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EMERGENCY CASEBOOK

Delayed spinal cord compression in ankylosing spondylitis

A 45 year old man with long standing ankylosing spondylitis tripped and fell backwards against a concrete pillar when walking to catch a bus. He did not lose consciousness and presented to the casualty department 20 minutes later complaining of pain in his neck and left shoulder. On examination he was tender over his vertebra prominens and had paraesthesiae over the left C8 dermatome. No other focal neurology was found. Spinal x rays showed fusion of most of the cervical and thoracic vertebral bodies but no fractures were seen. A diagnosis of C8 root compression was made and he was referred to the orthopaedic team for further assessment.

Four hours later he complained of numbness up to his umbilicus. On examination he now had a flaccid paralysis of his lower limbs and reduced left upper limb power. A magnetic resonance imaging scan of his spine revealed an epidural haematoma extending from C5 to T5 on the dorsal aspect of the spinal cord (fig 1). The neurosurgical team performed an emergency cervical laminectomy to decompress the spinal cord, during which the C4 spinous process was found to be fractured.

Minor trauma in patients with ankylosing spondylitis can result in vertebral fractures, which bleed into the spinal canal and form haematomas causing delayed spinal cord compression.¹ Because of the distorted anatomy in ankylosing spondylitis, spinal fractures may be difficult to identify on plain x rays.² In the case described, the vertebral fracture found during surgery could not be seen on the cervical films. The fact that the patient had sustained a serious injury only became apparent when his neurological status rapidly deteriorated. Thus, when patients with ankylosing spondylitis present to the A&E department following an episode of trauma, a period of neuro-observation is useful and should signs of spinal cord compression develop, urgent neurosurgical consultation is indicated.

T-1 weighted MRI scan of cervical spine showing epidural haematoma (arrow) on dorsal aspect of spinal cord.

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