CASE REPORT

Neurological complications of sarcoidosis

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SUMMARY. A patient with acute neurological complications of sarcoidosis is described.

Introduction

WITH an incidence of only 4 per cent, neurological complications of sarcoidosis are uncommon (James *et al.*, 1976), and involvement of the spinal cord has been described in only 17 cases (Delany, 1977). We present a patient with an unusual neurological picture.

Case report

A 34-year-old, previously fit man presented to his general practitioner on 29.12.80 complaining of stiffness of the ankles and knees. Six days later he developed painful red nodules over the thighs. His joints improved on indomethacin, but the left shoulder and ankle were later affected. He attended the out-patient clinic on 16.1.81, by which time he had widespread tender red nodules on both thighs and shins, typical of erythema nodosum (Figure 1). He had bilateral knee effusions and soft tissue swelling in the left ankle. A chest x-ray showed bilateral hilar lymphadenopathy, and, on the basis of this, together with the lower limb arthropathy and the erythema nodosum, a diagnosis of sarcoidosis was made. Aspirin and rest were prescribed.

Ten days later his general practitioner was called to his home. He then gave a history of weakness of the legs for seven days, severe enough to cause him to fall on attempting to get out of bed. He had also had occasional difficulty in initiating micturition. He was found to have marked weakness of the legs, brisk reflexes, ankle clonus and extensor plantars. He was pyrexial. Despite the absence of sensory symptoms, a myelogram was performed to exclude cord pressure by granulation tissue. This was normal.

His clinical state remained static in hospital while the following results were obtained: Hb 11.0 g/dl; WBC 10.6 × 10^9/l; ESR 124 mm/1st hour; ALT 89 U/l; alkaline phosphatase 338 U/l; Ca 2.40 mmol/l; gamma/GT 160 U/l; glandular fever slide test negative; Mantoux 1.1000 negative; VDRL and TPHA negative; RA latex negative; auto-antibody screen negative; CSF—protein 0.32 g/l, red cells 3200 × 10^6/l, WBC 5 × 10^6/l.

A liver biopsy (Figure 2) showed a single granuloma in the hepatic parenchyma comprising histocytes and lymphocytes, the former having a slightly epithelioid appearance. No necrosis was present in the granuloma and stains for mycobacteria were negative.

Four days after admission his temperature settled, the erythema nodosum and the knee effusions resolved and there began a dramatic improvement in the muscle power, sufficient for him to be able to walk with a stick and be discharged after four more days. Aspirin was the only drug given.

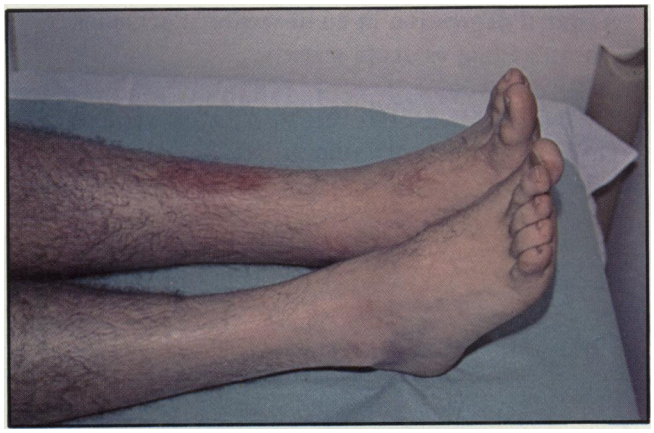

Figure 1. *Patient's legs with signs typical of erythema nodosum.*

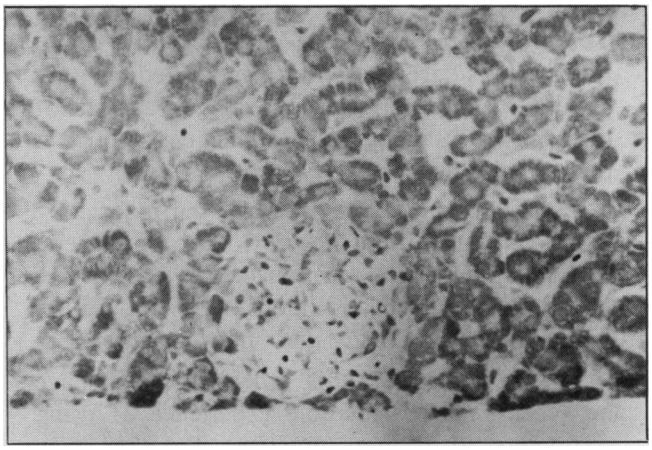

Figure 2. *Results of the liver biopsy.*

The answer to the June quiz is as follows:

What, in your opinion, was this diagnosis?

Agitated depression in an obsessional personality, masquerading as acute anxiety.

The winner of a £100 British Airways voucher is Dr J. J. R. Benn of London, NW8.

Since discharge his improvement has continued, although he still has spasticity and spasms in his legs, now controlled by baclofen. His ESR and liver enzymes have returned to normal, and on chest x-ray the hilar adenopathy has regressed. Six months later he is able to walk without sticks, drive a car and run a short distance. Muscle volume has improved and micturition is normal.

Comment

Neurological complications are uncommon in sarcoidosis but usually present as a symmetrical polyneuropathy or as cranial nerve palsies. There is usually evidence, as in this case, of systemic involvement, notably hilar lymphadenopathy and liver involvement. Most cases, however, run a chronic course, quite unlike our patient in whom the sudden onset and quick resolution of the neurological signs suggest a vascular basis, perhaps due to occlusion by perivascular granulomata or a vasculitis. The latter is a feature of erythema nodosum, and the neurological symptoms of this patient came and went with the skin nodules. However, neurological complications are not described with that condition.

In view of the unusual clinical picture, although sarcoidosis seemed the likely diagnosis, steroid therapy was not begun while the results were awaited. By the time the liver biopsy confirmed our impression, recovery was already beginning. Corticosteroid therapy is generally used for central nervous system involvement, but proved unnecesssary in this acute, transient complication.

References

Delaney, P. (1977). Neurological manifestations in sarcoidosis: review of the literature with a report of 23 cases. *Annals of International Medicine,* **87**, 336-345.

James, D. G., Neville, E., Siltzbach, L. E. *et al.* (1976). A worldwide review of sarcoidosis. *Annals of the New York Academy of Sciences,* **278**, 321-334.

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Source: Association of Medical Research Charities, press release.