De Quervain's Thyroiditis

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Introduction

Thyroiditis is an inflammation (not necessarily an infection) of the thyroid gland. Inflammatory diseases, are the most common thyroid disorders encountered in clinical practice. Some of these present to the otolaryngologists, as painful deglutition or odynophagia, which can be a very distressing symptom. They may also present as neck pain, sore throat, neck mass or even dyspnoea.

Singer classified inflammatory diseases of the thyroid 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 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 steroids in this condition is so dramatic as to be almost diagnostic. Such a case who went from pillar to post for more than 3 weeks, before a diagnosis was made is being reported, to increase awareness of this not so common disorder among clinicians [2].

Case Report

A 40 year old wife of a serving Junior Commissioned Officer (JCO), hailing from Bihar, reported with complaints of pain throat on swallowing since the last 24 days. On direct questioning she gave history of low grade fever. She had been on antibiotics 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. 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.

A provisional diagnosis of De Quervain's thyroiditis was made and FNAC and T3, T4, TSH were asked for. 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 (Fig 1 & 2). The native follicular cells were seen scattered

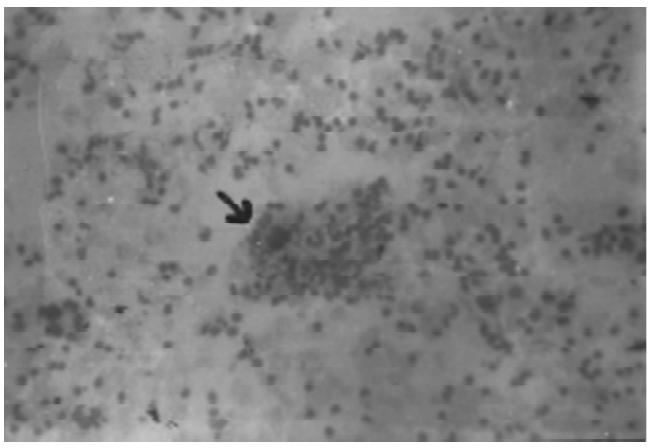

Fig. 1 : Lower power (x10) showing dense lymphocytic infiltrate , a giant cell in epitheloid granuloma (arrow head) with necrotic debris and a thyroid follicle (arrow)

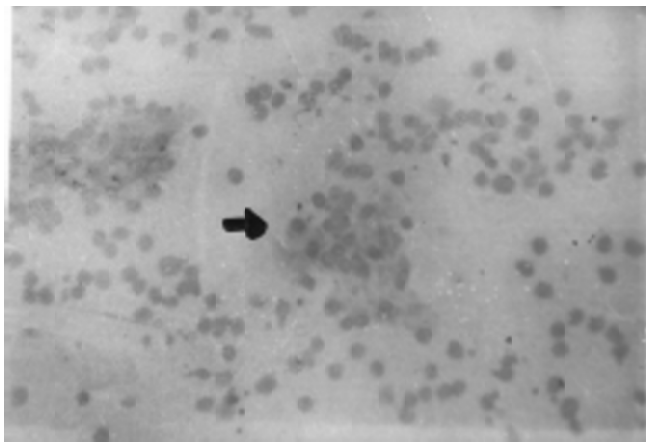

Fig. 2 : High power (x40) showing Hurthle cell changes with lymphocytes (arrow) in the FNAC.

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and in small groups with bare nuclei. The background was dirty with a granular necrotic material. The features were consistent with De Quervain's thyroiditis. The T3 and T4 values were elevated being 4 ng/ml and 17.0 mcg/dl respectively and TSH-0.5uu/ml. ESR was 34 mm/1 hr and TLC 8500/cumm.

The patient was put on tab 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. Ultrasonography showed thickened isthmus with heterogenous echotexture. RAIU showed subnormal values. Thyroid scan showed poor and patchy tracer distribution. Repeat T3, T4, TSH after a month showed normal values but the patient complained of palpitations and was advised Tab proparnalol 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 [3]. 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, 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 [2]. 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 indefinitely. Recurrence is uncommon. The presence of pyriform fistula must be considered in children 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 [4].

Silent thyroiditis, the other form of subacute thyroiditis was recognized only in 1970. It resembles in part Hashimoto's thyroiditis and in part De Quervain's thyroiditis. Values of T3, 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 to smoulder for weeks before the correct diagnosis is suspected [5].

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"The doctor said he would have me on my feet in two weeks."

"And did he?"

"Yes, I had to sell the car to pay the bill."