AN UNUSUAL CLINICAL PRESENTATION OF SUBACUTE GRANULOMATOUS THYROIDITIS

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SUMMARY – Subacute granulomatous thyroiditis is an inflammatory thyroid condition that is presumed to be caused by a viral infection or postviral inflammatory process. It is characterized by neck pain, usually a tender diffuse goiter, and thyrotoxicosis. A case is presented of subacute granulomatous thyroiditis in an adult woman who had no neck pain but presented with morning stiffness in the small joints of the right hand, intermittent abdominal pain, malaise, fever, and myalgia. After the diagnosis had been established, she was treated with propranolol and acetylsalicylic acid, and has fully recovered. In conclusion, this disease may be difficult to diagnose, especially if there is a combination of fever and increased aminotransferases, which can lead to a wrong diagnostic approach.

Key words: *Thyroiditis, subacute; Neck pain; Arthralgia; Aminotransferases*

Introduction

The term 'thyroiditis' refers to a group of heterogeneous disorders a common feature of which is inflammation of the thyroid gland[1]. Subacute granulomatous thyroiditis (SAGT) is a transient, self-limited, inflammatory thyroid disease that is often preceded by an upper viral respiratory tract infection. The disease affects women four times more often than men. In the initial, destructive phase, the patient has biochemical findings of thyrotoxicosis and approximately one-half of patients have symptoms and signs of thyrotoxicosis that results from the inflammation of thyroid follicles with the release of preformed hormone into the circulation. Also, the patient has a high erythrocyte sedimentation rate (ESR) and low thyroid radioiodine uptake values. Low radioactive iodine uptake is indicating damage to the gland as well as suppressed values of thyrotropin (TSH) in serum[2]. Thyroid cytology reveals infiltration with multinuclear giant cells, lymphocytes, macrophages, neutrophils and degenerated follicular cells. In the majority of patients, thyroid function tests characteristically evolve through the thyrotoxic phase, followed by hypothyroid and recovery phase. The leading clinical feature in the majority of patients is pain in the thyroid area[3], which may be accompanied by malaise, fever and myalgia. We describe a case of SAGT that presented with atypical symptoms, including absence of neck pain, but with morning stiffness in the small joints of the right hand, intermittent non-colicky abdominal pain, fever and myalgia.

Case Report

A previously healthy 47-year-old woman who had only undergone hysterectomy in 2005 due to uterine myoma presented with morning stiffness in the small joints of the right hand and intermittent non-colicky pain in the right upper abdominal quadrant that had lasted for 4 weeks. Also, she complained of malaise, fever and myalgia that had lasted for 3 weeks.

She was admitted to the internal medicine ward of our hospital with a presumed diagnosis of collagenosis. Several weeks earlier, she had an upper respiratory tract infection. She denied any pain in the thyroid area. She received no analgesic therapy. Clinical examination

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revealed only fever (38 °C). Thyroid physical finding was nonsignificant (no palpable goiter and no thyroid tenderness). Laboratory investigations revealed mild leukocytosis, elevated serum aminotransferases and alkaline phosphatase (ALP). Alanine aminotransferase (ALT) was 124 U/L (reference interval [RI] 10-36 U/L); aspartate aminotransferase (AST) was 58 U/L ([RI] 8-30 U/L) and ALP was 180 U/L ([RI] 54-119 U/L). After one week: ALT 63 U/L, AST 37 U/L, ALP 163 U/L; after two weeks: ALT 42 U/L, AST 24 U/L, ALP 136 U/L. Bilirubin concentration was normal. ESR was elevated (70 mm/h) and C-reactive protein was mildly elevated, 7.7 mg/L (upper reference limit: 5 mg/L). Antinuclear antibodies and rheumatoid factor were negative. Radiography of the right hand and abdominal ultrasound were normal. Blood cultures, urine culture, throat and nose cultures were sterile. Viral hepatitis markers were negative and a drug cause of hepatitis was excluded by careful history. Chest radiography and electrocardiogram were normal. Finally, thyroid function tests were done and showed thyrotoxicosis (initially free thyroxine FT4 52 pmol/L, [RI] 9.8-16.8 pmol/L); free triiodothyronine FT3 16 pmol/L, [RI] 4.6-7.8 pmol/L; thyrotropin TSH <0.005 MU/L, [RI] 0.63-4.19 MU/L). After eight weeks, the following results were found: TSH 6.9 MU/L, FT4 8.0 pmol/L, FT3 7.3 pmol/L. After twelve weeks, TSH was 2.5 MU/L, FT4 11.5 pmol/L, and FT3 6.5 pmol/L. Antithyroglobulin and antiperoxidase antibodies were undetectable. On ultrasonography, the thyroid appeared mildly diffusely enlarged with one nodule in the right lobe (1 cm in diameter). Thyroid scintigraphy showed diffusely reduced uptake in the thyroid gland consistent with subacute thyroiditis. Fine-needle aspiration cytology of the thyroid nodule revealed infiltration with multinuclear giant cells, lymphocytes and macrophages (Fig. 1). Three months later, thyroid ultrasonography did not reveal any nodule. The patient was closely monitored and evolved through a period of thyrotoxicosis, followed by hypothyroidism and finally euthyroidism. In the symptomatic period, the patient was treated with acetylsalicylic acid and propranolol. In the recovery phase, morning stiffness in the small joints of the right hand, intermittent abdominal pain, myalgia and fever disappeared.

Discussion

In SAGT, thyroid tenderness results from stretching of the thyroid capsule due to the underlying inflammatory process. The anterior neck pain can be unilateral or bilateral and may irradiate to adjacent structures, so some patients are subjected to extraction of innocent teeth. In some cases, the pain can be so severe that the patient cannot tolerate palpation of the neck. Although pain in the thyroid area is the most prominent symptom in 96% of patients[3], this case illustrates that SAGT may present without pain or tenderness in the thyroid area. It is uncertain what factors determine such a significant difference in symptomatology regarding neck pain. In order to establish the nature of painless SAGT, cytologic examination, HLA typing, and long-term follow-up are necessary[4].

In contrast to SAGT, painless lymphocytic subacute thyroiditis is generally considered to be an autoimmune disorder (a variant form of Hashimoto's thyroiditis), in which the thyroid gland is diffusely infiltrated with lymphocytes and thyroid autoantibodies (antithyroid peroxidase antibodies) are positive in most patients. It has a clinical course similar to that of SAGT, except that the thyroid gland is not pain-

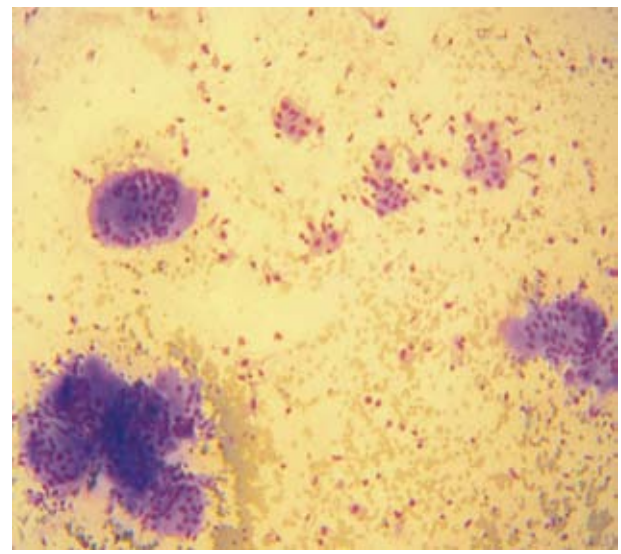

Fig. 1. Thyroid cytology revealed infiltration with multinuclear giant cells, lymphocytes and macrophages compatible with the diagnosis of subacute granulomatous thyroiditis.

ful or tender. ESR in painless thyroiditis is normal or slightly increased and the use of acetylsalicylic acid or glucocorticoid therapy is not indicated[5]. Serum ALP may be elevated in as many as 50% of patients with SAGT. Quantification of ALP isoenzymes in thyrotoxicosis has shown this increase to be of only liver origin in some patients, of only bone origin in other patients, and sometimes to be of both liver and bone origin[6]. Some authors suggest that an elevation of the liver biochemical tests in thyrotoxicosis is caused by hepatic ischemia due to increased metabolism[7], and the others consider it as part of the diffuse inflammatory process. In conclusion, atypical SAGT may be difficult to diagnose, especially if there is a combination of fever and increased aminotransferases, which can lead to a wrong diagnostic approach. Awareness of this relationship may be helpful in establishing the correct diagnosis and may prevent unnecessary diagnostic expenses. As this case shows, in febrile patients with increased ESR, aminotransferases and ALP, and who have no apparent source of infection, at least TSH should be done early in diagnostic evaluation.

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Sažetak

NEUOBIČAJENA KLINIČKA MANIFESTACIJA SUBAKUTNOG GRANULOMATOZNOG TIREOIDITISA

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Subakutni granulomatozni tireoiditis je upalna bolest štitnjače za koju se pretpostavlja da je uzrokovana virusnom infekcijom ili postvirusnim upalnim procesom. Obilježena je bolovima u vratu, pri čemu je obično prisutna difuzna struma bolna na palpaciju, te tireotoksikoza. U članku se prikazuje slučaj subakutnog granulomatoznog tireoiditisa u odrasle žene koja nije imala bolova u vratu, nego jutarnju ukočenost malih zglobova desne šake, povremene bolove u trbuhu, malaksalost, vrućicu i bolove u mišićima. Nakon što je postavljena dijagnoza liječena je propranololom i acetilsalicilnom kiselinom i u potpunosti se oporavila. Zaključno, ova bolest može zadavati poteškoće u dijagnozi, osobito ako postoji kombinacija vrućice i povišenih aminotransferaza, što može dovesti do pogrešnog dijagnostičkog pristupa.

Ključne riječi: *Tireoiditis, subakutni; Bol u vratu; Artralgija; Aminotransferaze*