Eosinophilia, Arthritis, and Soft Tissue Swellings

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A 64-year-old man presented with a 3 month history of symmetrical inflammatory synovitis involving metacarpophalangeal joints and wrists, bilateral carpal tunnel syndrome, bilateral extensor tenosynovitis at the wrists, and a 3 year history of gradually enlarging large soft tissue swellings in his upper arms, groin, and thighs (Figure 1). White blood cell count was 23.6 × 10^9/l (39% eosinophilis). He denied symptoms affecting the respiratory or gastrointestinal systems. An excision biopsy of the soft tissue swelling around the left thigh was performed. This revealed expansion of fibrous septa by histiocytic cells with a heavy infiltrate of lymphoid cells and eosinophils. Blood vessels were prominent and inflammatory cells were predominantly in a perivascular distribution (Figure 2). A bone marrow aspirate and trephine showed the presence of eosinophils (37%), with no myelodysplastic change.

He was treated with prednisolone 15 mg daily and methotrexate 15 mg weekly, which resulted in good control of the synovitis. However, the large soft tissue swellings persist, and eosinophil count remains elevated (9.4 × 10^9/l).

The spectrum of diseases involving arthritis with a peripheral blood eosinophilia includes rheumatoid arthritis, vasculi-

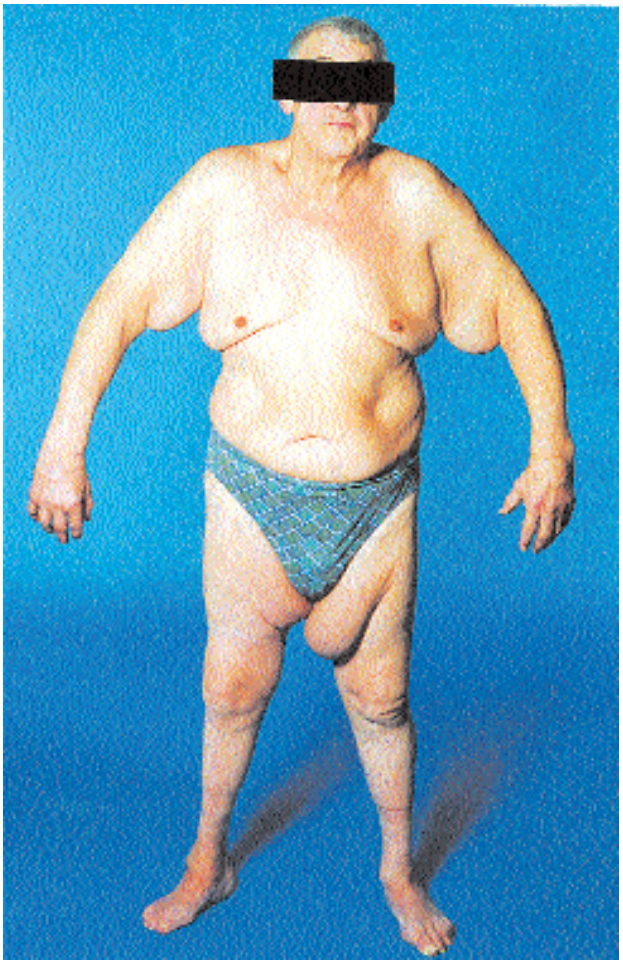

Figure 1. Bilateral upper arm and left thigh soft tissue swelling at presentation, before medical or surgical treatment.

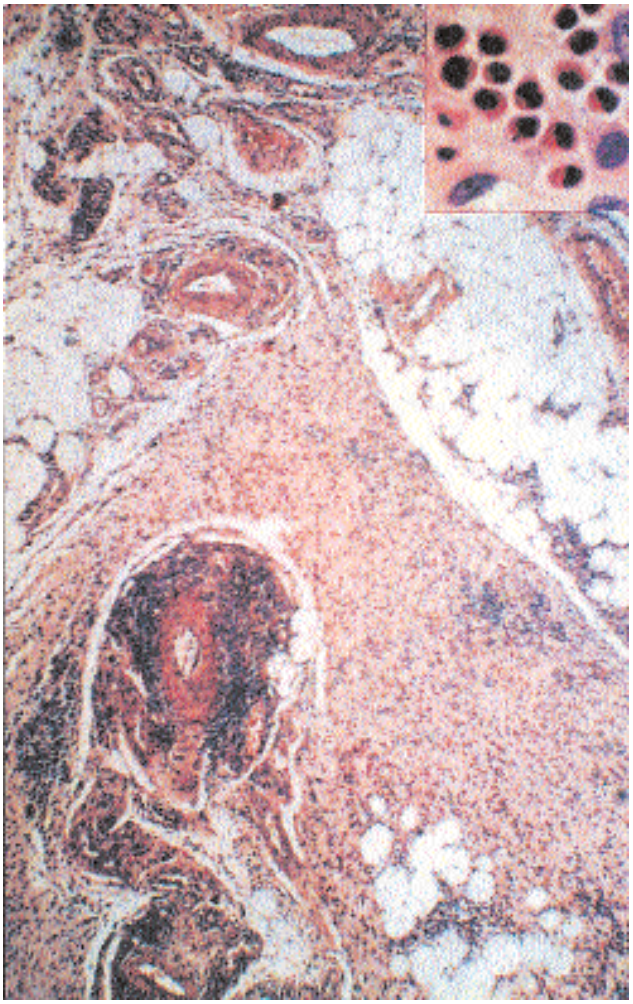

Figure 2. Biopsy of swelling, medial left thigh, showing adipose tissue containing irregular broadened fibrous septa, and abundant lymphoid cells and eosinophils concentrated around small blood vessels and capillaries (original magnification ×40). Inset shows bi-lobed nuclei of eosinophils (original magnification ×400).

tis, parasitic infections, hematological malignancy, atopy, and drugs. Skin manifestations are also seen in eosinophilic fasciitis[1], NERDS syndrome (nodules, eosinophilia, rheumatism, dermatitis, swelling)[2], and idiopathic eosinophilic arthritis[3]. However, the clinical signs, laboratory indications, and histological appearances of the skin and bone marrow do not conform closely with any of these clinical syndromes, and we suggest that this increases the already protean manifestations of eosinophilia-arthritis syndromes.

REFERENCES

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