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CASE REPORT

De Quervain's Thyroiditis (sub-acute thyroiditis)

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Abstract

Inflammatory diseases of the thyroid can be classified into three broad categories: acute, subacute and chronic thyroiditis. Subacute disease includes granulomatous or De Quervain's thyroiditis and lymphocytic thyroiditis or silent thyroiditis. The gland swells up and is very painful and tender. As thyroid hormones are discharged into the blood, patient becomes hyperthyroid clinically but the gland cannot take up iodine so the radioactive iodine uptake is very low. The hyperthyroidism generally resolves after a few weeks. The relief of pain by giving NSAID or steroids in this condition is so dramatic as to be almost diagnostic. A 40 year old man, hailing from Nawabganj, Dhaka was diagnosed as De Quervain's thyroiditis and treated successfully. In this report, the case condition, procedures of diagnosis and treatment are reported in details.

Key words. De Quervian's thyroiditis, hyperthyroidism, inflammation.

Introduction

Classical sub-acute thyroiditis is painful transient inflammation of the thyroid gland occurring after infection with Coxsackie, mumps or adenoviruses. There is pain in the region of thyroid that may radiate to the angle of jaw and the ears, and is made worse by swallowing, coughing and movement of the neck. The thyroid is usually palpably enlarged and tender. Systemic upset is common. Affected patients are usually female aged 20-40 but it may happen in male as well. Painless transient thyroiditis can also occur after viral infection and in patients with underlying autoimmune disease. The condition can also be precipitated by drugs, including Interferon-alpha and lithium.

Thyroiditis is an inflammation of the thyroid gland. Inflammatory diseases are the most common thyroid disorders encountered in clinical practice. Some of these present as painful deglutition or odynophagia, this can be a very distressing symptom. They may also present as neck pain, sore throat, neck mass or even dyspnoea along with fever. Inflammatory diseases of the thyroid can be classified into three broad categories: acute, subacute and chronic thyroiditis. Subacute disease includes granulomatous or De Quervain's thyroiditis and lymphocytic thyroiditis or silent thyroiditis. The chronic group includes chronic lymphocytic (Hashimoto's thyroiditis) and invasive fibrous (Riedel's) thyroiditis.[1]

De Quervain's thyroiditis was first described in 1904 and is much less common than Hashimoto's thyroiditis and may be missed if not looked for in a case of odynophagia. The gland swells up and is very painful and tender. As thyroid hormones are discharged into the blood, patient becomes hyperthyroid clinically but the gland cannot take up iodine so the radioactive iodine uptake is very low.

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The hyperthyroidism generally resolves after a few weeks. The relief of pain by giving NSAID or steroids in this condition is so dramatic as to be almost diagnostic.

Case report

A 40 year old man work as a tailor, hailing from Nawabganj, Dhaka reported with complaints of pain in the neck and, pain in the throat on swallowing since the last 20 days. On direct questioning he gave history of low grade fever. He has been prescribed an antibiotic by local physician but with no relief. There was no history of having ingested any foreign body, haemoptysis or change of voice.

On examination voice was normal, temperature was 99.4°F but pulse was 136/min. There was no palpable lymph node in any area of neck. Examination of the throat and indirect laryngoscopy did not reveal any abnormality. Laryngeal crepitus was present. Palpation of the thyroid revealed a very slight uniform diffuse enlargement with a small 1x1 cm tender nodule palpable on the left lobe, the swelling moves with deglutition.

A provisional diagnosis of De Quervain's thyroiditis was made and FNAC, and T3, T4 and TSH were done which showed that T3 and T4 increased, and TSH dramatically reduced. FNAC confirmed the diagnosis. Smear revealed numerous lymphocytes scattered singly and in groups with a few plasma cells and macrophages. A number of multinucleated giant cells and aggregates of epitheloid cells (granuloma) were also seen. The native follicular cells were seen scattered and in small groups with bare nuclei. The background was with a granular necrotic material. The features were consistent with De Quervain's thyroiditis. The T3 and T4 values elevated being 4 ng/ml and 17.0 mcg/dl, respectively and TSH 0.5uu/ml. ESR was 65 mm/1 hr and TLC 6500/cumm. Ultrasonography showed thickened isthmus with heterogenous echotexture. Radioactive Iodine uptake was done which showed subnormal values. Thyroid scan showed poor and patchy tracer distribution.

The patient was put on tablet prednisolone 10 mg daily for a week which was subsequently tapered off. There was dramatic relief in the pain and fever also subsided. Further evaluation also confirmed thyroiditis. Repeated T3, T4, TSH after a month showed normal values but the patient complained of palpitations and was given tablet proparnalol 40 mg twice daily, which was stopped after three months. As clinical presentation, FNAC and response to treatment matched features of De Quervain's thyroiditis, further studies for thyroid antibodies to exclude Hashimoto's thyroiditis were not done.

Discussion

The thyroid gland is generally resistant to infection because of its rich vascular supply, protective capsule and high iodine content. There may be some predisposing conditions such as trauma, sepsis which allow the organisms' access to the gland. While in acute suppurative thyroiditis most of the cases are due to gram-positive bacterial infections in De Quervain's thyroiditis, also known as subacute thyroiditis or Granulomatous thyroiditis, viral infections such as Adenovirus, Coxsackievirus, Influenza virus, Epstein Barr virus, Mumps, Echovirus and Enterovirus have been implicated. Tomer and Davies reviewed a group of studies which showed that both thyroiditis and autoantibodies to thyroid antigens could be induced by viral infections in mice, rats and chicken.[2] It may have an acute or a subacute presentation being more common in middle aged women and is preceded by a viral prodorome of myalgias, fever, lassitude, sore throat and dysphagia, after which the patient develops a painful tender gland. It is a self limiting disorder and 35% patients may be asymptomatic. The ESR, T3 and T4 levels are raised initially and I^{131} uptake shows subnormal values. Absence of thyroid antibodies differentiates this condition from autoimmune thyroiditis. Recovery is invariably complete and response to prednisolone is so dramatic that it is almost diagnostic. Occasionally, thyroid hormones are used to rest the gland and may be required in prolonged cases. A few patients become hypothyroid and once the inflammation subsides, they need to stay on hormonal therapy like thyroxine indefinitely.

Recurrence is uncommon. The presence of pyriform fistula must be considered in child-

-ren with recurrent acute suppurative thyroiditis. Barium swallow two months after the acute phase can identify the tract in 36 out of 38 cases described by Szabo and Allen.[3]

Silent thyroiditis, the other form of subacute thyroiditis was recognized only since 1970. It resembles in part Hashimoto's thyroiditis and in part De Quervain's thyroiditis. Values of T3 and T4 are raised but radioactive iodine uptake is low (like De Quervain's thyroiditis), there is no pain and FNAC resembles Hashimoto's thyroiditis.

A high index of clinical suspicion in cases of odynophagia and even with those presenting as referred pain to the face, angles of jaw and ears would give an early diagnosis and prevent the symptoms for weeks before the correct diagnosis is suspected.[4]

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