata) 15 g, Fa Ban Xia (Rhizoma Pinelliae Preparata) 15 g, Chen Pi (Pericarpium Citri Reticulatae) 10 g, Fu Ling (Poria) 10 g, Gan Jiang (Rhizoma Zingiberis) 10 g, Zi Wan (Radix Asteris) 10 g, Bai Qian (Rhizoma Cynanchi Stauntonii) 10 g, Gan Cao (Radix Glycyrrhizae) 10 g, Chai Hu (Radix Bupleuri) 5 g, Xuan Fu Hua (Flos Inulae) 10 g, Dai Zhe Shi (Haematitum) 15 g and Huang Lian (Rhizoma Coptidis) 3 g. The acupoints Zusanli (ST36), Zhongwan (CV12) and Tiantu (CV22) were selected and once a day. Meanwhile, Omeprazole 20 mg once a day combined with Motilium 10 mg each time and three times a day were applied. The patient was advised to pay attention to her diet and emotion and lift the legs of bed at the head side for 15 to 20 centimeters. When she visited here on June 12, her cough and acid regurgitation were obviously alleviated, but with lassitude, bland taste in the mouth, pale teeth-marked tongue proper with thin-white coating and thready-weak pulse. The above mentioned recipe was modified with Dang Shen (Radix Codonopsis) 20 g and Bai Zhu (Rhizoma Atractylodis Macrocephalae) 30 g added. After 8 weeks, the cough, retching and acid regurgitation completely disappeared. Then the daily dose of the western agents were gradually reduced until withdrawal. The modified recipe one dose every other day combined with the acumoxa therapy twice every week were applied. She continued to receive the treatment for 1 month or more. As a result, no recurrence was found in a 6-month follow-up visit.

SUMMARY

In clinic, to GERC, it's very difficult to treat due to the susceptibility of recurrence. Based on the clinical experience accumulated for many years, Dr. Huang adopts the integrated therapy of Chinese Medicine, western medicine and acumoxa, which achieves great fulfillment. With the satisfactory short and long term therapeutic effect, low toxic-side effect and high practicability, it's worthy of being further developed and popularized in clinic.

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