

A case of tuberculous spinal arachnoiditis

HISTORY AND EXAMINATION

A 31-year-old Iraqi man, who had been in the UK since 2002, presented with loin pain then a three-month history of progressive leg weakness and sensory disturbance, urinary hesitancy and urgency, and erectile failure. He had smear positive pulmonary tuberculosis one year previously and had been treated with 6 months of anti-tuberculous chemotherapy.

Tone in the legs was increased bilaterally. He had pyramidal weakness of the legs (3-4/5 on left, 4/5 on the right) with brisk reflexes and ankle clonus and an extensor plantar on the left. He had impaired proprioception on the left leg below the hip and reduced vibration sense below the knees bilaterally.

INVESTIGATIONS

Routine blood tests showed a mildly raised ESR. HIV serology was negative. CXR initially showed parenchymal nodules in the right upper and mid zone and on the left lower zone but at follow up the CXR was normal.

CSF was acellular and microscopy for AAFB was negative. Protein was 0.2 and glucose 3.8 (plasma 4.5).

MRI (see figure 1) showed multiloculated intradural CSF collections displacing the spinal cord anteriorly over T2-T8.

DIAGNOSIS

Tuberculous spinal arachnoiditis.

MANAGEMENT

A T3-T9 laminectomy and debridement with exploration of intradural arachnoid cysts was performed and he was given 8mg dexamethosone perioperatively. A chronic pachymeningitis was diagnosed on histology but there were no granulomas, and microscopy for AAFB and TB

PCR was negative. He was treated with 12 months of anti-tuberculous chemotherapy and baclofen for radicular pain. His neurological symptoms and signs improved post surgery.

DISCUSSION

Secondary intradural spinal arachnoid cyst formation can be caused by trauma (including surgery and lumbar puncture), arachnoiditis and inflammation. Secondary spinal arachnoiditis can result from inflammatory or chemical meningitis (e.g. contrast agents, anaesthetics), subarachnoid haemorrhage, or trauma. Spinal arachnoiditis results from inflammation of the theca, causing clumping and deformation of the nerve roots, and a polyradiculopathy. The spinal cord may be involved secondary to an infective myelopathy or secondary to ischaemic myelopathy due to inflammation of the vasculature, cord atrophy, and intramedullary cysts. Intradural cysts can displace and deform the cord. MRI is the investigation of choice and may show deformation of nerve roots, nodules in the subarachnoid space, loculations and meningeal enhancement, although the severity of MRI appearance does not correlate well with symptoms. Surgical management is often unsuccessful.

References

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Figure 1: MRI showed multiloculated intradural CSF collections displacing the spinal cord anteriorly over T2-T8.

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