Clinical records

De Quervain's subacute thyroiditis

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Introduction

De Quervain's subacute thyroiditis is a rare but distinct clinical entity. It was first described by de Quervain in 1904 and later more fully by de Quervain and Giordenengo in 1936. The terms acute non-suppurative thyroiditis, giant cell thyroiditis, struma granulomatosa, and granulomatous thyroiditis are synonymous. It is probably due to a virus affection of a normal thyroid gland, and it has been suggested that the responsible agent may be a mumps virus. (Eylan *et al.*, 1957; and Felix-Davies, 1958).

The purpose of this paper is to discuss the condition and present three case reports.

Case reports

Case 1

A 60-year-old female complained of a severe sore throat, difficulty in swallowing and feeling unwell for four days prior to admission to hospital. Her neck had become swollen and painful; she was extremely ill, with a pyrexia of 38·5 °C. and was distinctly irrational. There was a diffuse swelling of the neck and marked tenderness over the whole thyroid gland. The pharynx and larynx appeared quite normal. There was a lymphocytosis of 13,000 and the E.S.R. was 35 mms. The blood was not examined for thyroid antibodies. A diagnosis of de Quervain's subacute thyroiditis was made. She was treated with penicillin and hydrocortisone and five days after admission the pyrexia and inflammation of the neck had subsided, though she remained tender over the thyroid gland. At this stage she was becoming noticeably tired, unsteady and tending to feel the cold. The serum thyroxine iodine was 3·7 μgs. per 100 ml. and the free thyroxine index −2·8. Subsequent treatment included thyroid replacement (Eltroxin), and when seen two months later she was fit and well, and there were no apparent residual signs of thyroiditis or hypothyroidism.

Case 2

A 36-year-old female had a mild upper respiratory tract infection ten days preceding swelling of the neck with complete dysphagia for liquids. Examination of the mouth, floor of mouth, oropharynx and larynx was normal, though pooling of saliva was seen in the hypopharynx. There was a brawny red swelling of the lower neck with considerable tenderness over the thyroid gland. A spreading cellulitis over the sternum obliterated the sternal notch. She appeared

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acutely ill with a pyrexia of 39·0 °C. The white cell count was 11,000, the E.S.R. 118 mms., and there was a negative titre of thyroid antibodies. Biochemical investigations also showed that she was mildly hypothyroid. The serum thyroxine iodine was 3·8 μgs. and the free thyroxine index 4. A diagnosis of de Quervain's subacute thyroiditis was made and she was given hydrocortisone and tetracycline for five days. Within twenty-four hours of admission, the neck swelling was beginning to subside and she was able to swallow much more easily. It was now apparent that there was a slight general enlargement of the thyroid gland. This enlargement and the accompanying tenderness persisted for some days but since discharge from hospital her progress has been uneventful.

Case 3

A 62-year-old female patient presented with acute dysphagia and pain in the throat. She had been perfectly fit and well and gave no previous history of thyroid disease.

The pain was the predominant symptom which preceded the dysphagia by twenty-four hours.

Examination revealed a tender, swollen thyroid gland. There was some pooling of saliva in the hypopharynx but no organic lesion was visible.

Investigations included a cine barium swallow which was normal, including a normal swallowing mechanism. The white cell count was 8,100 and the E.S.R. 40 mms. The serum thyroxine was 8·5 μgs. and there was a negative titre of thyroid antibodies. A diagnosis of de Quervain's subacute thyroiditis was made and she was treated with Prednisolone and Tetracycline for ten days.

She progressively improved and when seen two months later was symptom free. The E.S.R. was 6 mms. and the serum thyroxine 5·5 μgs.

Clinical features

De Quervain's subacute thyroiditis tends to affect females rather than males, and usually in the fourth and fifth decades. They present with a history of a cold or upper respiratory tract infection. The onset may be very acute but is often mild. The patient may complain of a sore throat, malaise, a painful swallow and dysphagia. Referred pain to one or both ears may be present. The thyroid gland is firm and diffusely enlarged, though one lobe only may be affected. Tenderness of the gland is probably the most important diagnostic sign. In the most severe form there may be a spreading cellulitis extending downwards over the sternum and upwards to the jaw. In the pre-antibiotic era the condition was often fatal due to a complicating suppurative lesion in the gland and mediastinitis. In mild cases a 'pain in the neck' may be the only symptom. One of the main features of the condition is its well-defined course (Crile, 1952), which ends in complete disappearance of the thyroid swelling and remission of all symptoms.

Discussion

Diagnosing de Quervain's subacute thyroiditis can often be difficult and the condition it is most likely to be confused with is acute suppurative thyroiditis. This is a much more severe disease which tends to persist and often leads to abscess formation in the thyroid gland and neck. It may complicate acute

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laryngitis and pharyngitis but occasionally it may be secondary to an underlying carcinoma of the larynx and pharynx. Haemorrhage into a cyst also has an acute onset with similar signs, but the presence of a palpable nodule in the thyroid gland would be diagnostic.

In de Quervain's subacute thyroiditis the laboratory findings are usually a moderate leucocytosis, a very high E.S.R., and a low or absent titre of thyroid antibodies. The incidence of this disease seems to be variable. It is said to be very rare in this country but fairly common in parts of the United States and Canada. It is a disease which often escapes recognition and it is probable that many cases are either misdiagnosed or undetected, and the true incidence is indeed higher. In mild cases, patients are treated for simple pharyngitis or sore throat or even a pain in the neck, whilst the thyroiditis runs its course. Doniach *et al.* (1960) saw only four cases in three years at the Middlesex Hospital, and Meachim and Young (1963) reported two patients diagnosed retrospectively out of a total of 1,282 cases of primary thyroid disease in Sheffield. McWhinney (1964) described ten cases of de Quervain's subacute thyroiditis in one Stratford-on-Avon General Practice of nearly 8,000 patients during a nine-year period. Vanderlinde and Milne (1960) see between two and six patients each year in their hospital practice in the United States.

De Quervain's subacute thyroiditis must be considered as a cause in the differential diagnosis of acute dysphagia and in E.N.T. practice the condition may be encountered more frequently than is realized.

During the course of the disease, transient hyperthyroidism often occurs with a high serum thyroxine and increased iodine uptake. Hyperthyroidism may develop later in the disease but it rarely persists. Hypothyroidism occurring so early in de Quervain's subacute thyroiditis as in the two cases described is unusual, but is possibly the result either of a complete absence of thyroid hormone due to extensive destruction of the gland, or more likely to mild hypothyroidism which was already present. The patients described in this paper improved very rapidly within a few days of commencing treatment. This also is unusual as most symptoms tend to persist for weeks and even months. A wide variety of treatments including antibiotics, steroids, salicylates and radiotherapy have all been tried with varying degrees of success and it is clear that treatment must be empirical. Steroids are probably the most effective treatment; they do not cure the disease but do suppress the symptoms until the illness has run its course.

Summary

Three female patients with de Quervain's subacute thyroiditis are presented and the clinical features described. Differential diagnosis is between, in the severe form, acute suppurative thyroiditis and haemorrhage into a cyst, and in the mild cases, simple pharyngitis and a pain in the neck. The most important diagnostic clue is thyroid tenderness. The incidence of the disease in this country is very low but is probably more common than is generally supposed, and patients who present with acute dysphagia may be suffering from this condition.

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