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# Treatment of Hashimoto Thyroiditis from Liver Based on ''Kido Tatsuki''

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Abstract: Hashimoto's thyroiditis belongs to the category of "gall disease" of traditional Chinese medicine. The main cause of Hashimoto's thyroiditis is emotional disorder, liver insufficiency and liver-qi stagnation, which eventually lead to qi stagnation, phlegm and blood stasis before the neck. The disease is mainly in the liver, involving the spleen and kidney. "Mu Yu" first appeared in "Huangdi Neijing", "Mu Yu" is the stagnation of liver Qi, which affects the process of human body to produce a series of pathological changes, "Da Zhi" is to comply with the wood, make it reach, regulate qi. Therefore, based on the "Huangdi Neijing" and clinical understanding, the importance of air conditioner" in the treatment of Hashimoto thyroiditis, and from the four aspects of "soothing the liver", "promoting blood and eliminating phlegm", "tonifying the spleen and kidney", "happy mood" to "air conditioner" to prevent and cure the disease.

#### 1. Introduction

Hashimoto's thyroiditis (HT) is a common chronic autoimmune thyroid disease, which is mainly characterized by elevated levels of thyroid peroxidase antibody (TPOAb) and/or thyroglobulin antibody (TgAb) and intrathyroid lymphocyte infiltration. Its incidence is about 5%~10%, accounting for 22.5% of thyroid diseases, showing an increasing trend year by year <sup>[1]</sup>, and the incidence of female is higher than that of male <sup>[2]</sup>. As the disease progresses, there will be goiter, hyperthyroidism, hypothyroidism and other manifestations. The pathogenesis of HT is relatively complex, and current studies have found that it is related to genetic, environmental, immune, intestinal flora and other factors. The main treatment factors are methimazole, prednisone, cyclophosphamide, selenium yeast, etc, but western medicine has limitations such as adverse reactions, unclear recurrence rate, and less than expected efficacy <sup>[3]</sup>. Traditional Chinese medicine has fewer adverse reactions and significant curative effect, and has certain advantages in improving patients' quality of life.

Hashimoto thyroiditis belongs to the categories of "gall disease", "gall tumor" and "qi gall" in Chinese medicine, and its etiology is related to emotional and internal injury, diet and soil inappropriately, and physical factors. However, nowadays, with the increase of people's study, work and life pressure, emotional internal injury has become the main pathogenic factor. The key

pathogenesis of this disease is emotional internal injury, liver failure, qi stagnation, phlegm and blood stasis before congealing the neck, which leads to the occurrence of this disease. The main location of the disease is liver, involving spleen and kidney. Therefore, based on the theory of "Mu Yu Da Zhi", this paper discusses the treatment of HT from the liver, emphasizing the influence of the liver master's catharsis dysfunction on the disease, in order to provide differential treatment ideas for clinical diagnosis and treatment of the disease.

#### 2. Theoretical connotation of "Mu Yu Da Zhi"

"Mu Yu Da Zhi" was first found in "Huangdi's Internal Classic" and is one of the five principles of depression treatment. His cloud: "The emperor said: good. What can be done to cure depression? Qibo said: the wood yu reached, the fire yu, the earth depression, the Jin Yu diarrhea, the water depression folding, but adjust its gas, over the fold, with its fear also, the so-called diarrhea "[4].What is "depression"? Liu Wansu said, "Yu Yu is a big problem. The stagnation is blocked and the qi is not smooth." That is, "Yu" is more understood as the meaning of discomfort and irregularity. According to Jibian, "wood depression, liver qi is not well; "which makes it clear that wood depression is liver qi insecurity. Doctors of all generations also understand "wood depression" as "liver depression" in clinical practice.

#### 3. Theoretical basis of HT caused by "Mu Yu"

#### 3.1 The theoretical connotation of "Mu Yu"

"Mu Yu Da Zhi", was first found in the Huangdi Neijing and is one of the five principles for treating depression. It says: "The emperor said: good. What can be done to cure depression? Qibo said: the wood yu reached, the fire yu, the earth depression, the Jin Yu diarrhea, the water depression fold, but adjust its gas, over the fold, with its fear also, the so-called diarrhea "[5]."Medical purpose Xu Yu": "Husband" Neijing "said: wood depression, wood depression, liver depression also. The one who reaches, the one who reaches, the one who accesses also. A rising timber, a stagnant economy." Later generations of doctors will also understand "wood depression" as "liver depression".

## 3.2 "Wood depression" and HT Traditional Chinese Medicine

Understanding of the causes of HT mainly include emotional internal injury, eating disorders, soil incompatibility, endowment differences, among which emotional internal injury is the main factor. Its main disease location is liver, involving spleen and kidney, with liver dysfunction and liver qi stagnation as the core pathogenesis.

In terms of the physiological function of the liver, the five elements of the liver belong to the wood, which is to reach, raise and dredge. The liver is the master of catharsis, regulating emotions, regulate the whole body qi, regulate the whole body qi blood Yin and Yang. "Liuzhou Medical Legend" cloud: "the disease of seven emotions must start in the liver", the first disease of seven emotions hurt the liver. Liver qi Shuda, then qi is not blocked, emotions and smooth; If the liver qi is not relaxed, the qi machine is disordered and the mood is abnormal. Emotional disorders, first of all invade the liver, liver dysfunction, liver qi stagnation, qi machinery disorders, qi and blood operation is not smooth, water and fluid transport disorders, and eventually lead to phlegm, blood stasis obstructed before the neck and the disease. In addition, from the meridian circulation, the thyroid is located at the place where the liver meridian circulation passes, as stated in the "Spiritual pivot", "the pulse of the liver foot Jueyin starts at the time of the big finger from the hair...Belongs

to the liver, gallbladder, through the diaphragm, cloth rib, after the throat, on the opponent." Emotional disorders caused by stagnation of the liver meridian, qi and blood movement is not smooth, qi stagnation, phlegm, blood stasis before the neck and the occurrence of this disease.

#### 3.3 Modern Medical understanding of "Muyu" and HT

With the rapid development of economy and society, the increasingly accelerated pace of life, and the increasingly fierce competition, people are facing heavy work and life pressure, and mental and psychological factors are increasingly becoming an important part of affecting human health. The liver is the core of the body to regulate the psychological stress response caused by the changes of emotional factors (psychological stress), and the liver's cathartic function plays a decisive role in psychological stress, which is intrinsically related to psychological stress through the neuroendocrine network [6]. There is no such term as psychological stress in TCM theory, but there is a close relationship between emotion, pathogenicity and the connotation and mechanism of psychological stress in TCM theory. With the deepening of research, the connection between autoimmune diseases and mental diseases has been gradually discovered, and many evidences show that at least some patients with mental diseases have autoimmune basis [7]. As a common autoimmune thyroid disease, both T-cell-mediated cellular immunity and B-cell-mediated humoral immunity are involved in the pathogenesis of HT. Liver is the largest organ in the human body with immune function, and people with long-term negative emotional accumulation are prone to chronic emotional stress [8]. Continuous emotional stress will lead to changes in the body's immune function, and abnormal liver host cathartic function can directly lead to changes in human emotions and immune function disorders, thus leading to various autoimmune diseases such as HT. Studies have shown that liver depression can reduce the body's cellular immunity [9], and patients with anxiety disorders are significantly more likely to be accompanied by thyroid diseases [10].

### 4. "Wood depression" throughout each stage of HT

Hashimoto thyroiditis can be divided into normal thyroid function, hyperthyroidism (hyperthyroidism) and hypothyroidism (hypothyroidism) according to the development characteristics of the disease. Emotional disorders, leading to liver depression as a key factor in the development of the disease, and throughout the disease.

Liver master catharsis, smooth mood. Long-term low mood, depression, liver dysfunction, liver qi stagnation, Qi is the shuihe of blood, Qi can line fluid, qi stagnation is the body fluid, blood stasis, Qi stagnation, phlegm, blood stasis before the neck and the occurrence of this disease, can be manifested as pre-neck swelling, choking discomfort, pharyngeal obstruction, chest tightness and other symptoms. Qi stagnation is the initial factor of the disease, Qi stagnation will further cause the production of spittoon and blood stasis pathological products, and throughout the disease. In the course of the development of the disease, if the mood is depressed, liver depression produces heat, it can be seen that hyperthyroidism symptoms such as irritability, fluster, and hand shaking (hyperthyroidism is mostly transient);If mood depression, liver wood attack spleen, or chronic illness and kidney, liver depression and spleen deficiency or spleen and kidney deficiency disease, can be manifested as mood depression, joy, fatigue, throat and neck have foreign body sensation, Hashimoto hypothyroidism patients common such symptoms.

#### 5. Explore the key treatment of HT

"Wood depression" from the "wood stagnation", "Da Zhi" is the key treatment, that is, comply with the liver wood, raise hair, regulate qi, and then restore the function of the zang-fu organs to

normal.Abnormal emotions first affect the zangfu Qi machine, as "Su Question ·Lift pain" cloud: "anger is Qi, joy is slow, sadness is Qi away, fear is gas, panic is gas disorder, thinking is gas knot", and emotional activities caused by qi disorders is an important cause of disease.Anger, fear, worry and fright are closely related to the liver and are closely related to the physiological characteristics and functions of the liver [11].And "qi" is the intermediary of the connection between "liver master drainage" and "emotion" [12].It can be seen that the thinning and regulating qi mechanism is the basis for the liver to regulate emotions, the "reaching" method of "wood depression", and the key to the treatment of HT.

The treatment of HTHT by the theory of "thinning and regulating Qi machine" is based on the core pathogenesis of liver loss, dereliction of duty and stagnation of Qi machine. Liver depression is the initial factor of the disease, and throughout the disease, spittoon and blood stasis are the important pathological factors in the development of the disease, and the syndrome of spleen and kidney deficiency may be involved in the later stage. For the treatment of HT, the importance of "thinning and regulating qi machinery" is put forward, starting from soothing the liver, supplemented by promoting blood and eliminating phlegm, strengthening the spleen and kidney, and attaching importance to pleasant emotions.

### 5.1 Regulating Qi, soothing liver mainly

"Wood depression" is the initial stage of HT, and throughout the disease, so the treatment should be based on soothing the liver.Bupleurum Shugan powder is often used to add or reduce, medicinal bupleurum, orange peel, fructus aurantii, Paeony, Xiangfu, Chuanxiong, rose and other products of soothing liver and regulating Qi, in order to comply with the wood's nature and make Qi run smoothly.As "Jingyue book" records, "wood should not be depressed, so want to xin scattered, along with its sex for the supplement, against its sex for the release."Among them, bupleuri soothes the liver, Chuanxiongxiong and Xiangfu solve the depression of liver Qi, and the qi of Chang liver meridian. Modern studies have shown that bupleurum has anti-inflammatory and immunomodulatory effects [13].

# 5.2 Promoting blood circulation and eliminating phlegm to help qi run

Liver dysfunction, stagnation of liver qi, qi flow fluid, blood flow is not smooth, and phlegm into stasis, phlegm, stasis in front of the neck and manifested as pre-neck swelling, and even local formation of hard mass. The formation of phlegm and stasis will further hinder the operation of qi, thus further aggravating the condition. Phlegm and stasis are not only the pathological products, but also the pathogenic factors of aggravating the disease. Therefore, in the use of soothing liver and regulating qi drugs, we should pay attention to the use of activating blood and eliminating phlegm drugs, and choose summer hay, pinellia, Thunbertillaria and other resolving phlegm and dispersing the phlegm in clinical diagnosis. "Materia Medica Hui Yan" said: "Summer hay can clear heat to liver fire, but also can disperse the swelling, for the clear liver and disperse the essential medicine. "Modern studies have shown that Prunella can significantly improve goiter, and has anti-tumor, anti-inflammatory, hepatoprotective and immunosuppressive effects [14].

#### 5.3 Strengthening spleen and kidney, strengthening and protecting healthy Qi

HT in the middle and late stages of disease development, liver depression invade the spleen, chronic disease and kidney, spleen and kidney deficiency. A person has its roots, just as a tree has its roots and water has its source. Human life, all depends on qi, the kidney is the root of anger, the spleen is the source of anger. The kidney is the source of life, and the spleen is the source of qi and

blood biochemistry. Nature and nurture nurture and promote each other. Days of qi full, evil cannot do; Sufficient healthy qi can drive away evil spirits and promote the healing of diseases. Therefore, in the treatment process, we should pay attention to the basis of the tonifying day after day, the clinical commonly used Codonopsis, Astragalus, white art, poria and other spleen and qi products, or choose angelica, cooked rehmannia, dodcuta seed, cistanche, cinnamon, deer horn gum and other warm Yang tonifying kidney products.

#### 5.4 Calm the mind, happy mood

In the current society with intense competition, double pressure and fast pace, emotional disease is playing an increasingly important role, so regulating emotions and improving mental state are paid more and more attention by the majority of medical personnel in the treatment of diseases. Hua Tuo also pointed out in his book "The Secret Record of the Green Bag" that "good doctors treat the heart first, then the body, and then the disease. "As a doctor, it is necessary to timely discover the abnormal emotions of patients, deeply understand the psychological demands of patients, respect the personal feelings of patients, and timely psychological counseling and communication for patients. In addition, patients should also learn to self-regulate, can divert attention through running, flowers, walking dogs, listening to music and other methods to improve their mental state. Based on conventional treatment, Zhu Moonmoon et al. [15] adopted music therapy and psychological counseling intervention, and found that music therapy can effectively improve the clinical indicators of HT patients, improve their mood and improve their quality of life.

#### **6. Examples of medical records**

The patient, a female, came to see the doctor in February 2021 for "finding thyroid nodules with thyroid dysfunction for 2 years". The patient complained that bilateral thyroid nodules were found in the physical examination 2 years ago, and was diagnosed as "Hashimoto" after completing the thyroid function examination, without obvious discomfort, and was not paid attention to.Half a month ago, there was a feeling of neck swelling, no neck obstruction, irritability, and no complaint of special discomfort, diet, sleep normal, bowel adjustment. Physical examination: Thyroid palpation II.Big, tough.Dark tongue, thick white fur, string of veins.Auxiliary test: TPOAb: 291.0IU/ml.B-ultrasound: bilateral lobe nodules of the thyroid gland (the larger one on the left was about 10.0mm\*10.2mm\*11.7mm, the larger one on the right was about 6.0mm\*5.4mm\*7.2mm), bilateral lobe parenchymal echo changes, considered Hashimoto's thyroiditis.TCM diagnosis: gall disease, syndrome differentiation: Qi stagnation phlegm obstruction, formula: Xingqi Xiaoying granule (hospital self-produced preparation), Xingqi Xiaoying granule specific composition:Radix bupleurum, Fructus aurantii, orange peel, Ligusticum chuanxiongxiong, Radix paeoniae, Radix xylocorrhiza, Trichosanthes, Fritillaria thunbergii, calciniae ostrea, Prunus prunus, and licorice, after taking the medicine, the feeling of swelling in the neck was reduced, and the irritability was improved. After 6 weeks of reexamination, the thyroid function returned to normal, and the thyroid nodule was smaller than before, the size of the larger one on the left side was about 5.7mm\*4.2mm, and the size on the right side was not significantly changed. The patient was instructed to continue to take Qi Xiaoying granule, regulate mood, moderate diet, and review after 3 months.

Tangerine peel, Fructus aurantii regulating qi stagnation, wood fragrance qi analgesia, can treat qi stagnation, can also remove the syndrome mass, Qingpi has the effect of soothing liver qi, eliminating stagnation, can treat Qi stagnation and blood stasis caused by mass, all drugs used together as a minister medicine. Melon wilts, fritillaria thunbergii for phlegm moistening medicine, moistening phlegm. Oysters salty, salty can be soft, can be soft and hard. Prunella prunella to disperse the knot, bitter to relieve heat, the main into the liver channel, has the effect of clearing the liver fire to disperse the stagnation, and the whole prescription to prevent the drug dry, for the

adjuvant medicine. Scorch licorice to make medicine, reduce the line of qi and loose knot of the product of fierce. Combined use of all kinds of drugs, playing a total of regulating qi and soothing liver, phlegm eliminating gall effect.

#### 7. Summary

The main pathological factors of Hashimoto thyroiditis are qi stagnation, phlegm and blood stasis. Qi stagnation is the primary factor, and it runs through the disease. In the early stage, the patients mostly suffered from emotional disorders and liver-qi stagnation, which further led to phlegm coagulation and blood stasis obstructing the neck, and then spleen and kidney deficiency in the later stage. Therefore, the treatment should start from the "thinning and regulating qi machine", mainly to ease the liver, according to the condition supplemented by promoting blood and eliminating phlegm, tonifying the spleen and kidney, and paying attention to pleasant emotions.

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