

# Case Report: Acupuncture Treatment for Hypothyroidism

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**Abstract:** *Background - Hypothyroidism is a condition in which the body lacks sufficient thyroid hormone. People with this condition have symptoms associated with a slow metabolism, tiredness, weight gain, constipation, dry skin, feeling cold and etc. [12] Traditional Chinese Medicine (TCM) regards hyperthyroidism and as Yin/Yang imbalances and often uses acupuncture, herbal medicine and dietary therapy to rebalance Yin and Yang. [8]*

*Aim - The main purpose of doing this work is to show the most effective acupoints used in the acupuncture treatment of hypothyroidism in our practice and the results after the treatment.*

*Methods - The patient is a 24 year old female diagnosed with Hashimoto hypothyroidism, an autoimmune thyroiditis. The treatments were done in the clinic for TCM and acupuncture in Skopje by a doctor specialist in acupuncture. The treatments were done every week for 3 years, when the TSH and T4 levels normalized. During the treatments she has done 7 analysis for thyroid.*

*Results - From the first treatment made the levels of TSH. T4 and TPO hormones were gradually normalizing. The last results are from the analysis when she also made her last treatment - TSH=13.8 T4=2.8 TPO=<60.*

*Conclusions - For condition such as hypothyroidism, acupuncture gives satisfying results and improves the condition significantly.*

*Key words: hypothyroidism, hashimoto, acupuncture, treatment, acupoints*

## Background

Hypothyroidism occurs as a consequence of deficient secretion by the thyroid gland. [2] Hypothyroidism mostly affects women, 15-20 times more than man and occurs more frequently in the age group of 30 to 50. [4] [17] In the prevalence of hypothyroidism in the developed world is about 4.6%. [14] Western medicine hypothyroidism has two differentiations - primary and secondary, of

Standard Western treatment generally involves life-long hormonal replacement therapy with synthetic hormones or animal protomorphogens. In the

which the primary is the most common. Primary hypothyroidism is thought of as an autoimmune disease induced through chronic inflammation of the thyroid gland, also known as Hashimoto's thyroiditis. This variety occurs most commonly in women. Secondary hypothyroidism is caused by failure of the hypothalamus to regulate the thyroid gland or lack of secretion of thyroid stimulating hormone (TSH) from the pituitary gland. [1] Low levels of TSH exist in secondary hypothyroidism, whereas very high levels of TSH exist in primary hypothyroidism due to the fact that there is no feedback inhibition from the pituitary gland. The levels of TSH, T4 and T3 hormones are explained in table 1. [3]

The symptoms that usually occur in hypothyroidism are: depression, constipation, abnormal menstrual cycles, irritability, hair loss, dry hair, fatigue, weakness, cold intolerance, weight gain or difficult losing weight, muscle cramps and etc. [2] Signs and symptoms of the early diagnosis of primary hypothyroidism may not be detectable except through blood analysis. [1]

Because the body is expecting a certain amount of thyroid hormone, the pituitary will make additional thyroid stimulating hormone (TSH) in an attempt to entice the thyroid to produce more hormone. This constant producing of high levels of TSH may cause the thyroid gland to become enlarged and form a goiter. [12]

**Table 1. Thyroid function tests [11]**

Type of hypothyroidism	TSH	T4	T3
Hashimoto's thyroiditis or atrophic thyroiditis	Raised	Low	Normal or low
Hypothalamic or pituitary disease— failure of TSH	Usually undetectable	Low	Normal or low

Traditional Chinese Medicine, the treatment includes long-term acupuncture and herbal medicine. In the treatment of hypothyroidism, acupuncture can be used to regulate energy levels, restore hormonal balance, smooth emotions and

help manage sleep, emotions and menstrual problems. [1] [7]

According to the Traditional Chinese Medicine, there are three types of hypothyroidism: Spleen and Kidney qi deficiency, Heart and Kidney yang deficiency and Kidney jing deficiency.

1. Spleen and Kidney qi deficiency - it is seen in subclinical hypothyroidism or the early stages of an underactive thyroid and it is diagnosed as subacute hypothyroidism or Hashimoto's thyroid. The blood test reveals elevated TSH, but normal to low levels of T4 and T3. Symptoms are fatigue, tiredness, depression, mild sensitivity to cold, poor appetite, constipation, weight gain, weak bladder, irregular cycles and etc. The tongue is pale and scalloped and the pulse is weak, thread and deep. The treatment principle is to strengthen and supplement Spleen and Kidney qi and resolve the phlegm.
2. Heart and Kidney yang deficiency - the most common presentation of well-developed and clinical hypothyroidism. Cardiovascular complications are quite common, cold intolerance, puffy face and eyes, depression, weight gain, dry skin and hair, no sweating, poor appetite, frequent urination, constipation, hoarse voice, low basal body temperature and etc. The tongue is pale, swollen and scalloped. The pulse is weak, slow or imperceptible. The treatment principle is to warm Kindey, Spleen and Heart yang.
3. Kidney jing deficiency - late stage illness where the kidneys are severely depleted and the marrow is being affected. It appears usually in elder patients. The symptoms arw dizziness, headaches, poor memory, insomnia, tinnitus, hair loss, general weakness, urinay frequency and etc. the tongue is slightly pare or pink and dry with no coat. The pulse is weak, thread, deep and imperceptible. The treatment principle is to supplement and enrich Kidney jing. [11]

Acupuncture stimulates the nervous system and causes the release of neurochemical messenger molecules. The resulting biochemical changes influence the body's homeostatic mechanisms, thus promoting physical and emotional well-being. The acupuncturists seek the root cause within the pattern of imbalance and the hypothyroidism can be described as Kidney Yin and Yang deficiency. When the needles are inserted into certain acupoints, the Liver and Kidney Yin strengthens, the heat clears and the Kidney Yang invigorates. [16]

## Methods

The patient is a 24 year old female diagnosed with Hashimoto hypothyroidism, an autoimmune thyroiditis or according to the Traditional Chinese medicine she has Spleen and Kidney qi deficiency. The first treatment was done on 10.03.2012 in the clinic for Traditional Chinese Medicine and Acupuncture in Skopje by a doctor specialist in acupuncture. The treatments were done every week until 14.11.2015. During the treatment were done 7 analysis for thyroid. Acupuncture was done indoor on a room temperature with duration of 35-40 minutes. Fine sterile needles were used made by Wuijiang City Medical & Health Material Co., LTD, size 0.25x25mm. Acupoints that were used in the treatment are: DU20 (BaiHui), GB20 (FengChi), DU14 (DaZhui), ST9 (RenYing), LI4 (HeGu), BL15 (XinShu), BL20 (PiShu), BL23 (ShenShu), DU4 (MingMen), RN6 (QiHai), RN4 (QuanYuan), SP9 (YinLingQuan), ST36 (ZuSanLi), SP6 (SanYinJiao), KI3 (TaiXi), LR2 (TaiChong).

DU20 (BaiHui) - The highest acupuncture point on the body that is used very frequently in acupuncture. It is known as the "hundred meetings" since it's treating more than a hundred diseases. It is located on the center line of the head, from the tops of the ears, in the midline where they meet. All Yang meridians of the body pass through this point and it is used when there is Yang imbalance, excess Yang energy in the body or low energy. It is used in insomnia, headache, to boost the energy, calm the mind and improve the sleep.

GB20 (FengChi) - A point of the gallbladder, located in a depression between the upper m. Sternocleidomastoideus and m. Trapezius. It is used to eliminate wind factor, to activate channels and reduce pain. It is used in insomnia, cold symptoms, nasal obstruction, all issues of the head and sense organs, relaxes and balances the nervous system and etc.

DU14 (DaZhui) - This point is located on the midline, below the spinous process of the 7<sup>th</sup> cervical vertebra. It is used to calm the Wind, clear Heat, to strengthen the Qi and Yang deficiency conditions. It is used to cure common cold, chills and fever, neck rigidity, cough and other.

ST9 (RenYing) - It is located on the neck, lateral to the Adam's apple, on the anterior border of m. Sternocleidomastoideus, where the common sarotid artery pulsates. It's function is to regulate the Qi and Blood, to benefit the throat and neck, to regulate conditions such as sore throat, goiture, scrofula, thyroid problems and other.

LI4 (HeGu) - Located in the middle of the second metacarpal bone on the radial side. It's function is to tonify the Qi, strengthen the immunity, benefit the eyes, nose, ears and mouth, to treat conditions such as fever, malignant sore, constipation, swelling and pain of the eyes and face and other.

BL15 (XinShu) - Located on the level of the lower border of the spinous process of T5 vertebra on the Bladder meridian. It's function is to calm the shen, move the Qi, remove Blood stasis, to treat conditions like insomnia, deficiency of Heart Qi, irregular pulse, eye pain and etc.

BL20 (PiShu) - Located 1.5 cun lateral to the lower border of the spinous process of the 11<sup>th</sup> thoracic vertebra. Indications are Phlegm and Dampness, sinking of the Spleen Qi, poor appetite, tiredness, nausea, cough and etc.

BL23 (ShenShu) - It is located lateral from the spinous process of L2 vertebra on the meridian of the kidneys. It is used to tonify the Qi energy of the kidneys, dizziness, tinnitus, tiredness, dry eyes and etc.

DU4 (MingMen) - it is located below the spinous process of L2 vertebra. It tonifies Kidney Yang, strengthens the Kidneys, helps in conditions such tinnitus, dizziness, fatigue, low back pain and other.

RN6 (QiHai) - Located in the lower abdomen, 1.5 cun below the umbilicus. It is used to regulate and tonify the Qi energy, harmonize the Blood, to eliminate humidity factor and strengthen the kidneys. It is used in abdominal pain, insomnia, coldness, frequent urination and etc.

RN4 (QuanYuan) - Located 3 cun below the umbilicus, on the midline of the abdomen. It is useful for Yin, Yang, Qi or Blood deficiency, in conditions such weakness, chills, infertility and etc.

SP9 (YinLingQuan) - Located on the lower border of the medial condyle of the tibia. It is used to regulate the Spleen, resolve dampness, help conditions such poor appetite, diarrhea, bloating, swelling, dry mouth and etc.

ST36 (ZuSanLi) - Located 3 cun below the lower border of the patella. It benefits the Stomach and Spleen, tonifies Qi and Blood, increases Yang, expels Wind, Cold and Dampness. It is used in conditions such fever, dizziness, chronic illness, depression, insomnia and other.

SP6 (SanYinJiao) - It is located on the inside of the leg, above the ankle. It is used to tonify Yin and Blood, in all Spleen disorders, in conditions such as

insomnia, dizziness, digestive disorders, menstrual issues, blurred vision, tinnitus and other.

KI3 (TaiXi) - Located posterior to the medial malleolus. Used to tonify Kindey Yin and Yang, calm the Mind, regulate uterus, tinnitus, dizziness, weakness, insomnia, cough, dry throat, poor memory and etc.

LR2 (TaiChong) - Located on the dorsum of the feet, between the first and second metatarsophalangeal joints. It clears Liver Fire, spreads Liver Qi, clears Heat, helps in conditions such headache, dizziness, pain in the chest, swollen eyes, throat dryness and etc.

## Results and discussion

The patient was doing the treatments every week from 10.03.2012 to 14.11.2015 when the TSH and T4 levels normalized. Before the treatments, she was taking Eutirox 25mg for four years until 13.12.2013 when she started taking 50mg four days and three days 25mg. Then the doses were reduced gradually until 29.04.2015 when she stopped taking the Eutirox. During the treatments she has done 7 analysis for thyroid and the levels for TSH and T4 hormones were normalized, except the TPO levels were >1000. The doctors advised to increase the doses of Eutirox, but she decided to stick to the acupuncture and reduce the doses. From the first treatment made the levels of TSH and T4 hormones were gradually normalizing.

The last results are from analysis made on 14.11.2015 when she also made her last treatment - TSH=13.8 T4=2.8 TPO=<60. On table 2 are shown the results from the analysis made during the treatment - the date when the analysis was made, and the levels of the T4, TSH and TPO.

**Table 2. Analysis and results for thyroid hormones**

Date	T4 (9-21)	TSH (0,4-4,5)	TPO <60
30.08.2013	14,4	4,3	>1000
31.10.2013	16,5	2,85	>1000
13.12.2013	17,4	1,4	>1000
11.11.2014	14,4	3,51	>1000
19.02.2015	13,6	5,2	862
09.05.2015	(FT4) 1,2	4,2	(no record)
14.11.2015	13,8	2,8	<60

Acupuncture can regulate on different levels the autonomic nervous system, hormones and neuropeptide release to help control metabolism and may aid in regulating the immune system as well as regulating the emotional state of the patient. According to the latest researches, acupuncture can be successfully used to treat autoimmune thyroiditis. As Luzina C. and Xin N. write in their

article, the results show that 67% (32 cases) were cured, 19,6% markedly effective after a long term treatment course. Other authors have also written about their patient's positive experience with acupuncture treatment. [9] [13] [18]

Except the acupuncture treatment, a lot of practitioners of the TCM, use tea formulas for hypothyroidism. They make teas to treat Spleen-Kidney yang, support the Spleen, warm the Kidneys and regulate the Qi and Blood. [5] [6]

TCM treats the human body holistically, taking into consideration the unity of body and spirit and their relationship to the environment. For Chinese Medicine, a symptom or disease is a sign of imbalance derived from and affecting the whole body and indicates that other aspects of the patient's life need evaluation as well, not just the apparent organ or system affected. TCM treatment of autoimmune thyroiditis has a long history and names it "gall disease", yingbing. Patients with gall disease can easily become furious and worry too much. Also, the disharmony between Yin and Yang leads to nodule, edema, and phlegm stagnation. [10]

Luzina C. and Xin N. in their article about autoimmune thyroiditis are explaining that according to Dr. Wei Liu In the pattern of Yang Deficiency with Spleen and Kidney Deficiency, the key symptoms are: lassitude; sleepiness; poor memory; ringing in the ears (tinnitus); dizziness; weakness of the lower back and knees; dry skin; dry hair; aversion to cold; edema; constipation; impotence (men); irregular periods (women); pale, puffy tongue body with tooth marks along the edge; white, sticky tongue coating; and a pulse that is deep and thin or deep and slow. [10]

Autoimmune diseases need long-time treatment strategies. The disease needs to be directed outwards, away from the Yin interior, and towards the Yang exterior to prevent the disease from lodging itself in the blood, fluids or Yin viscera. According to TCM, diseases have 'exit routes' through the Yang channels and their associated bowels, and most treatment strategies are designed to take advantage of these exit routes, as diseases cannot directly exit from the Yin viscera, blood or fluids. [15]

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