

A man with thyrotoxicosis, lymphoma and thymic hyperplasia

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(Index words: Investigations, management)

Summary

We report a case of non-Hodgkin's lymphoma of Burkitt's type with thyrotoxicosis and thymic hyperplasia in a 27-year old man. As far as we are aware this is the first reported case of Burkitt's lymphoma, thymic hyperplasia and thyrotoxicosis occurring in the same patient.

Introduction

Non-Hodgkin's lymphoma is a solid tumor of lymphatic tissue. Rarely, it can be associated with thymic hyperplasia. Thyrotoxicosis is also a recognised association of lymphomas and it is usually due to a lymphoma arising from the thyroid itself. Thyrotoxicosis also can give rise to thymic hyperplasia.

Case report

A 27-year old man presented with shortness of breath on mild exertion of one month's duration. He also complained of a non-productive cough and dysphagia. The dysphagia was mainly for solids and not for fluids. He had noticed increased sweating, palpitations and loss of weight of two weeks' duration. He had no past history of any significant illness. There was no family history of thyroid illness. He was not on any medication.

On examination he was anxious, had exophthalmos, lid lag, lid retraction and fine tremor of his hands. There was cervical and supraclavicular lymphadenopathy, prominent veins over the chest, and Pemberton's sign was positive. There was no goitre. His pulse rate was 110/min regular and bounding. The blood pressure was 100/50 mmHg. The jugular venous pulse was not elevated. The cardiac apex was in the sixth intercostal space in the anterior axillary line. There was an ejection systolic murmur at the left

sternal edge. The trachea was central and the percussion note was impaired over the upper chest. The breath sounds were normal bilaterally and there were no added sounds. Abdominal and nervous system examination was unremarkable.

Investigation gave the following results: TSH 0.01 mIU/ml (normal range 0.47-5.01 mIU/ml); T4 3.16 ng/dl (normal range 0.71-1.85 ng/dl); T3 16.75 pg/ml (normal range 1.68-3.45 pg/dl); chest xray showed a superior mediastinal mass (Figure 1); thyroid scan was compatible with Graves' disease; 2-D echocardiogram showed an ejection fraction of 51% with normal valves and heart size; full blood count gave a haemoglobin of 12.7 g/dl, white cell count $5.6 \times 10^9/l$ with a normal differential count and a platelet count $204 \times 10^9/l$; blood picture showed normocytic normochromic red blood cells and both white blood cells and platelets were of normal morphology; and a CT scan of the thorax confirmed the presence of an anterior mediastinal mass probably of thymic origin.

A fine needle aspiration biopsy of the left supraclavicular lymph node showed a monotonous population of mitotically active lymphocytic cells with pyknotic nuclei, compatible with non-Hodgkin's lymphoma. An excision biopsy of the lymph node confirmed a diagnosis of non-Hodgkin's lymphoma possibly of Burkitt's type.

The patient was started on carbimazole 30 mg/day and propranolol 40 mg 8-hourly. After 6 weeks the thyroid function tests had returned to normal. The patient was then transferred to an oncology unit where he was treated with an etoposide-based regimen. After 6 cycles of chemotherapy the dysphagia and dyspnoea had improved. A repeat chest xray showed significant regression of the thymic mass. The patient is currently asymptomatic and no longer on antithyroid drugs.

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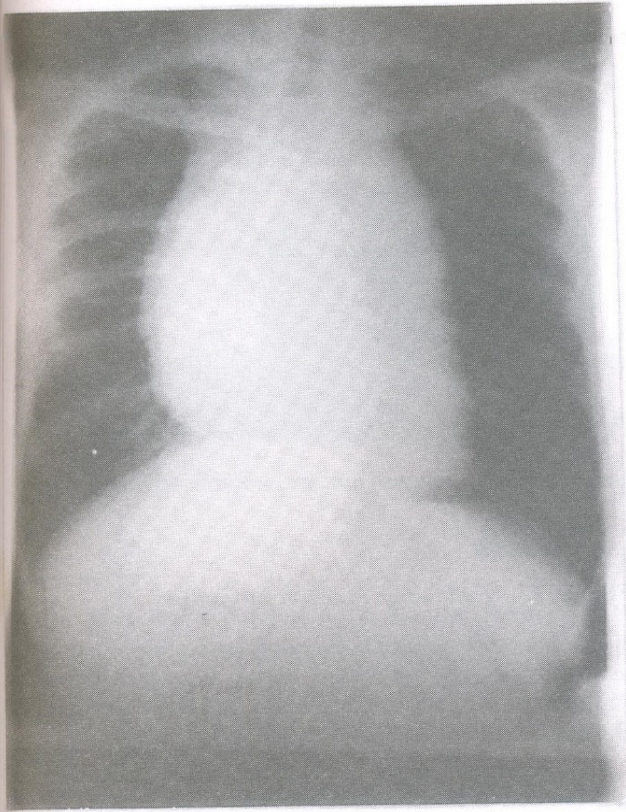


Figure 1.

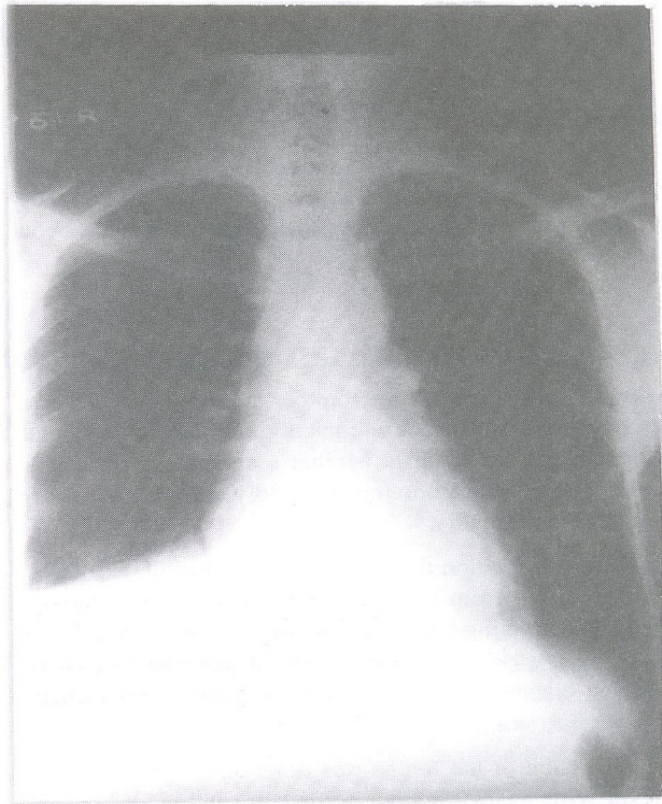


Figure 2.

Figures 1 and 2 show chest xray appearances before and after treatment for non-Hodgkin's lymphoma.

Discussion

After investigation we were able to come to a diagnosis of non-Hodgkin's lymphoma and thymic hyperplasia with thyrotoxicosis. Lymphoma and thyrotoxicosis are rare associations. However, most of the reported cases of lymphoma giving rise to thyrotoxicosis arise from the thyroid gland itself (1). We were unable to perform thyroid antibody tests, as these are not available in the government sector. The mediastinal mass that turned out to be thymic hyperplasia was probably due to the lymphoma, although both lymphoma and Graves' disease can lead to thymic hyperplasia (2,3,4,5). With radiotherapy and chemotherapy the thymic hyperplasia resolved almost completely. As far as we know, this is the first reported case of non-Hodgkin's lymphoma, thyrotoxicosis and thymic hyperplasia occurring in the same patient.

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