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Case Report

Endothoracic Goiter Associated with Hashimoto Thyroiditis as a Cause of Fever of Unknown Origin, Case Report

Jaider Luis Saurith Monterrosa[1], Rafael Pila Peláez[2]*, Rafael Pila Pérez[3] and Pedro Rosales Torres[4]

[1]*Specialist First Degree Internal Medicine, Manuel Ascunce Domenech Hospital, Camagüey, Cuba*

[2]*Specialist Second Degree Internal Medicine, Assistant Professor, Manuel Ascunce Domenech Hospital, Camagüey, Cuba*

[3]*Specialist Second Degree Internal Medicine, Associate Professor, Manuel Ascunce Domenech Hospital, Camagüey, Cuba*

[4]*Specialist First Degree Pathological Anatomy, Instructor, Cuba*

***Corresponding Author:** Rafael Pila Pérez, Specialist Second Degree Internal Medicine, Assistant Professor, Manuel Ascunce Domenech Hospital, Camagüey, Cuba.

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Abstract

Hashimoto's thyroiditis is a disease of relative frequency in our environment, its presentation as fever of unknown origin (FUO) is exceptional demonstrated by the absence of bibliography, laboratory clinical studies discard all possible infectious, immune and oncological etiologies, the imaging study guided the diagnosis which was confirmed by histopathological studies after total thyroidectomy.

Keywords: *Endothoracic Goiter; Hashimoto Thyroiditis; Fever of Unknown Origin (FUO)*

Introduction

The term fever of unknown origin (FUO) was established arbitrarily by Petersdorf and Benson [1] as a fever of 38°C or more, rectally, during the smallest weeks and remaining undiagnosed after one week of studies in a hospital center. Weinstein and Field [2] make a critical review of the topic and they consider the term more appropriate for patients who present with fever of 38°C during three or more weeks, the cause has not been discovered with the data obtained in the clinical history, physical examination and The practice of blood analysis, urine and chest radiography.

The causes of fever of unknown origin are grouped into four groups:

1. 40% of the cases correspond to infectious processes.
2. 20% correspond to neoplasms.
3. Another 20% is attributed to connective tissue diseases.
4. The last group is a miscellany of vascular, immunological, hematological diseases, etc.

In 10% of patients the cause is unknown. Since then there have been numerous works and series published on this disease [3].

The case of FUO is presented due to Hashimoto's thyroiditis (HT), which is a frequent disease in females 15 - 20% and can occur at any age, although it is more frequent between 30 - 50 years. United States and the United Kingdom where its incidence is estimated at 0.3 - 1.5 per thousand inhabitants, being the cause of goitrogenic hypothyroidism in regions with normal iodine [4].

Next, we make a presentation of a case admitted in the service of internal medicine of a middle-aged patient in the FUO course and it was evidenced that we were facing a Hashimoto's thyroiditis, which is extremely rare.

Case Report

Black 57-year-old female patient, with a history of essential hypertension and hypothyroidism, with no family history of medical importance. As data of interest, he worked in administrative work in jungle area in the Venezuelan Amazon for 3 months. Home treatment with hydrochlorothiazide one tablet of 25 mg Daily, Enalapril Tablet of 20 mg one every 12 hours and Levothyroxine one tablet of 0.1 mg Daily. She initially consulted in the hospital in his health area for clinical symptoms of 1 week of evolution, consisting of feverish peaks of undulant pattern associated with dry cough. At which time she was diagnosed with acute bronchitis Indicating azithromycin 500 mg/day for five days without improvement, later they entered and give management under the diagnosis of community pneumonia with third generation cephalosporin for a period of 10 days, all of the above without a therapeutic response, Patient decides to voluntarily leave the health center until the patient evolves for three months without changing her symptomatology, using our service where you enter for study.

Patient tells us that during his stay in Venezuela, she underwent hormonal studies of the thyroid that gave positive antiperoxidases antibodies, as well as pain and difficulty in eating solid foods and occasional dyspnea.

At physical examination, discrete mucous skin pallor, cardiopulmonary, abdominal, neurological, gynecological and osteomuscular apparatus without alterations, fundus and normal otoscopy, at neck examination (Quervain maneuver, lahey and negative cri), the only positive data on physical examination was the sign of pemberton which is very suggestive of endothoracic goiter.

The analytical study showed hemoglobin 9.8 g/l leukocytes 8,500 mm^3 with normal differential, high C reactive protein, erythrosedimentation 110 mm/h, ionogram, liver enzymes, amylase, creatinine, glycemia, lipogram, uric acid, total proteins, LDH, CK total, platelet count and reticulocyte count within the normal parameters mild peripheral lamina hypochromia. VDRL, HIV ELISA, serial blood cultures, urine culture, stool culture, hepatitis C antibody, hepatitis B surface antigen, pharyngeal exudate, thick blood drop, ANA, cryoglobulins, complement, Paul bunnel and negative davinson's test, normal electrocardiogram, normal echocardiogram, abdominal ultrasound and normal gynecological, medullogram and normal meduloculture, thyroid function test t 4120 nmol/l (VN 50-144) t3 0.94 nmol/l (VN 0.92-2.78), TSH: 3 um/ml (VN: 0.5- 5.0) Posteroanterior and lateral chest radiograph (Figure 1).

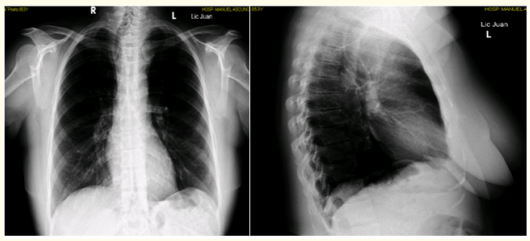

Figure 1: *Chest x-ray AP LAT: Displacement of the trachea on the right with the appearance of extrinsic compression, not pleuropulmonary alterations.*

Thyroid ultrasound with endothoracic projections which resulted as a result: left lobe increased in volume with endothoracic projections which measures 74 x 43 mm, remains of the thyroid of multinodular aspect. Diagnostic impression Endothoracic goiter, When describing these findings in order to rule out that the tracheal displacement described in the chest radiograph, was by esophageal component we decided to request esophagogram which was within the normal parameters (Figure 2). Computed tomography of the thorax (Figure 3).

Figure 2: *Barium column with normal and physiological intellections is observed, Esophagogram within normal parameters.*

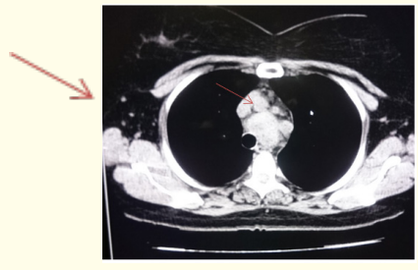

Figure 3: *Simple lung CT: At the level of the superior mediastinum, volume increase of the left thyroid lobe 81x48 mm, endothoracic projections with tracheal displacement to the right (See arrow).*

Subsequently, total thyroidectomy was performed with extraction of endothoracic projections, procedure without complications (Figure 4 and 5), a patient who remained hospitalized for a week after proceeding, with total resolution of all the symptoms for which he consulted. The result of the biopsy and histopathological study (Figure 6) was compatible with Hashimoto's thyroiditis and no signs of malignancy. Patient, which we followed on an outpatient basis and during all the checkups were normal without fever.

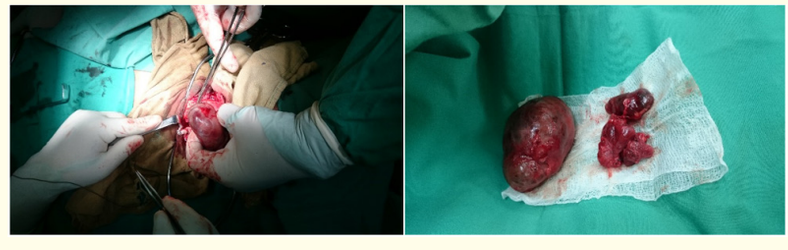

Figure 4 and 5: *Thyroid gland is observed with increased diffuse size, predominantly left thyroid lobe 8x5 cm of reddish-brown coloration, firm consistency and slightly nodular surface.*

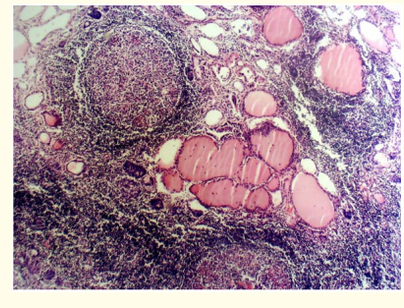

Figure 6: *Atrophy of thyroid follicles, chronic inflammatory infiltrate with predominance of lymphocytes and developed germinal centers. Data compatible with Hashimoto's thyroiditis.*

Discussion

There are diseases whose clinical presentation are very characteristic and infrequently presented as a febrile syndrome, so they are difficult to diagnose. Within FUO there are approximately more than 200 disorders as differential diagnoses that include autoimmune diseases, as the cause of this entity are thyroid diseases, mainly acute and subacute thyroiditis, which occur with fever, sometimes of unknown cause [3-5].

However, chronic thyroiditis, such as HT, is not reported as FUO, as we have observed that after a thorough bibliographic search, we have not found references to it.

There are a series of atypical and uncommon clinical forms of HT such as pseudotirotoxicosis of subacute onset associated with Graves' ophthalmopathy, another curious entity is the so-called "hashitoxicosis" in which HT hyperfunction and histology coexist, all this indicates the immunommunitary thyroid pathology spectrum [4].

In this patient with a long-standing FUO and in which she has performed multiple exams related to it and that has a diagnosis of a HT for several years demonstrated by functional tests of the thyroid and antiperoxidases antibodies which is positive in this entity in the 97% of cases [4]. We had in mind the possibility of a process of malignancy in the course of it.

In our patient, a large, symmetric, endothoracic goiter was found to be imaged, as in some cases it is sufficiently localized to suggest a neoplasm [6]. As we suspect in this case the thyroid gland does not contain native lymphoid tissue, intrathyroidal lymphoid tissue appears in several pathological conditions which is more evident in the course of autoimmune thyroid pathology, as in the case of Hashimoto's autoimmune chronic thyroiditis [7], a significant percentage of primary thyroid lymphoma warn about a base autoimmune thyroiditis [8], this association is present in around 50% of cases, being the only known risk factor [7,8]. Among patients with HT the risk of developing thyroid lymphoma is 60 times more frequent than in patients without thyroiditis, therefore the frequency of primary thyroid lymphoma seems to be higher in areas with high prevalence of thyroiditis. Many patients have symptoms and signs of tracheal or esophageal compression, which causes dysphagia, stridor and facial edema [3-5]; In this patient, dyspnea and dysphagia were present in solid foods. A sign was observed in cases of endothoracic goiter called Pemberton sign, which guides this location. No specific alteration is found in the laboratory for diagnosis. In some, they are hypothyroid and many have antiperoxidases antibodies and antithyroglobulin positive indicative of TH4, in our case the first test was positive in a previous study of 5 months.

Imaging studies cannot distinguish thyroiditis, carcinomas or lymphomas, but nevertheless these studies help to assess the extent of the disease, plan the therapy and monitor the response to treatment [10]. Ultrasonography and fine needle aspiration are the studies used to evaluate a thyroid tumor [6-8]. In our patient, the thyroid ultrasound allowed us to demonstrate the increase in volume of the left lobe with endothoracic projections and the multinodular aspect, which was corroborated by the computerized axial tomography. A fine needle aspiration biopsy was not performed due to the condition of endothoracic goiter and compressive manifestations.

Needle puncture or excisional biopsy is useful in cases that cannot be resected by total thyroidectomy, they are necessary in order to obtain enough material for the definitive histological diagnosis and sometimes with the complementation of the immunohistochemistry [7-11].

Surgical treatment (total thyroidectomy) is useful in the face of compressive conditions, specifically in the face of airway compromise, its large size and esophageal compression [7-11]. Our patient after this therapy has remained asymptomatic with the complementary dose of levothyroxine sodium.

Conclusions

The communication of cases with this condition will facilitate the knowledge and improvement of the diagnosis, avoid delays and unnecessary examinations that in many occasions are of high cost and generate great discomfort to the patient.

Conflict of Interest

None.

Bibliography

1. Petersdorf R and Benson P. "Fever of unexplained origin: report on 100 cases". *Medicine (Baltimore)* 40 (1960): 130.
2. Weinstein L and Fields B. "Fever of obscure origin; Seminars in infectious disease". New York: Srattoninter continental Medical Book (1988): 108.
3. Pila Pérez R., *et al*. "Tiroiditis de subaguda como causa de fiebre de origen desconocido". *Revista Archivo Médico de Camagüey* 10.5 (2006): 120.
4. Lucas Martín M and Puig Domingo JL. "Reverter Calatayud enfermedades del tiroides". Farreras - Rozman XVII edición, Elsevier España (2012): 2356-2358.
5. Cortez Mijares l., *et al*. "Tiroiditis subaguda como causa de síndrome febril prolongado. Presentación de un caso". *Revista Electrónica de las Ciencias Médicas en Cienfuegos* 10.6 (2012): 519-521.
6. Contran R., *et al*. "El sistema endocrino <<hipotiroidismo>> En patología Robins y Cotran". Patología estructural y funcional, McGraw-Hill interamericana: 1179.
7. Chigael G., *et al*. "Linfoma primario de tiroides: Diagnostico en dos casos clínicos". *Gländ Tir Paratir* 17 (2008): 34-38.
8. Pila Perez R., *et al*. "Linfoma primario de tiroides". *La Revista O.R.L.-Dips* 3 (2005): 164-168.
9. Mazzaferri E and Oertel Y. "Primary malignant thyroid lymphoma and related lymphoproliferative disorders". *Endocrine Tumors* (1993): 348-350.
10. Podoloff DA. "Is there a place for routine surveillance using sonography, CT, or MR imaging for early detection (notably lymphoma) of patients affected by Hashimoto's thyroiditis?" *American Journal of Roentgenology* 167.5 (1996): 1337-1338.
11. Bergoglio LM and Mestman JH. "Guía de consenso para el diagnóstico y seguimiento de la enfermedad tiroidea". *Acta Bioquímica Clínica Latinoamericana* 41.1 (2007): 87-119.

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