BRIEF REPORTS

SPINAL TUBERCULOSIS: BEWARE THE POSTERIOR ELEMENTS

J. TRAVLOS, G. DU TOIT

Simultaneous involvement of the posterior and anterior vertebral elements in spinal tuberculosis is rare. If unrecognised, serious consequences may ensue during anterior spinal decompression.

Case report. A 28-year-old woman presented with destructive anterior vertebral lesions of T9 and T10 (Figs 1 and 2); tuberculosis was confirmed by needle biopsy. There had been no previous neurological deficit, but after the biopsy she had a right lower limb monoplegia and had lost bowel and bladder control. An emergency left-sided anterior spinal decompression was therefore performed.

Fig. 1

Fig. 2

As the necrotic material was being removed, there was progressive posterior and lateral displacement of the caudal segment of the spine, causing compression of the exposed dura. Despite her being in a neutral right lateral decubitus position on a horizontal operation table, there was considerable difficulty in maintaining spinal align-

ment and after the operation she had a complete lower limb motor paralysis. She was nursed on a Stryker frame and one week later a posterior fusion from T6 to L2 was performed; the destroyed laminae of T9 and T10 were removed and Harrington rods applied. Bowel and bladder control returned within a week and neurological recovery was complete within 10 weeks. She subsequently underwent anterior fibular strut-grafting without any complications.

Fig. 3

Fig. 4

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Discussion. Posterior vertebral involvement in tuberculosis has been appreciated for many years (Jacobs 1964) but is uncommon. The incidence has been variously reported as 0.2% (Adendorff, Boeke and Lazarus 1987) to 10% (Babhulkar, Tayade and Babhulkar 1984). Both Babhulkar et al (1984) and Naim-Ur-Rahman (1980) report cases of selective posterior element destruction,

where they suggest laminectomy as the procedure of choice, but neither mentions simultaneous anterior and posterior involvement. Adendorff et al (1987) reported two patients with circumferential spinal disease out of 703 with tuberculous spines; in one the posterior destruction was unrecognised and the patient, like ours, became paraplegic after anterior decompression.

With circumferential spinal involvement there is severe spinal instability analogous to an unstable fracture-dislocation; either anterior or posterior decompression will merely contribute to further instability. Restoration of stability is a priority, but most anterior fixation devices depend on intact posterior vertebral elements and are inappropriate. Posterior spinal instrumentation can achieve immediate stability. There is also less likelihood of intra-operative spinal displacement with the patient prone than in the lateral decubitus position.

The spine should be exposed with care, recognising the danger of dissecting on the carious laminae. A temporary unilateral stabilising Harrington distraction rod is inserted and an adequate laminectomy/debridement performed; then the spine is fused definitively. We prefer double Harrington distraction rods with sublaminar and longitudinal interspinous wiring (Figs 3 and 4).

The interspinous wire is applied before distracting the Harrington rods to prevent over-distraction and to assist spinal realignment. Pedicular fixation is avoided since it may obstruct subsequent insertion of an anterior strut-graft. If neurological recovery does not ensue within a few weeks an anterior decompression can then be performed safely in the knowledge that the spine is stable. If anterior destruction is extensive an anterior strut-graft should be inserted irrespective of whether anterior decompression is necessary.

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GIANT CELL TUMOURS OF THE PROXIMAL FIBULA

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Giant cell tumours of the proximal fibula are relatively uncommon and their reported incidence in the fibular head varies from 3% to 8% (Goldenberg, Campbell and Bonfiglio 1970; McGrath 1972; Sung et al 1982; Campanacci et al 1987). Excision of the proximal fibula is the usual treatment, but the operative technique has not been precisely described and a study specifically dealing with fibular lesions is lacking. In this report we emphasise the importance of excising the entire proximal tibiofibular joint in preference to disarticulation.

Patients, methods and results. Between 1981 and 1987 we treated seven men and two women with giant cell tumours of the proximal fibula. Their mean age was 41 years

(range 34 to 52). Seven patients were treated for the primary lesions and two for recurrent tumours. In all cases the diagnosis was confirmed histologically.

In the patients with a primary tumour, this was excised extraperiosteally with a margin of healthy tissues, including 4 to 6 cm of normal bone distal to the lesion; proximally 3 to 5 mm of the subarticular portion of the lateral tibial condyle, together with the proximal tibiofibular joint (PTFJ) was excised with a curved osteotome. The postoperative course was uneventful and there were no complications. None of these cases had any recurrence after an average follow-up of 4.2 years (range 2 to 7).

Of the two patients treated for recurrence, one had had the tibiofibular joint disarticulated but developed a soft tissue recurrence two years after the operation. For this, a radical excision was performed; a segment of the peroneal nerve had to be sacrificed. Four years later she was clinically and radiographically free of recurrence, and had satisfactory function with a foot-drop splint.

The other patient with a recurrence also had a disarticulation of the proximal tibiofibular joint; he developed a soft tissue recurrence with extension into the

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