

Elaboration and subsequent application of a protocol for measuring reduction in a patient with Hashimoto thyroiditis

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ABSTRACT

Background: Hypothyroidism is the result of insufficient production or absence of production of thyroid hormones. Weight gain is one of the side effect of this autoimmune disease. In this paper a protocol for the reduction of measures for a Hashimoto thyroiditis patient was performed and the obtained results were analyzed. **Material and Methods:** The patient is female of 26 years of age, with an initial weight of 63.1 kg and a height of 160 cm. Body mass index (BMI) of 24.6. She presents hyperlipodystrophy in the abdominal area and thighs and cellulitis in the thigh area. **Results:** There was a weight loss associated with measurement of the reduction of abdomen and thighs. **Conclusions:** Treatments consisting in measuring reduction help in reducing body measurements, but following a good diet and practicing exercise are also required.

Key words: Hashimoto thyroiditis; Measurement of reduction; Aesthetic biomedicine; Nutrition

INTRODUCTION

Chronic autoimmune thyroiditis is the most frequent thyroiditis and is the most common cause of hypothyroidism in countries where diet provides a sufficient supply of iodine [1]. It is also called chronic lymphocytic thyroiditis or Hashimoto's thyroiditis.

Up to 95% of cases occur in women [1]. It affects people of all ages, especially those in their 30s and 50s. The incidence of this thyroiditis has increased exponentially over the last 50 years, which may be related to the increase in iodine content in the diet [2].

The natural course of the disease is the gradual loss of thyroid function [3]. Among patients with this condition who exhibit moderate increases in TSH and in the presence of anti-thyroid antibodies, hypothyroidism affects up to 5% of the general population.

The main clinical manifestations are the signs and symptoms of hypothyroidism [4].

Due to the insidious evolution of the disease, the doctor will find patients with less specific complaints, such as: weight gain (moderate), constipation or fatigue [5].

MATERIALS AND METHODS

The initial consultation and subsequent treatments were developed in Clínica Áurea – Clínica de Biomedicina Estética, Portugal.

In the initial consultation, all the procedures were explained, as well as side effects, expected results and contraindications.

The patient signed informed consent.

The patient is a female of 26 years of age. Initial weight of 63.1 kg and a height of 160 cm. Body mass index (BMI) of 24.6.

She presents hyperlipodystrophy in the abdominal area and thighs and cellulitis in the thigh area.

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In the initial consultation, the measurements described in Table 1 were taken, which will serve as a reference for each treatment session and to facilitate the evaluation of results. Initial photos were also taken (Figs. 1a and 1b).

The patient reported that she did not want to perform mesotherapy treatments, because she had already done it in the past and it had been quite painful.

Although the area being evaluated was the abdomen, a thigh protocol was also performed (Table 2 and 3).

The patient was provided with information regarding the foods that she could consume and those that would have to be avoided, based on the analysis of the potential triggers of autoimmune diseases upon the outcomes of previous research (Table 4).

Ethics Statement

The procedures followed were in accordance with the ethical standards of the responsible Committee on Human Experimentation (institutional and national) and the Helsinki Declaration of 1975, as revised in 2000 and 2008.

RESULTS

After 12 treatment sessions, the results are as follows (Figs. 2 - 4).

Final photos were also taken (Figs. 5a and 5b).

DISCUSSION

The patient presented at the initial consultation a weight of 63.1 kg and height of 160 cm, with a BMI of 24.6.

Table 1: Measurements at the first consultation

Date	Weight (Kg)	%Fat mass	%Water	Visceral fat	Muscle mass (Kg)	Basal Mean Index (KJ)	
	63,1	30,9	48,7	3	41,4	1349	
01/08/2018	Abdomen (cm)	Waist (cm)	5 cm below belly button (cm)	Right thigh (cm)	Left thigh (cm)	Right arm (cm)	Left arm (cm)
	88	77	101	60	61	32	32

Table 2: Measurement of reduction in the abdomen

	Treatment	Protocol
Session 1	Cavitation + Pressure therapy	20 min of Cavitation + 30 min of Pressure therapy
Session 2	Radiofrequency	20 min
Session 3	Pressure therapy + Cryotherapy	Cooling gel on the abdomen + 30 min of Pressure therapy
Session 4	Electrostimulation + Massage	25 min of Electrostimulation in the abdominal area. Immediately afterwards a modeling massage
Session 5	Cavitation + Pressure therapy	20 min of Cavitation + 30 min of Pressure therapy
Session 6	Radiofrequency	20 min
Session 7	Cavitation + Pressure therapy	20 min of Cavitation + 30 min of Pressure therapy
Session 8	Radiofrequency	20 min
Session 9	Electrostimulation + Massage	25 min of Electrostimulation in the abdominal area. Immediately afterwards a modeling massage
Session 10	Cavitation + Pressure therapy	20 min of Cavitation + 30 min of Pressure therapy
Session 11	Pressure therapy + Cryotherapy	Cooling gel on the abdomen + 30 min of Pressure therapy
Session 12	Radiofrequency	20 min

Table 3 : Measure reduction for thighs

	Treatment	Protocol
Session 1	Pressure therapy	30 min.
Session 2	Pressure therapy+Cryotherapy	Gel with cold effect on the abdomen + 30 min of Pressure therapy
Session 3	Radiofrequency	15 min in each zone (right front leg, right back leg, left front leg, left back leg)
Session 4	Pressure therapy+Cryotherapy	Cooling gel on the abdomen + 30 min of Pressure therapy
Session 5	Pressure therapy	30 min.
Session 6	Radiofrequency	20 min
Session 7	Electrostimulation+Massage	25 min of Electrostimulation. Immediately afterwards a modeling massage
Session 8	Pressure therapy	30 min.
Session 9	Pressure therapy+Cryotherapy	Cooling gel on the abdomen + 30 min of Pressure therapy
Session 10	Pressure therapy+Cryotherapy	Cooling gel on the abdomen + 30 min of Pressure therapy
Session 11	Radiofrequency	15 min in each zone (right front leg, right back leg, left front leg, left back leg)
Session 12	Electrostimulation+Massage	25 min of Electrostimulation. Immediately afterwards a modeling massage

Table 4: Foods recommended and advised against based on the analysis of the potential triggers of autoimmune diseases

Consume	Avoid	
Almonds	Lactose-free Yoghurts	Caffeine
Asparagus	Lettuce	Flax seeds
Bean	Lobster	Green tea
Beef	Orange	Lactose
Brewer's yeast	Oysters	Pasta, rice, bread (based on wheat)
Canned tuna	Pasta and brown rice	Raw vegetables: cabbage, corn, broccoli, Brussels sprouts, cauliflower and spinach
Carrot	Peanuts	Soy and Derivatives
Chicken meat	Plowing	Sugar consumption
Cockle	Pork liver	Sweet potato
Cooked shrimp with no sauces	Prunes	
Corn	Pumpkin	
Cucumber	Quinoa	
Dark bread	Saltwater fish	
Dried seaweed	Strawberries	
Egg yolk	Sunflower seeds	
Garlic	Walnuts	



Figure 1: (a) Initial photo: frontal. (b) Initial photo: lateral.

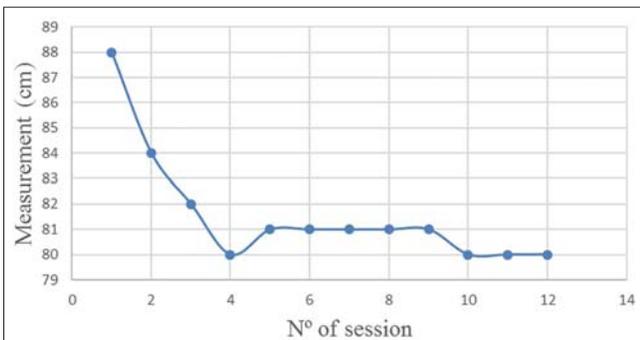


Figure 2: Measurement of the abdomen throughout the sessions.

According to the BMI chart, the patient (26) has normal weight for her height. After analyzing the percentage table of fat mass for females, she is in the “healthy” range.

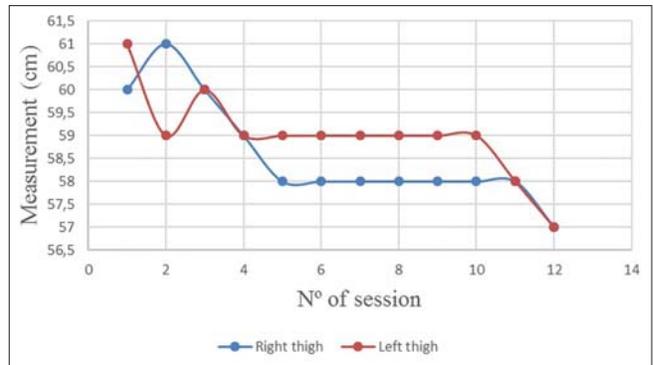


Figure 3: Measurement of the thighs throughout the sessions.

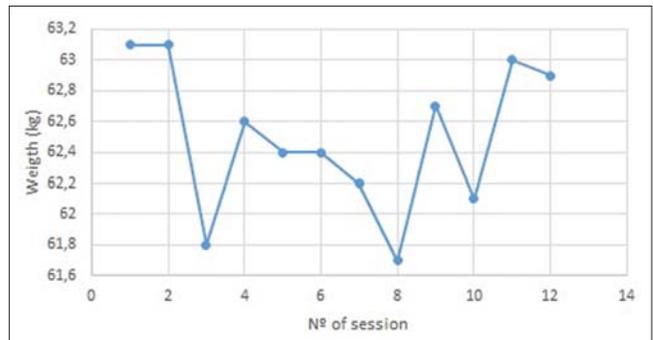


Figure 4: Weight measures along the sessions.



Figure 5: (a) Final photo: frontal. (b) Final photo: lateral.

The results confirm that the patient has lost volume and weight, a fact that is noticed by the loss of centimeters in both the abdomen and the thighs (Figs. 3 - 5).

The BMI was not altered.

The patient confirms that she notices improvements in the cellulitis in the thigh area and that the skin is much smoother.

CONCLUSION

The lack of improvement in the percentage of fat mass (initial: 30.9, final 33.6) is due to the fact that the patient confirmed that she did not exercise during the treatment and did not follow the recommendation of foods to eat and avoid.

These treatments help in reducing the body measurements, but it is also necessary to follow a good diet and practice exercise. The patient was advised to attend nutrition consultations and exercise to continue to reduce weight.

The majority of subjects with thyroid disease experience problems in maintaining normal body weight and have a higher body mass index and waist circumference than healthy individuals [6].

The role of diet in autoimmune diseases seems to be important but the true extent of its influence and the therapeutic potential are still largely unknown in this context.

Physical exercise is of equal importance to enhance the results that the treatments provide.

However, these two major reasons are not responsible alone for weight loss. If there is a hormonal imbalance, which many people with Hashimoto's thyroiditis experience, then it will be extremely difficult to lose a significant amount of weight by eating and exercising alone [7]. Eating a lot of refined foods and skipping meals affects two of the major hormones in the body, cortisol and insulin [8]. If these habits continue for many years, this will put stress on the adrenal glands and can eventually lead to insulin resistance [9]. Until this is corrected, even with a perfect diet and exercise pursued on a daily basis, losing weight will be difficult.

Many people with Hashimoto's thyroiditis and other types of hypothyroidism also have an imbalance in the ratio between the hormones estrogen and progesterone, which can also lead to weight gain and thus make it

difficult to lose weight [10]. The patient was advised to consult with a competent endocrine doctor, as they will be able to detect a hormonal imbalance.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible Committee on Human Experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

Statement of Informed Consent

Informed consent was obtained from all patients for being included in the study.

REFERENCES

1. Chiovato L, Magri F, Carlé A. Hypothyroidism in context: where we've been and where we're going. *Adv Ther*. 2019;36(Suppl 2):47-58.
2. Mincer DL, Jialal I. Hashimoto thyroiditis. *StatPearls Publishing*; 2020. Accessed May 12, 2020.
3. Publishing HH. The lowdown on thyroid slowdown. *Harvard Health*. Published 2019. Accessed May 13, 2020.
4. Abbott RD, Sadowski A, Alt AG. Efficacy of the autoimmune protocol diet as part of a multi-disciplinary, supported lifestyle intervention for Hashimoto's thyroiditis. *Cureus*. 2019;11:e4556.
5. Schumaker T, Censani M. Growth failure and excessive weight gain in a 10 year old male with obesity: approach to diagnosis, management, and treatment of acquired hypothyroidism. *Front Pediatr*. 2018;6:166.
6. Wojtas N, Wadolowska L. Evaluation of qualitative dietary protocol (diet4hashi) application in dietary counseling in hashimoto thyroiditis: study protocol of a randomized controlled trial. *Int J Environ Res Public Health*. 2019;16. pii: E4841.
7. Kouidrat Y, Diouf M, Desailoud R, Louhou R. Effects of a diet plus exercise program on thyroid function in patients with obesity. *Metab Open*. 2019;2:100008.
8. Mohiuddin A. Skipping Breakfast Everyday Keeps Well-Being Away. *Glob J Pharm Pharm Sci*. 2019;7:1-7.
9. Ahola AJ, Mutter S, Forsblom C, Harjutsalo V, Groop P-H. Meal timing, meal frequency, and breakfast skipping in adult individuals with type 1 diabetes – associations with glycaemic control. *Sci Rep*. 2019;9:20063.
10. Mousa U. Fat Distribution and metabolic profile in subjects with Hashimoto's thyroiditis. *Acta Endocrinol Buchar*. 2018;14:105-12.

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