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Ankylosing Spondylitis with Waldenstrom's Macroglobulinaemia in the Absence of Previous Irradiation: A Case Report

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We describe a case of ankylosing spondylitis (AS) in a 48 year old man who subsequently developed Waldenstrom's macroglobulinaemia (WM). This is the first reported case of this association in the absence of previous irradiation.

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The association between the development of leukaemia, lymphoproliferative disorders and plasma cell dyscrasias in patients with AS who have received radiotherapy and/or chemotherapy is well established[1-5]. However WM in the absence of previous radiotherapy is not reported. We describe a case with long standing AS where the finding of an unusually low serum IgA led to the diagnosis of WM.

THE CASE

A 48 year old man with a 26 year history of AS presented with a flare of his condition including increasing spinal pain and stiffness, intermittent fever and weight loss of 4 kg. He had been on phenylbutazone for 8 years (a dose varying between 300 to 600 mg daily) as it was the only non-steroidal anti-inflammatory drug providing symptomatic relief. On examination clinical features of AS were noted. There was no hepatosplenomegaly, lymphadenopathy or bruising. Fundoscopy was normal. Investigations revealed Hb 14 g/dl, WCC 9000/cmm, platelets 330,000/cm, ESR 9 mm/hr, CRP 0.1 g/L (NR 0-0.1), total protein 65 g/L, albumin 41 g/L. Biochemistry was normal. Serum Immunoglobulin levels were: IgA 0.30 g/L (NR 0.7-4.5), IgG 3.30 g/L (NR 7-16), IgM 10.30 g/L (NR 0.8-2.5). Immunoelectrophoresis showed a monoclonal paraprotein of IgM kappa Abdominal CT scan showed para aortic lymph nodes but no hepatosplenomegaly (Fig 1). Bone marrow aspiration and trephine biopsy revealed 46% lymphocytes with some cells having the characteristics of plasmacytoid lymphocytes and less than 1% plasma cells (Fig 2). A diagnosis of Waldenstrom's macroglobulinaemia was made based on the immunoglobulin levels; immunoelectrophoresis and bone marrow findings.

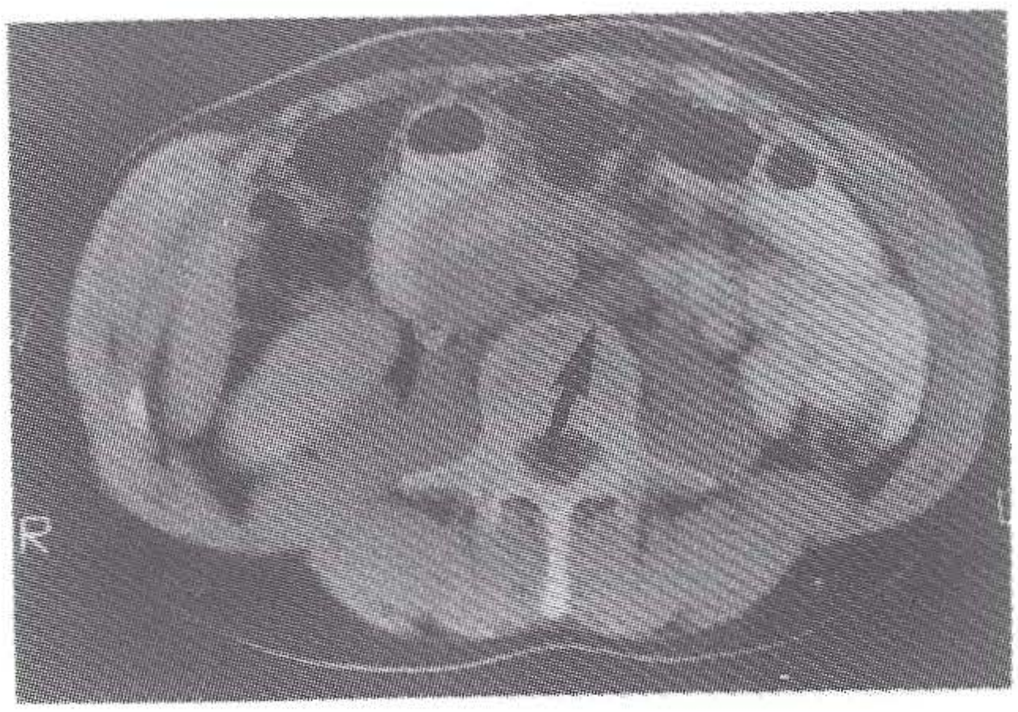

Figure 1. CT Abdomen showing para aortic lymphadenopathy (arrow).

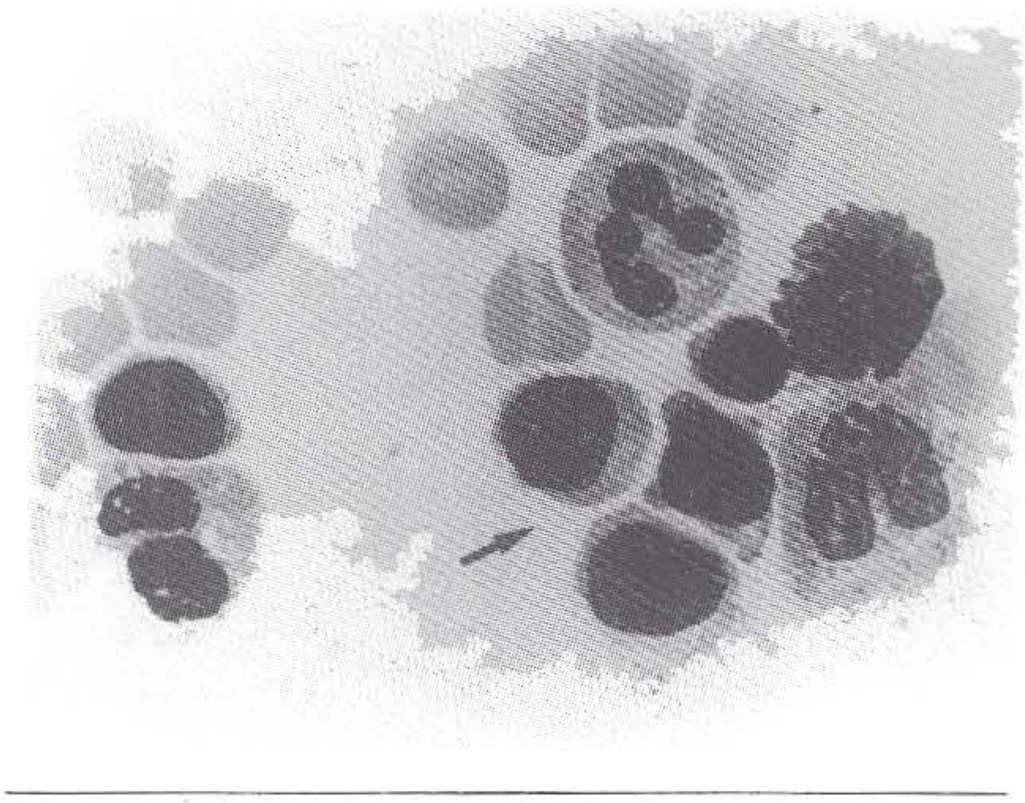

Figure 2. Bone marrow showing a group of three plasmacytoid lymphocytes (arrow). The stain used was May-Giemsa-Grunwald.

DISCUSSION

Most patients with AS have an elevated serum IgA level and there is speculation that the level correlates with disease activity[6-8]. The finding in our patient of the unusually low level of IgA led to further investigations resulting in the diagnosis of WM, a neoplasm of immature B lymphocytes[9,10]. Haemopoeitic malignancy including

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leukaemia, lymphoma and WM are well described in patients with AS who have been treated with radiotherapy[1-5]. However the particular association between AS and WM has never been reported in the absence of radiotherapy[4].

Phenylbutazone has been implicated in the pathogenesis of many haematological disorders including acute and chronic leukaemia, lymphoma, myelodysplastic syndrome[3,11-13], aplastic anaemia and pan-cytopaenia[14]. However both the duration of the treatment and the total dose of phenylbutazone has been highly variable[11,12], and recent opinion casts doubt on any real causal association between phenylbutazone and leukaemia[15,16].

Our patient had been treated with phenylbutazone for eight years, with a total dose of at least 720 grams. Whilst it is possible that phenylbutazone may have played a role in the development of WM in our patient, in view of its previous implication in the pathogenesis of other haemopoeitic disorders, this is most unlikely as this association has not been previously recognised despite 40 years of phenylbutazone usage[11]. Although we are unable to speculate on the mechanism of causation and the possibility of a chance association between these two uncommon disorders yet we cannot discount that this case may demonstrate for the first time a haematological malignancy occurring in AS in the absence of previous irradiation.

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