

LESSON OF THE MONTH

"Rheumatoid nodules" and lymphoma!

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Case history

A 63 year old woman presented with painful, stiff hands. There was swelling of the hands, ankles and feet but no systemic upset. On examination there was soft tissue thickening of the proximal interphalangeal (PIP) and metacarpal phalangeal (MCP) joints of the hands with pitting oedema of the hands, feet and lower legs. The remainder of the examination was unremarkable. The following investigations were negative or normal. Full blood count and differential, erythrocyte sedimentation rate (ESR), C reactive protein (CRP), rheumatoid factor, nuclear antibody profile, thyroid function. Serological investigation for parvovirus B19 was negative. Radiographs of the hands revealed soft tissue swelling but no erosions.

During the following six months the patient developed synovitis of PIP joints and wrists (fig1) with bilateral dorsal sheath effusions (fig 2). Multiple firm nodules were noted on both elbows and forearms measuring up to 1 cm (fig 2) and she developed symptoms and signs of carpal tunnel syndrome.

The patient now fulfilled ARA 1987 diagnostic criteria for rheumatoid arthritis¹ with



Figure 1 Soft tissue swelling of proximal interphalangeal joints.



Figure 2 Multiple nodules and dorsal sheath effusion.

early morning stiffness, swelling of PIP joints for greater than six weeks, symmetrical joint swelling, and rheumatoid nodules. There were, however, atypical features; the ESR was normal, the rheumatoid factor was negative, and there was marked peripheral oedema. Further investigations were performed. Immunoglobulins, vasculitis profile and C3, C4, C3d were normal. Brucella, hepatitis A and B, and Borrelia serology was negative. Chest radiograph and isotope bone scan were normal. Histological examination of the nodules revealed a mixed inflammatory cell infiltrate consisting of lymphocytes, mononuclear cells, and histiocytes. There was some destruction of blood vessels and collagen fibres. Central fibrinoid necrosis with macrophage palisading, characteristic of a rheumatoid nodule, were not identified.

Biopsy of peripheral oedematous skin revealed superficial and deep panniculitis with perivascular inflammation composed of lymphocytes and histiocytes. Abdominal ultrasound and computed tomography of thorax, abdomen, and pelvis were negative. A presumptive diagnosis of rheumatoid arthritis with atypical features was made and a trial of treatment was started with 7.5 mg of prednisolone and 250 mg of d-penicillamine daily. The synovitis, oedema, and panniculitis improved but the nodules persisted. Over the next two years, at close review, the patient remained stable with treatment.

Two years after the initial presentation the patient developed night sweats. Clinical examination at that time revealed two enlarged lymph nodes in the right inguinal region. Excision biopsy and histopathological examination showed anaplastic high grade lymphoma with B cell markers. Combination chemotherapy was started. Despite therapy the disease progressed and the patient died one year later.

Discussion

This case is of particular interest because, although both panniculitis and polyarthritis have been reported as paraneoplastic syndromes predating haematolymphatic malignancy,^{2,3} this is the first reported case in which a clinical rheumatoid-like nodulosis has occurred before the onset of B cell lymphoma. Although the possibility exists that the rheumatological syndrome and lymphoma were unrelated, we suggest that this nodulosis represents

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a hitherto unreported paraneoplastic syndrome occurring before the onset of B cell lymphoma.

The panniculitis in this case is typical of a paraneoplastic syndrome in that the patient was a woman in her 60s with swelling of the skin of upper and lower extremities. Previous reports, however, were of T cell⁴ rather than B cell lymphoma occurring with panniculitis and the good response to corticosteroids is unusual for a paraneoplastic syndrome. Seronegative polyarthritis has been reported as a rheumatological manifestation of B and T cell lymphomas^{2 5 6} and arthritis indistinguishable from seronegative rheumatoid arthritis has been described in association with cutaneous T cell lymphoma.² The RS₃PE syndrome (remitting seronegative symmetrical synovitis with pitting oedema)⁷ has been reported in association with non-Hodgkin's lymphoma⁸ and other malignant tumours.⁹ Although there are features to support this diagnosis in this patient—that is, symmetrical seronegative synovitis with pitting oedema, remitting with a modest dose of corticosteroid; the normal inflammatory indices, nodulosis and panniculitis are not typical.

This case illustrates that not all patients who fulfill ARA criteria for classification have rheumatoid arthritis.¹⁰ The atypical features and non-specific nodule histology prompted us to investigate extensively and keep the patient under close review. It was two years later that the underlying malignant disease was clinically manifest.

The lesson

- Lymphomas can present with rheumatoid-like nodulosis and synovitis.
- Patients who fulfill ARA criteria do not always have rheumatoid arthritis.
- Patients with rheumatoid arthritis and atypical features should have further investigation including nodule biopsy.

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