A foreign body in the spinal canal

A CASE REPORT

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An 18-year-old man who presented with weakness in his lower limbs, had an upper motor neurone lesion at the D12-L1 level. At laminectomy two stone-like objects were found which proved to be bundles of tiny pieces of wood. They are thought to have entered the cord through an abdominal penetrating injury sustained six years previously.

We describe a patient with a foreign body resembling a 'stone' in the spinal cord. Details of the probable aetiology and pathogenesis are given.

Case report

An 18-year-old man presented with difficulty in walking due to weakness of his lower limbs which had been present for six months and had become progressively worse. He had had difficulty in passing urine for 15 days. There was no pyrexia or constitutional symptoms. On examination he had an upper motor neurone lesion corresponding to the level of D11.

Six years previously he had fallen from a tree in a field and landed on sharp shoots which were remnants of the cut stems of sugar cane. He sustained a penetrating injury of the abdomen. An exploratory laparotomy had been carried out. He had an associated compression fracture in the dorsolumbar region. He recovered in six weeks and was well for six years.

Examination revealed a kyphotic deformity of the dorsolumbar spine. He had upper motor neurone paraparesis with grade-3 power at the hip, knee and ankles and grade-2 power of extensor hallucis longus and flexor hallucis longus. He had hypoesthesia in the L2, L3 and L4 dermatomes and loss of proprioception.

Routine haematological investigations were normal. The Mantoux test was negative. Plain radiographs showed wedging at the level of D11 and L2 with posterior scalloping and a widened interpedicular distance at these levels. MRI and CT were not done.

Myelography revealed total obstruction at L1 with widening of the dye column, consistent with an intradural lesion (Fig. 1). Examination of the CSF showed xanthochromia. In view of the clinical and myelographic diagnosis of obstruction at L1, the patient had a spinal decompression and a laminectomy from D11 to L2. The ligamentum flavum was hypertrophied. It was dirty yellow in colour with a firm fusiform swelling. The dura was adherent from D11 to L1. An incision was made in the thickened dura but there was no leakage of CSF. There was a solid mass of tissue and, with difficulty, a plane of cleavage was developed with blunt dissection to expose the swelling. Two black, rounded hard structures were encountered which were stone-like and surrounded by a foreign-body granuloma (Fig. 2a). They were excised and produced a metallic sound when dropped into a steel container.

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dura was repaired and the wound closed in layers. The postoperative period was uneventful. Although recovery was slow, four weeks after surgery the patient had reduced spasticity and better sphincter control.

The stones were sent for biochemical analysis. Histological examination of the tissue around the stones revealed fibrous tissue interspersed with a vascular stroma and giant cells, consistent with a foreign-body granuloma.

After decalcification, the stones showed multiple protein matrices over a bundle of tiny wooden pieces (Fig. 2b), presumably from the shoots of sugar cane.

**Discussion**

Progressive compressive myelopathy due to foreign bodies such as the blades of a knife, bullets, pellets and arrows in the spinal canal is well recognised. In this patient we found ‘stones’ in the spinal canal with a foreign-body granuloma. Before operation, the neurological deficit was thought to be due to stretching of the cord over an internal gibbus or an intramedullary tumour.

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