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Advances in traditional Chinese medicine treatment for Hashimoto's thyroiditis

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Abstract. Hashimoto's Thyroiditis (HT), as the primary cause of hypothyroidism worldwide, has shown an increasing prevalence. Although Western medicine can regulate thyroid function, its effect on reducing autoantibodies is limited. Based on the holistic concept and syndrome differentiation and treatment, Traditional Chinese Medicine (TCM) has demonstrated unique advantages in regulating immunity, improving symptoms, and delaying disease progression. By sorting out the etiology, pathogenesis, main treatment methods, and efficacy of HT, this paper aims to explore the progress of TCM in the treatment of HT and provide ideas and methods for clinical practice. However, there is a lack of high-quality clinical evidence for TCM treatment of HT. In the future, high-quality clinical trials are needed to confirm the efficacy, so as to promote new breakthroughs in TCM treatment of HT.

Keywords: Hashimoto's thyroiditis, traditional Chinese medicine treatment, clinical experience

1. Introduction

As a common autoimmune thyroid disease, Hashimoto's Thyroiditis (HT) has a global prevalence of approximately 7.5% [1], and its incidence has been on the rise in recent years, making it the leading cause of hypothyroidism worldwide [2, 3]. HT is usually characterized by thyroid enlargement and elevated thyroid autoantibodies [4], which seriously affects patients' quality of life. At present, conventional Western medicine treatment adopts hormone replacement therapy, surgery, radioactive iodine, or gene therapy according to clinical indications and thyroid function indicators. However, these treatment methods have certain side effects and limited effects in improving patients' immune status and reducing thyroid enlargement. In recent years, TCM has shown unique advantages in regulating immunity, improving symptoms, and delaying disease progression. Meanwhile, the introduction of evidence-based medicine has provided new support for the standardization of TCM treatment for HT, and relevant diagnosis and treatment guidelines and evidence evaluation studies have been successively released [5, 6]. Based on the characteristics of TCM, this paper discusses the pathological changes and development of HT, in order to provide new ideas and methods for TCM treatment of HT.

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2. Etiology and pathogenesis in traditional Chinese medicine

In TCM, HT is classified into the category of "goiter disease". It is believed that its etiology lies in congenital insufficiency, acquired malnutrition, emotional distress, or inappropriate geographical environment. Its occurrence is closely related to the liver, spleen, and kidney, with "qi stagnation, phlegm accumulation, and blood stasis" as the core pathological factors. "*Zhu Bing Yuan Hou Lun (Treatise on the Etiology and Symptoms of Diseases) - Goiter Disorder*" records that "goiter disease is caused by qi stagnation", indicating that the occurrence of goiter is closely related to emotional depression. Modern scholars have further elaborated on the etiology and pathogenesis of HT. Xia Zhongyuan [7] summarized the pathogenesis as "disharmony of liver and spleen, intermingling of phlegm and blood stasis, and deficiency of both qi and yin". Xu Zhiyin [8] believed that in the early stage, the syndrome is intermingling of phlegm and qi; in the middle stage, it is intermingling of phlegm and blood stasis; in the late stage, it is deficiency of spleen and kidney yang, emphasizing that the intermingling of qi stagnation, phlegm accumulation, and blood stasis runs through the entire course of the disease. Lu Deming [9] held that emotional internal injury is the initiating factor, and the disease initially occurs mostly due to emotional internal injury, which leads to failure of the liver to disperse stagnated qi and unsmooth flow of qi. Wu Shentao [10] proposed treatment based on "relieving stagnated fire", believing that the early stage of the disease is caused by factors such as emotional distress leading to "stagnated fire" lurking internally. Zhang Zengyan [11] put forward that "malnutrition of essence and clarity" is the root cause, "congenital insufficiency and internal disturbance of seven emotions" are the pathogenic factors, "qi deficiency and blood stasis, and deficiency of heart and spleen yang" are the persistent pathogenesis, and "deficiency of liver and kidney yin, and imbalance between water and fire" are the stage-specific changes. In summary, the nature of the disease is deficiency in origin and excess in superficiality, with intermingling of deficiency and excess. HT is mostly excessive in the early stage, mainly manifested as qi stagnation and qi depression; as time goes by, it turns from excess to deficiency, and pathological products such as phlegm and blood stasis can run through the entire course of the disease.

3. Primary methods and efficacy of traditional Chinese medicine in treating HT

3.1. Stage-based treatment

Most scholars divide HT into three stages (early, middle, and late) for treatment according to the development process of the disease. Huang Lijuan [12] believed that the early stage of HT is mostly of the qi stagnation and phlegm accumulation type, the progressive stage is mostly of the liver depression transforming into fire and deficiency of heart and liver yin type, and the late stage is mostly of the blood stasis and phlegm binding, and deficiency of spleen and kidney yang type. The main treatment principles should be regulating qi and resolving phlegm, reducing goiter and resolving masses. Xue Cimin [13] proposed that the early stage of HT is dominated by heat toxin stagnation, treated by clearing heat and detoxifying, soothing the liver and nourishing yin; the middle stage is characterized by concurrent phlegm accumulation, qi stagnation and blood stasis, treated by invigorating the spleen and resolving phlegm, regulating qi and dispersing blood stasis; the late stage is dominated by deficiency of spleen and kidney yang, treated by warming and invigorating the spleen and kidney, resolving phlegm and dispersing blood stasis. Qi Luguang [14] believed that since the occurrence of HT is always closely related to liver qi stagnation, Chaihu Shugan San (Bupleurum Liver-Soothing Powder) should be used in the early stage to soothe the liver and relieve stagnation; in the middle stage, Xiaoluo Wan (Scrofula-Resolving Pill) is used to improve liver depression and spleen deficiency; in the late stage,

hypothyroidism is common, and on the basis of Shengmai San (Pulse-Invigorating Powder), drugs for invigorating the spleen and kidney yang, and warming and resolving phlegm should be added to nourish the spleen and kidney, and soften and resolve hard masses. Tang Hanjun [15] emphasized that syndrome differentiation and treatment should be carried out according to changes in patients' thyroid hormone levels and immune function, dividing into thyroid function normal stage, hyperthyroidism stage, and hypothyroidism stage, which is consistent with the thinking of China's HT diagnosis and treatment guidelines [5, 6].

3.2. Syndrome-based treatment

Jiang Zhaojun [16] divided HT into liver depression and phlegm accumulation type, deficiency of both qi and yin type, and deficiency of spleen and kidney yang type, and self-formulated Xiaoying Fang (Goiter-Reducing Formula) as the basic treatment formula, taking clearing heat and detoxifying, regulating qi and resolving phlegm as the basic treatment principles. Chen Ruquan [17] proposed that dysfunction of the liver and kidney is the main cause of Hashimoto's thyroiditis, and divided HT into four types: qi stagnation and phlegm obstruction, phlegm binding and blood stasis, deficiency of both qi and yin, and deficiency of spleen and kidney yang. Clinical treatment focuses on invigorating qi and spleen, soothing the liver and regulating qi, resolving phlegm and dispersing masses, promoting blood circulation to remove blood stasis, warming yang and reducing goiter, invigorating qi and nourishing yin, clearing heat and purging fire, dispersing lung qi and reducing goiter. Zhang Yao [18] and others analyzed 354 HT-related literatures, established a database of TCM syndrome factors and symptoms of Hashimoto's thyroiditis. The study showed that five syndrome types are more common: deficiency of spleen and kidney yang, liver depression and spleen deficiency, deficiency of both qi and yin, liver qi stagnation, and phlegm-blood stasis. Syndrome factors such as thyroid enlargement, fatigue, and anorexia are more common, which are the common characteristics at the disease level.

3.3. Chinese patent medicine treatment

Western medicine mainly improves thyroid function, but its effect on reducing antibodies is not ideal, and long-term use of Western medicine will have some inevitable side effects, while TCM can play a role in reducing toxicity and enhancing efficacy. Some basic studies have shown that Tripterygium wilfordii has a significant regulatory effect on the autoimmune disorders of HT [19, 20], but Tripterygium wilfordii often causes severe toxic reactions in liver, kidney and other tissues, and there is a lack of in-depth research on its toxic mechanism. Multiple studies have shown that Prunella vulgaris can reduce the levels of thyroid autoantibodies (Thyroid Peroxidase Antibody, TPOAb), (Thyroglobulin Antibody, TGAb), Thyroid Stimulating Hormone (TSH), Free Triiodothyronine (FT3), and Free Thyroxine (FT4) [21, 22]. Lu Mingyan [23] and others randomly divided 52 HT patients into Prunella vulgaris Capsule treatment group and diet and lifestyle intervention control group. The results showed that after 3 months of treatment, TGAb and TPOAb in the treatment group decreased significantly, and thyroid morphology improved significantly. Some scholars included 150 HT patients to compare the efficacy of Selenium Yeast Capsules and Ruanjian Xiaoying Granule combined with Selenium Yeast Capsules. The results showed that Ruanjian Xiaoying Granule combined with Selenium Yeast Capsules can reduce the levels of thyroid-related antibodies and alleviate inflammation and oxidative stress reactions [24].

3.4. Emotional therapy

"*Yan Shi Ji Sheng Fang (Yan's Prescriptions for Benefiting Life) - Treatment of Goiter and Tumor*" points out that "goiter and tumor are mostly caused by improper joy and anger... Generally, human qi and blood circulate throughout the body, and it is desired to be free from stagnation. Improper regulation leads to qi stagnation and

blood stasis, resulting in goiter and tumor". HT patients have obvious anxiety and depression compared with normal people, and the emotional state of HT patients may be the result of the combined effect of various factors such as thyroid function antibodies and nodules [25]. Therefore, clinically, drugs such as Sini San (Frigid Extremities Powder) and modified Chaihu Shugan San are often used to soothe the liver and relieve stagnation. At the same time, Changyu Xiaoyao Decoction, Pokē Xiaoying Decoction, and Futu Fu Jian Decoction have also shown good efficacy [26]. In clinical practice, it is necessary to combine the characteristics and stages of HT, take into account the regulation of emotions while reducing goiter and resolving masses, and also pay attention to psychosomatic treatment, reduce patients' psychological pressure, and provide psychological guidance for patients.

3.5. External therapy

External therapies such as acupuncture, moxibustion, and auricular points have also made considerable progress in the treatment of HT. Some scholars have carried out small-sample studies, showing that acupuncture can relieve neck compression or pain in patients with Hashimoto's thyroiditis, improve systemic symptoms, reduce TPOAb levels, and reduce TSH levels in patients with hypothyroidism or subclinical hypothyroidism [27-29]. Ren Haitao [30] and others conducted animal studies, showing that warm acupuncture at key strengthening points can reduce the level of thyroid autoantibodies in HT rats, increase the matrix content in thyroid follicles, regulate the "neuroendocrine-immune system", and achieve the purpose of improving their thyroid function and pathological tissue structure. Xia Yong's team [31, 32] used Aconite cake-separated moxibustion as an adjuvant treatment for HT, which has a significant regulatory effect on patients' serum-specific antibodies and clinical symptoms. At the same time, multiple clinical studies have shown that acupoint application can effectively reduce the antibody level of HT patients, improve the degree of thyroid enlargement and symptoms, and at the same time relieve anxiety and improve patients' quality of life [33-36].

4. Conclusion

As a clinically common autoimmune thyroid disease, the prevention and treatment of HT has become a key issue of clinical concern. Although Western medicine can effectively regulate thyroid function, its intervention effect on core pathogenic antibodies is poor, and long-term application may increase the risk of complications. In contrast, based on the holistic concept and syndrome differentiation and treatment, TCM has shown unique advantages and definite efficacy in the treatment of HT.

Despite the broad prospects, there are still several key bottlenecks in the research and practice of TCM treatment for HT. At present, there is a lack of high-quality clinical evidence. Most existing studies are small-sample and single-center designs, and large-sample, multi-center, long-term follow-up randomized double-blind controlled trials are scarce, especially the lack of intervention evidence for the early stage of the disease and the stage of normal thyroid function. Most studies focus on the "formula-disease" correspondence, and insufficient in-depth exploration of the synergistic network of multi-components and multi-targets of TCM compounds and the common laws of different formulas. Some scholars have used single TCM herbs, specific formulas, and compounds in animal models, but there are relatively few studies on how to extract effective components of TCM and immune pathways. At present, the standards for TCM syndrome differentiation and classification and efficacy evaluation have not been unified, which affects the reproducibility and popularization of treatment plans. The research on the synergistic mechanism of integrated traditional Chinese

and Western medicine treatment is not sufficient, and systematic research on the optimization of combined treatment plans, efficacy evaluation, and prognostic impact still needs to be strengthened.

In the future, the research on TCM treatment of HT needs to make efforts in multiple dimensions. Focus on confirming the efficacy through higher-quality clinical trials, and use modern technical means to deeply clarify the precise molecular mechanism and material basis of its immune regulation. Transform from empirical research to basic research, explore the principle from methods, and further reveal the relationship between traditional Chinese and Western medicine and HT. Thus, to provide more high-quality and personalized medical services for patients, promote continuous new breakthroughs in TCM treatment of HT, and better serve clinical practice and patients' health.

References

[1] Wrońska, K., Hałasa, M. (2024). The role of the immune system in the course of Hashimoto's thyroiditis: the current state of knowledge. *International Journal of Molecular Sciences, 25*(13), 6883.

[2] Mikosch, P., Aistleitner, A.(2023). Hashimoto's thyroiditis and coexisting disorders in correlation with HLA status—an overview. *Wiener Medizinische Wochenschrift, 173*(1-2), 41-53.

[3] Hu, X., Chen, Y. (2022). Global prevalence and epidemiological trends of Hashimoto's thyroiditis in adults: a systematic review and meta-analysis. *Frontiers in Public Health, 10*, 1020709.

[4] Gao, Q., Jian, L. X., Xu, J. G., Wang, D. G., & Sun, Y. M. (2012). Research progress on the etiology, pathogenesis and clinical treatment of Hashimoto's thyroiditis. *China Journal of Chinese Materia Medica, 37*(20), 3003–3006.

[5] Guidelines for the integrated traditional Chinese and Western medicine diagnosis and treatment of Hashimoto's thyroiditis. (2025). *Chinese Archives of Traditional Chinese Medicine, 43*(08), 246-258.

[6] Ding, Z. G., & Xia, Z. Y. (n.d.). Guidelines for the integrated traditional Chinese and Western medicine diagnosis and treatment of Hashimoto's thyroiditis [J/OL]. Chinese Archives of Traditional Chinese Medicine, 1-31. https: //link.cnki.net/urlid/21.1546.r.20250708.1028.002. Gao, T. S., & Ni, Q. (2024). Guidelines for the syndrome-disease combination diagnosis and treatment of Hashimoto's thyroiditis. *Chinese Journal of General Practice, 22*(03), 361-367.

[7] Liu, X. Y., Peng, J., & Xia, Z. Y. (2020). Eight methods of reinforcing healthy qi and resolving goiter in the treatment of Hashimoto's thyroiditis. *Chinese Journal of Clinical Healthcare, 23*(05), 717-720.

[8] Wang, G. Y., & Fei, Z. D. (2015). Experience of Xu Zhiyin in treating Hashimoto's thyroiditis. Jiangsu *Journal of Traditional Chinese Medicine, 47*(10), 16-17.

[9] Liu, J. (2018). Summary of Professor Lu Deming's experience in treating thyroid diseases. *Guiding Journal of Traditional Chinese Medicine and Pharmacy, 24*(04), 59-61.

[10] Sheng, Y., & Wu, S. T. (2013). Wu Shentao's treatment of Hashimoto's thyroiditis based on "relieving stagnated fire". *Chinese Journal of Information on Traditional Chinese Medicine, 20*(09), 88-89.

[11] Zhang, D., & Zhang, Z. Y. (2020). Experience of Zhang Zengyan in treating Hashimoto's thyroiditis based on "malnutrition of essence and mind". *Journal of Shanxi University of Chinese Medicine, 21*(06), 421-424+432.

[12] Xie, X., An, H. Y., & Huang, L. J. (2022). Experience of Huang Lijuan in treating Hashimoto's thyroiditis based on syndrome differentiation. *Liaoning Journal of Traditional Chinese Medicine, 49*(01), 29-31.

[13] Zhao, L., Guan, X., & Xue, C. M. (2012). Experience of Xue Cimin in treating Hashimoto's thyroiditis. *Shanghai Journal of Traditional Chinese Medicine, 46*(10), 13-14.

[14] Xue, Y. K., Li, X. H., Jia, H. N., & Zhao, H. (2013). Experience of Qi Luguang in treating Hashimoto's thyroiditis. *Shandong Journal of Traditional Chinese Medicine, 32*(5), 353–354.

[15] Liao, M. J., & Tang, H. J. (2021). Summary of Professor Tang Hanjun's experience in treating Hashimoto's thyroiditis. *Liaoning Journal of Traditional Chinese Medicine, 48*(11), 27-31.

[16] Zhang, R. R. (2017). Summary of Professor Jiang Zhaojun's clinical experience in treating Hashimoto's thyroiditis based on the traditional Chinese medicine inheritance support system [D]. Shandong University of Traditional Chinese Medicine.
[17] Zhao, Y. (2015). Study on the academic thought and clinical application of Professor Chen Ruquan in diagnosing and treating Hashimoto's thyroiditis [D]. Hubei University of Traditional Chinese Medicine.
[18] Zhang, Y., Zhao, C. H., & Xu, Q. W. (2023). Distribution law and characteristics of TCM syndrome factors in Hashimoto's thyroiditis based on data mining. *Guiding Journal of Traditional Chinese Medicine and Pharmacy, 29*(07), 161-166.
[19] Luo, H., & Li, Q. L. (2019). Study on the therapeutic effect of Euthyrox combined with Tripterygium wilfordii polyglycoside on rats with Hashimoto's thyroiditis model. *Contemporary Medical Symposium, 17*(21), 44-46.
[20] Hua, C., & Xu, Z. Y. (2003). Experimental study on Tripterygium wilfordii in the treatment of Hashimoto's thyroiditis. *Practical Journal of Traditional Chinese Medicine,* (08), 397-399.
[21] Lu, M. Y. (2019). Study on the pharmacodynamic effect and mechanism of Prunella vulgaris on rats with autoimmune thyroiditis [D]. Chengdu University of Traditional Chinese Medicine.
[22] Yang, F., Xu, J., Zhang, X. K., & Wang, J. (2014). Curative effect observation of Prunella vulgaris capsule in the treatment of Hashimoto's thyroiditis with simple abnormal thyroid autoantibodies. *Hebei Journal of Traditional Chinese Medicine, 36*(11), 1693–1694.
[23] Lu, M. Y., & Zhu, J. M. (2019). Clinical observation of Prunella vulgaris capsule in the treatment of Hashimoto's thyroiditis. *World Latest Medicine Information, 19*(16), 154+156.
[24] Li, Y., & Song, J. F. (2024). Effect of Ruanjian Xiaoying Granule combined with Selenium Yeast Capsule in the treatment of Hashimoto's thyroiditis and its influence on thyroid-related antibody levels. *Clinical Research and Practice, 9*(08), 129-133.
[25] Cheng, J. (2020). Analysis of anxiety and depression in adult patients with Hashimoto's thyroiditis [D]. Anhui Medical University.
[26] Wu, P. D., Zhang, D. S., Zhang, C. P., Zhang, W. X., & Yang, X. J. (n.d.). Staged treatment of Hashimoto's thyroiditis based on "stagnation, binding, and deficiency" [Manuscript accepted for publication]. *Chinese Journal of Basic Medicine in Traditional Chinese Medicine*. Advance online publication.https: //doi.org/10.19945/j.cnki.issn.1006-3250.20251222.002
[27] Zeng, W. M., Wang, S. Z., Wang, G. Q., Tang, B., & Zhou, X. (2023). Clinical observation on 30 cases of Hashimoto's thyroiditis treated by acupuncture at acupoints of the Hand and Foot Yangming Meridians. *Journal of Traditional Chinese Medicine, 64*(15), 1550–1555.
[28] Ye, D. Z. (2023). Clinical efficacy observation of acupuncture in the treatment of Hashimoto's thyroiditis of kidney deficiency and liver stagnation type based on the "strengthening yuan and relieving stagnation" theory [D]. Fujian University of Traditional Chinese Medicine.
[29] Kamila, Yang, X. Z., Li, H. Y., & Wang, J. (2012). Acupuncture intervention effect and four diagnostic characteristics of autoimmune thyroiditis. *China Journal of Traditional Chinese Medicine and Pharmacy, 27*(7), 1938–1940.
[30] Ren, H. T., Wang, Z. J., Dai, Y., Wang, Y. X., & Zhou, H. (2022). Experimental study on the effect of warming acupuncture at key strengthening acupoints on thyroid function and pathological structure of rats with Hashimoto's thyroiditis. *Lishizhen Medicine and Materia Medica Research, 33*(6), 1528–1530.
[31] Xia, Y., Xia, M. Z., Li, Y., Chen, F., & Wei, R. (2012). Effect of aconite cake-separated moxibustion mainly at Guanyuan (CV4) and Mingmen (GV4) on thyroid function in patients with Hashimoto's thyroiditis. *Chinese Acupuncture & Moxibustion, 32*(2), 123–126.
[32] Zhang, Y. Y., Xia, M. Z., Li, Y., Wei, R., & Chen, F. (2013). Correlation analysis between specific serum antibodies and thyroid function in Hashimoto's thyroiditis treated by aconite cake-separated moxibustion. *Shanghai Journal of Acupuncture and Moxibustion, 32*(1), 25–27.

[33] Qiao, X. (2024). Clinical study on TCM acupoint application in the treatment of Hashimoto's thyroiditis [D]. Shandong University of Traditional Chinese Medicine.

[34] Qiao, X., Mu, S., Gao, S., Dong, Y., Chen, H., Li, J., Chen, H. (2025). Molecular mechanism of Xiaoying plaster in the treatment of Hashimoto's thyroiditis based on network pharmacology and molecular docking. *Chinese Journal of Bioinformatics*, 23(4), 291-303.

[35] Song, Z. C. (2021). Clinical efficacy observation of Chaigui Decoction combined with acupoint application in the treatment of Hashimoto's thyroiditis of qi stagnation and phlegm coagulation type [D]. Shandong University of Traditional Chinese Medicine.

[36] Qiao, X., Liu, B. W., Mu, S. L., Gao, S., & Li, J. (2024). Efficacy of acupoint application in the treatment of Hashimoto's thyroiditis of liver qi stagnation type: a randomized controlled trial. *Chinese Acupuncture & Moxibustion, 44*(5), 513–520.