Case report

Acute synovial rupture in Behçet's syndrome

P. T. DAWES, D. RAMAN, AND IAN HASLOCK

From the Department of Rheumatology, South Tees District Health Authority, Middlesbrough General Hospital, Ayresome Green Lane, Middlesbrough, Cleveland TS5 5AZ

SUMMARY A patient with Behçet's disease presented with an acute synovial rupture of the knee that was initially diagnosed as a deep venous thrombosis.

Case history

A 43-year-old housewife had a history of depression from 1968 with repeated episodes of marital upset and self-poisoning. In 1978 she developed recurrent episodes of oral and genital ulceration, scleritis, erythema nodosum, necrotic vasculitic lesions on the face, ataxia, and persistent synovitis of the knees and right ankle. A diagnosis of Behçet's syndrome was made, and she was treated with prednisolone, eventually being controlled on a dose of 10 mg a day.

In August 1981 she developed pain, swelling, and tenderness behind the left knee extending down the calf while stepping on to a bus. She was referred to hospital with a diagnosis of deep venous thrombosis. On admission she was pyrexial at 38°C. There was evidence of synovitis of the left knee, but no popliteal cyst was palpable. The left calf was warm, tender, and swollen, measuring 3 cm more than the right. Homans's sign was positive. The background activity of her Behçet's disease was under fair control with minimal oral ulceration and mild scleritis. A venogram was performed and was normal. An air arthrogram of the left knee was performed under aseptic conditions by injecting 100 ml of air through a filter via the lateral approach, and crepitus was palpated extending into the calf. The xeroradiograph (Fig. 1) revealed the characteristic streaky and lobular appearance of air in the adipose tissue of the popliteal space, with a feathery appearance outlining the muscles of the calf. A diagnosis of acute synovial rupture was made. The patient was treated by elevation of the limb, support stocking, and intra-articular injection of corticosteroid. She made a rapid recovery.

Fig. 1 Xeroradiograph of left knee showing air in the popliteal fossa tracking into the tissue planes of the calf.

Discussion

Behçet's syndrome is a multisystem disorder of which vascular complications, especially venous thrombosis, are well recognised.¹ Together with the clinical findings the original diagnosis of a deep venous thrombosis seemed logical, especially as synovial rupture has not previously been reported in this condition. However, the knee is the most commonly involved joint in Behçet's syndrome, and popliteal cysts have previously been described.² It has been suggested that rupture of the knee joint or popliteal cyst may be caused by the pressure induced in the knee by muscular contraction, and the onset of this woman's symptoms when stepping on to a bus is consistent with such an aetiology. Corticosteroids have also been implicated as a causative factor, though this is disputed.³

Differentiation between rupture of the knee joint and venous thrombosis is extremely important, as anticoagulants given to a patient with a ruptured joint may produce a large haematoma, with subsequent fibrosis and contracture of the calf muscles.⁴ Although we believe that air arthrography combined with xeroradiography is the best single technique to use under these circumstances,⁵ the addition of venography is important, especially in a disease with vas-

cular manifestations, as ruptured popliteal cysts and venous thrombosis may occur together.⁶ It is also necessary to have a definitive diagnosis of synovial rupture recorded in the patient's records, as the calf may not regain its former girth after synovial rupture despite resolution of the knee synovitis,³ and this may give rise to confusion at a later date.

The addition of synovial rupture to the protean manifestations of Behçet's syndrome is not merely a curiosity but makes it essential that all patients with this condition who present with a swollen leg are investigated by arthrography as well as venography before treatment is begun.

References

- 1 Behçet's syndrome. Ed. Lehner T, Barnes C G. London and New York: Academic Press, 1979.
- 2 Zizic T M, Stevens M D. The arthropathy of Behçet's disease. *Johns Hopkins Med J* 1975; **136**: 243-50.
- 3 Gerber N J, Dixon A St J. Synovial cysts and juxta-articular bone cysts (geodes). *Semin Arthritis Rheum* 1974; **4**: 323-48.
- 4 Tait C B W, Bach F, Dixon A St J. Acute synovial rupture. *Ann Rheum Dis* 1965; **25**: 273-7.
- 5 Raman D, Newton D R L, Haslock Ian, Moulder C. Air arthrography of the knee—a new look at an old technique. *Rev Rhum Mal Osteoartic* 1981; Numéro spécial: 1333 (abstr.)
- 6 Simpson F G, Robinson P J, Bark M, Losowsky M S. Prospective study of thrombophlebitis and pseudothrombophlebitis. *Lancet* 1980; **i**: 331-3.