

EXTRADURAL PYOGENIC GRANULOMA MASQUERADING AS AN ACUTE TRANSVERSE MYELITIS – A CASE REPORT

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INTRODUCTION

Pyogenic infection in the epidural space of the spinal canal is uncommon but the incidence appears to be rising amongst intravenous drug abusers^{1,2}.

CASE REPORT

A 28 year old drug abuser (heroin, amphetamine and morphine) was admitted to another hospital under medical care with a two weeks' history of abdominal pain, fever and malaise. On investigation, his blood culture revealed growth of staphylococcus aureus. He was treated actively with antibiotics for septicaemia. A week later he developed mild backache and over the next 48 hours he developed retention of urine and was unable to move his legs. On examination, he was febrile, and had spinal and paraspinal tenderness at D9/D10 region. There was flaccid paraplegia with absent stretch reflexes and sensory loss to all modalities below D8 level. Routine haematological investigations and plain x-rays of dorsal spine were entirely normal. A diagnosis of an acute pyogenic transverse myelitis was made and he was treated with multiple antibiotics.

On transfer to the Neurosurgical Unit, myelography demonstrated a partial extradural block at D9 - D10 level (Fig 1 & Fig 2). CSF obtained at myelography showed xanthochromia, normal glucose and protein 11.27 gms/L. CSF white cell count was $6 \times 10^6/L$ with a predominance of polymorphonuclear leucocytes suggestive of spinal meningitis. The CSF subsequently grew staphylococcus aureus.

At operation, a firm mass of granulation tissue extending from D7 - D10, was found on the posterior aspect of the dorsal dura and was excised. There was no evidence whatsoever of any liquid pus. Again the granulation tissue yielded a heavy growth of staphylococcus aureus and histopathological examination revealed granulation tissue containing large numbers of polymorphonuclear leucocytes and scanty gram positive cocci (Fig. 3).

Following surgery, back pain improved; however the patient still has marked paraparesis though at 4 months' post-operatively he is just able to stand.

DISCUSSION

It was the prediction of Dandy (1926)³ that an early operation in cases of spinal abscesses would prevent permanent neurological disability. Although effective surgical and antimicrobial treatment has been available for many years, the high morbidity and mortality from these infections have not been significantly reduced.^{2,4,5}

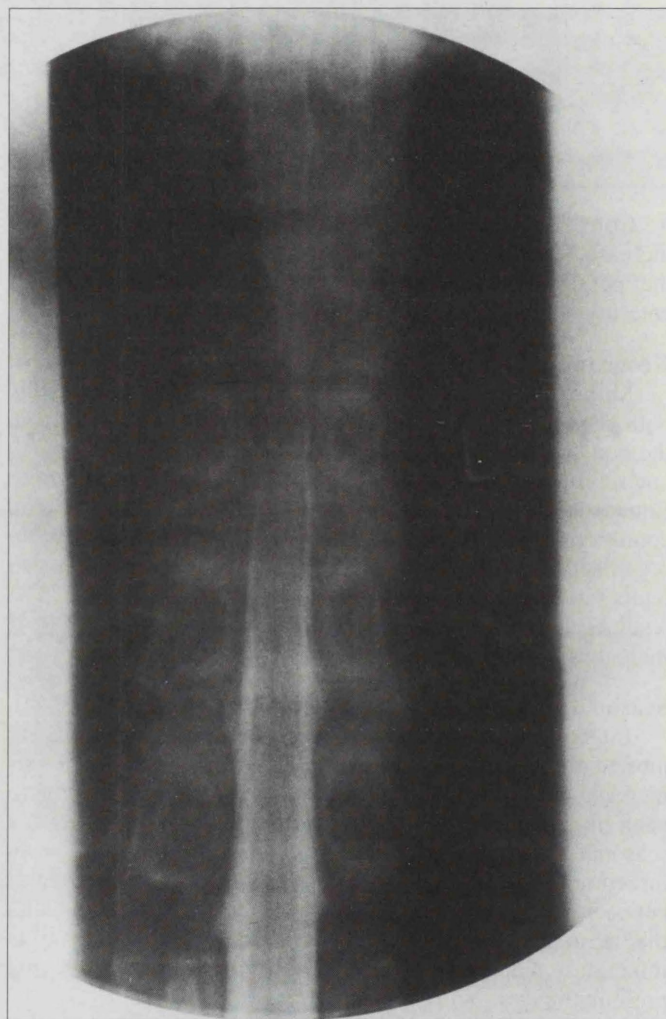


Fig 1 & 2. – Myelography (anteroposterior and lateral views) showing partial block at D9-D10 level

The incidence of spinal epidural abscess is approximately 0.2 to 1.2 per 10,000 admission^{4,6}. This appears to be rising in intravenous drug abusers^{1,2,6}. Pyogenic granulomas of spine presenting as an acute spinal cord compression are rare; however the more commonly encountered situation is chronic. Kopper et al (1988)¹ reported 18 cases of epidural spinal infections in drug abusers and found only one case of pyogenic granuloma presenting as acute spinal cord compression. Russel et al⁵ in 1979 reported 30 cases of epidural spinal infections of which 14 cases presented as acute spinal cord compression and he found pus in all these cases along with varying amounts of granulation tissue. Danner et al (1987)² reported 35 patients with epidural abscess; of these, 13 cases presented with acute spinal cord compression and only two had granulomas. The presentation of epidural infections is often variable, which makes the



Fig 2

diagnosis difficult. Danner et al (1987)² in their series of 35 cases found 15 patients (43%) had an initial diagnosis unrelated to the spine; out of these, two cases presented with abdominal pain and fever. Baker et al (1975)⁶ reported four out of 39 patients presenting as abdominal pain, and indeed, our patient initially presented with abdominal pain and fever. Since the drug-abusing population is often accused of exaggerating their discomfort as drug-seeking behaviour, it is not uncommon for these patients to remain undiagnosed for appreciable periods.¹

Plain x-rays are often normal except in cases of vertebral osteomyelitis, discitis and epidural abscess⁹⁻¹¹. Myelography or MRI usually illustrates the presence, location and extent of spinal epidural lesions^{1,2,6,7}. The CSF is abnormal in most cases and spinal meningitis may be associated with spinal epidural infections as happened in our case^{4,6,10,12-14}.

The commonest operative finding is liquid pus and less commonly pus with a variable amount of granulation tissue but pyogenic primary granulomas are rarely seen in acute spinal cord compression^{1,2,6}. It is noteworthy that in cases with liquid pus usually single level laminectomy suffices whilst in cases with granulomas multiple decompressive laminectomies are required¹.

The outcome of the surgical treatment depends upon the level of the neurological function at the time of diagnosis^{4,7,15}. Various authors have observed that the secondary pathological changes in the cord may be more extensive than can be accounted for by the mechanical effects of the cord compression alone^{4,6}.

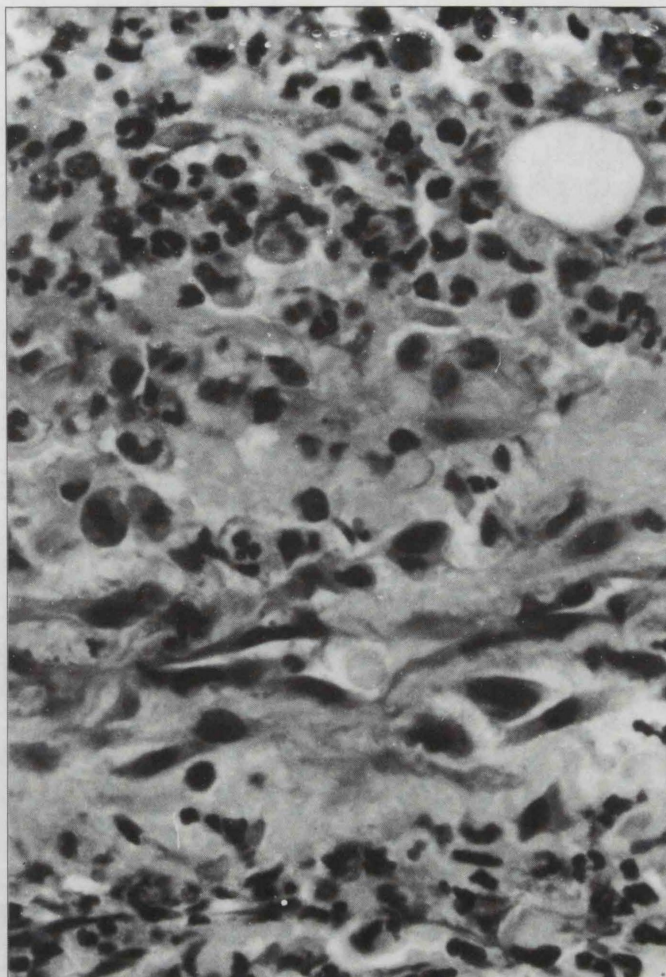


Fig 3 – Microphotograph showing fat and fibroblast containing large numbers of polymorphonuclear leukocytes (H&E x 660).

Most problems in the management of spinal epidural granulomas and abscesses are related to the failure to consider these lesions in the differential diagnosis of backache in a febrile patient with negative findings in plain x-rays, especially in drug abusers^{1,6}. This case illustrated the importance of recognising that acute spinal cord compression due to an unusual granuloma may arise in drug abusers and present with abdominal pain.

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QUIZ



A 38 year old garage mechanic presented with a history of pain and swelling affecting the left little finger and right ring finger. There was a previous history of gout. Examination also revealed a 'red nose' and the spleen was just palpable. Investigations revealed leucopenia, normal calcium and uric acid and an ESR 4mm/hr.

What is the diagnosis?

Answer on page 286