Case report

A case report of a spinal epidural haematoma associated with warfarin therapy

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Spinal epidural haematoma is an uncommon, but recognised, clinical entity that needs emergency management. The association of spinal epidural haematomata with warfarin therapy has been described and, in 1956, Alderman¹ stated that this diagnosis should be entertained in any patient receiving anticoagulants presenting with low back pain or sciatic pain. The purpose of this case report is to increase the awareness of this entity among medical personnel and to stress the urgency of management.

Case report

A 63-year-old lady presented with a 2-day history of pain in the interscapular region and numbness in both soles. She had been on warfarin for 8 years for multiple pulmonary emboli. She was assessed in the accident and emergency department at another hospital and sent home. Shortly after, she presented with weakness and numbness in both legs. She also developed incontinence of urine. She was catheterised and the residual urine was 250 ml.

On clinical examination, she had complete sensory loss from the T6 level down and grade I power in both lower limbs. The INR was 6.1 on admission. She was given 10 mg of vitamin K and 4 units of fresh frozen plasma. The INR came down to 1.4 after 8 h. MRI scan showed an epidural haematoma at the level of T2/T3 posteriorly (Fig. 1). She underwent decompression 9 h after the admission. At 14 months after surgery, she has full sensory recovery, grade III/IV power in the lower limbs, and is fully continent of bladder and bowel. However, she cannot walk and needs assistance to transfer from bed to chair and to stand.

Discussion

Spinal epidural haematoma was first described by Jackson in 1869. To date, approximately 275 cases have been reported in the literature.² Lawton *et al.*³ reported 30 cases of whom 10% were on anticoagulant therapy.

Many cases occurred in association with minor trauma or physical activity. Spinal epidural haematoma is believed to result from rupture of fragile epidural venous plexus. It can occur in any age group but is more common in the sixth decade. Groen and Ponssen⁴ reported a male predominance of 1.4:1, while Lawton *et al.*³ reported 2:1. An average of 3.8 spinal segments are involved. The most common sites affected are the cervicothoracic or thoracolumbar junction.⁴ Tarlov⁵ demonstrated in dogs that recovery of neurological function after spinal compression with an epidural balloon depends on the force and duration of compression and the rapidity of onset of motor deficit.

McQuarrie⁶ showed that a delay before surgery of more than 6 h reduces the probability of recovery. Foo and Rossier⁷ reviewed the literature and concluded that the recovery depends on the pre-operative neurological condition of the patient. Lawton *et al.*³ reported better

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Figure 1 MRI axial T2 image of the thoracic spine showing an epidural haematoma as localised high signal mass at the level of T2/T3 with compression of the cord.

neurological outcome in patients who had surgery within 12 h of the onset of neurological symptoms and in patients with Frankel grade D pre-operative neurological status.

The classical presentation is sudden onset of severe spinal pain followed by radicular pain and usually progress rapidly to paraplegia or quadriplegia. MRI scanning is the preferred method of diagnosis as it readily distinguishes spinal epidural haemorrhage from other lesions. Unless neurological signs are minimal, treatment consists of reversal of anticoagulation and prompt decompression of the haematoma and control of any bleeding points.

Conclusions

This case illustrates that the diagnosis of spinal epidural haematoma is often delayed in spite of the availability of modern neuro-imaging techniques, affecting the surgical outcome.

Despite Alderman's warning, the spine is a rarely suspected area of bleeding in patients on anticoagulant

therapy. The above case is a reminder to consider spinal epidural haematoma in patients on anticoagulant therapy who develop a sudden onset of spinal pain with or without neurological deficit.

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