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Kikuchi-Fujimoto's syndrome masquerading as tuberculosis

SAMUEL M. JAYARAJ, F.R.C.S.*, JOSEPHINE LLOYD, M.A., M.B.B.S.†, ADAM C. FROSH, F.R.C.S.*, KALPESH S. PATEL, F.R.C.S.*

Abstract
We report a case of a 27-year-old Asian man presenting with the typical features of tuberculous cervical lymphadenitis who was commenced on anti-tuberculous therapy on the strength of the clinical presentation. Histological examination of an excised cervical lymph node however, revealed the diagnosis of Kikuchi's syndrome; a histiocytic necrotizing lymphadenitis which is usually self-limiting.

Key words: Tuberculosis, lymph node; Neck; Lymphadenitis

Case report

A 27-year-old Asian man presented with a four-week history of malaise, night sweats, fevers, anorexia, weight loss and a lump in the right side of his neck. He had recently travelled to India and had contact with his brother who had tuberculosis. He was unsure as to whether he had ever received the Bacillus Calmette-Guerin vaccination. He was taking sulphasalazine for ankylosing spondylitis and paracetamol for his symptoms. On examination his temperature was 37.4°C and he looked unwell. Cervical lymph nodes were palpable on the right side. Endoscopic examination of the larynx and pharynx was normal as was examination of the cardio-respiratory, abdominal and central nervous systems.

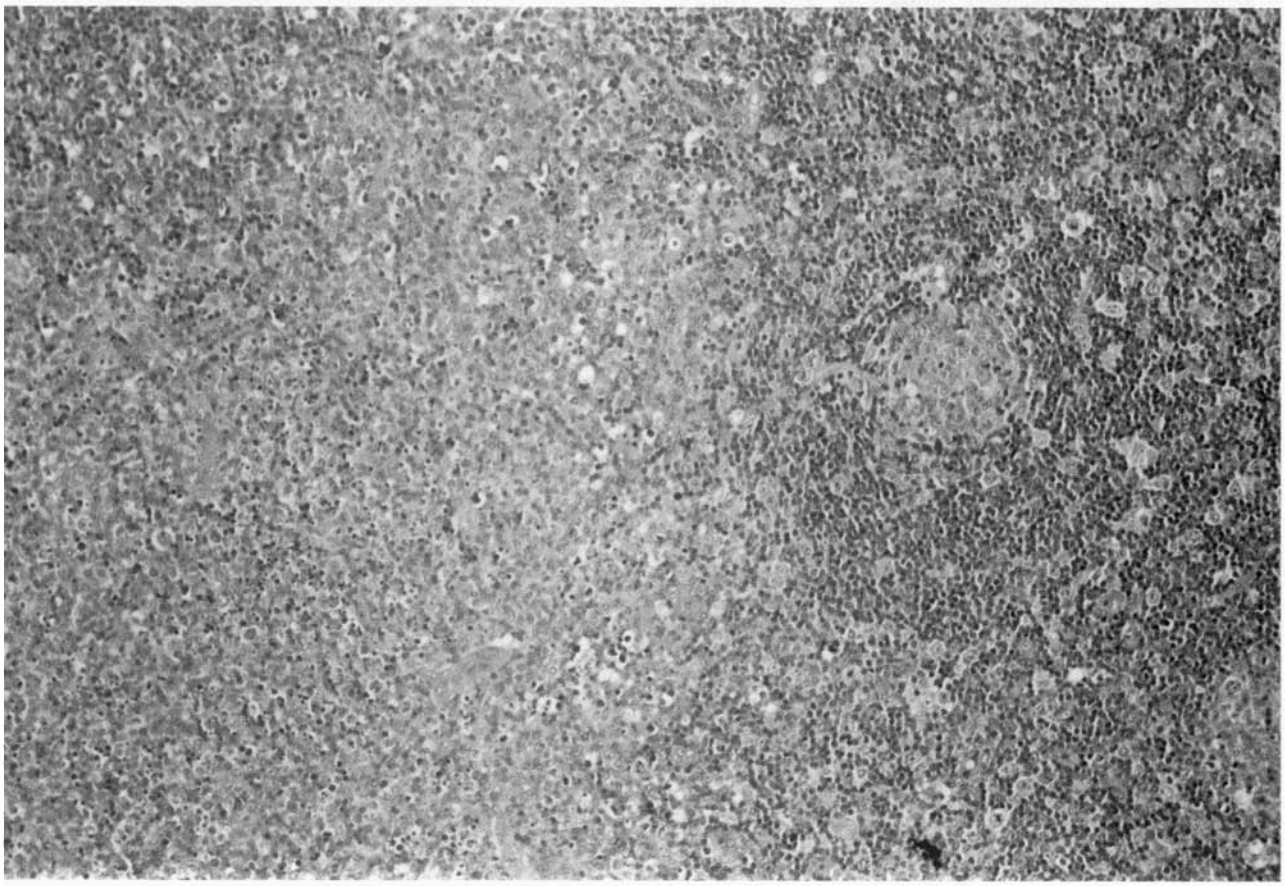

FIG. 1
Photograph of part of lymph node showing B cell follicle with reactive germinal centre adjacent to area of necrosis (H & E; × 200)

From the Departments of Otolaryngology–Head and Neck Surgery*, and Histopathology†, St. Mary's Hospital, London, UK.
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A full blood count, differential, and serum electrolytes and creatinine were within the normal range. A chest radiograph was also normal. The ESR was 20 mm/hr. Blood cultures were negative. Fine needle aspiration was performed but the cytological assessment was inconclusive and therefore, a cervical lymph node biopsy was performed under local anaesthesia. Tissue was sent for histological and microbiological examination.

On the basis of the history and clinical examination the diagnosis of glandular tuberculosis was made and the patient was therefore commenced on anti-tuberculous therapy and was discharged on this treatment while awaiting the biopsy results.

Histology

Microscopic examination of the excised node showed follicular hyperplasia with irregular areas of necrosis (Figures 1 and 2). Abundant cellular and nuclear debris was present within the necrotic areas which, however, lacked a neutrophilic infiltrate. Granulomas were not seen. The paracortical areas contained large collections of histiocytes, T-immunoblasts and plasmacytoid monocytes. The features described are those of Kikuchi's lymphadenitis. In the light of this report the patient was commenced on oral steroid therapy and the anti-tuberculous medication was stopped. The fever and lymphadenopathy subsequently resolved and the steroids were gradually withdrawn.

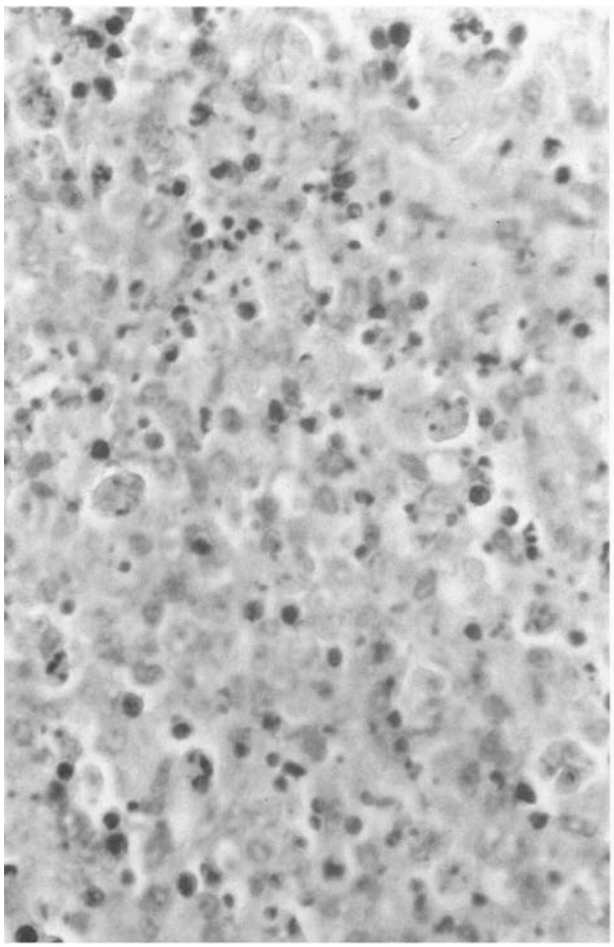

FIG. 2

Photograph of high power view of area of necrosis showing apoptotic debris. Neutrophils, plasma cells and granulomata are not seen. (H & E; × 400.)

Discussion

Fever and cervical lymphadenopathy of an acute onset includes a wide differential diagnosis which can be narrowed into three main categories: infective, autoimmune and malignant.

Kikuchi's disease is a rare disease that was first described in Japan almost simultaneously by Kikuchi and Fujimoto (Kikuchi *et al.*, 1977). It occurs most commonly in young women, being four times more frequent in females than males. The aetiology of the disease is unknown (although a viral cause has been suggested) but it is characterized by cervical lymphadenopathy with tenderness, night sweats and fever.

Fifty per cent of patients have leukopaenia, while less than five per cent have leukocytosis and 25 per cent have an atypical lymphocytosis. Elevation of the erythrocyte sedimentation rate has been reported (Case records of the Massachusetts General Hospital, 1997). Since many diseases can present with similar symptoms and signs to those described in the case report above, histopathological and microbiological assessment (following excisional biopsy) are essential aids to make the diagnosis.

The histological differential diagnoses in a case of Kikuchi's lymphadenitis include tuberculous lymphadenitis, lupus lymphadenitis, high grade non-Hodgkin's lymphoma, other reactive lymphadenitidies and metastatic malignancy (Stansfield and d'Ardenne, 1992).

In non-reactive tuberculosis the disease presents acutely as a febrile illness with weight loss and occurs either with generalized miliary dissemination or with loss/absence of natural defences against *M. tuberculosis*. In such a case the areas of tissue necrosis/nuclear debris within the node would contain vast numbers of acid-fast bacilli, easily identified by the Ziehl-Neelsen method. In this case report the ZN stain was negative. The main distinguishing feature in lupus lymphadenitis is the haematoxylin body – a homogeneous, structureless mass which stains violet with haematoxylin. In addition, plasma cell numbers are often increased and neutrophils may be present. However, these features are not always present and distinction may be impossible on histological grounds. In this situation measurement of serum ANA and antibodies to dsDNA would be useful.

The presence of numerous T-immunoblasts on the periphery of areas of necrosis may suggest a high grade lymphoma, but as seen in this case, the presence of a polymorphous infiltrate of histiocytes and monocytes would mitigate against this diagnosis. Similarly large vacuolated histiocytes surrounding necrotic debris may be suspicious of metastatic carcinoma. Immunohistochemical staining for cytokeratins (positive staining of carcinoma cells) would help to exclude this.

Bacterial, protozoal, viral and fungal infections can all cause a necrotizing lymphadenitis but neutrophil infiltration is generally a prominent feature, unlike in Kikuchi's disease.

Conclusion

Kikuchi's disease is a rare but benign and self-limiting disease. It is important to consider in the differential diagnosis of patients with cervical lymphadenopathy and fever of acute onset especially as its course and treatment differ greatly from other causes.

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Address for correspondence:
Samuel M. Jayaraj,
Department of Otolaryngology–Head and Neck Surgery,
St Mary's Hospital,
Praed Street,
London W2 1NY.

Fax: 0171-886-1847