An unusual cause of paraplegia

Introduction

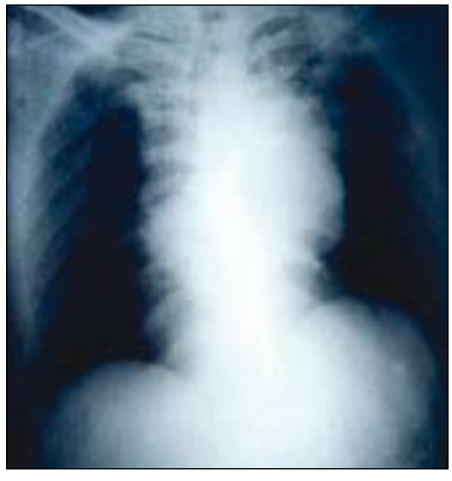
Paraplegia is not uncommon and often associated with severe disability and mortality. Acute paraplegia is commonly the result of trauma or occurs in association with metastatic infiltration; other causes include aortic dissection, infarction of the spinal cord and infections. Chronic or sub-acute picture is seen in multiple sclerosis, sub-acute combined degeneration of the cord, spinal cord tumours, motor neurone disease, infections and rarely as hereditary spastic paraplegia. This article presents a young man who had paraplegia with an unusual cause.

Discussion

Syphilis is a systemic disease caused by *Treponema pallidum*. It is curable and progression is preventable if detected and adequately treated at an early stage. If left untreated syphilis progresses through different stages: primary, secondary, latent and tertiary. Cardiovascular syphilis (CS), a feature of tertiary syphilis, is more common in males than females. CS is seen in about 12% of untreated patients and can present 10–40 years after the initial infection (Gribbin and Byren, 2003). Syphilitic aneurysms are seen in 10% of patients with CS, are characteristically saccular and most commonly affect the ascending aorta; pressure on adjacent structures can produce symptoms like dysphagia, stridor, and pain as a result of erosion of ribs and other bones (Gribbin and Byren, 2003). However, erosion of the vertebrae giving back pain and spinal cord compression as in this case is very rare (Miura et al, 1995).

This case demonstrates a devastating and fatal complication of CS. This case reminds us that syphilis, 'the great imitator', can involve any system and have complex manifestations indistinguishable from other diseases (Youatou et al, 2004). Although syphilis is uncommon it is re-emerging (Waugh, 2000) and CS should be considered in the differential diagnosis of aortic aneurysms or regurgitation. Early diagnosis and appropriate intervention (Goldstein et al, 2003; Bossert et al, 2004) will prevent complications and in some cases fatality. BJHM

Figure 1. Chest X-ray showing a widened mediastinum.



Case Report

A 40-year-old man was admitted to hospital with an acute onset of paraplegia of 5 days' duration, preceded by vague back pain in the interscapular region for 2 months. The pain was intermittent and was relieved by rest and analgesics. He had no significant past medical history. Physical examination revealed a gibbus at the level of the thoracic (T4–T6) vertebrae and signs of extramedullary cord compression at T7 level. Cardiovascular, respiratory, abdominal and ophthalmological examination was unremarkable and there were no Marfanoid features. Full blood count, biochemical and lipid profile, and electrocardiogram were within the normal range. Sputum examination was negative for acid-fast bacilli. Chest X-ray (*Figure 1*) showed mediastinal widening and X-ray of dorsolumbar spine showed scoliosis at T5–T8 with convexity to the right. Magnetic resonance imaging revealed gross dilatation of the arch of aorta and two large saccular aneurysms with size of 11.3 cm x 10.8 cm and 9.4 cm x 10.2 cm, causing destruction of T6–T9 vertebrae and spinal cord compression (*Figure 2*). A positive serum VDRL (venereal disease research laboratory test) and TPHA (*Treponema pallidum* haemaglutination assay) confirmed that the patient had syphilis. Enzyme-linked immunosorbent assay (ELISA) for human immunodeficiency virus (HIV) was negative. CSF analysis was normal and the CSF VDRL and TPHA were non-reactive. A diagnosis of cardiovascular syphilis was made and oral prednisolone was started followed by 2.4 million units of benzathine penicillin G. While awaiting surgery the patient's condition deteriorated rapidly as a result of a rupture of the aneurysm and he died despite aggressive resuscitation efforts. Autopsy confirmed syphilitic aortic aneurysm with destruction of vertebrae and direct spinal cord compression.

Bossert T, Battellini R, Kotowicz V et al (2004) Ruptured giant syphilitic aneurysm of the descending aorta in an octogenarian. *J Card Surg* **19:** 356–7

Goldstein B, Carroccio A, Ellozy SH et al (2003) Combined open and endovascular repair of a syphilitic aortic aneurysm. *J Vasc Surg* **38:** 1422–5

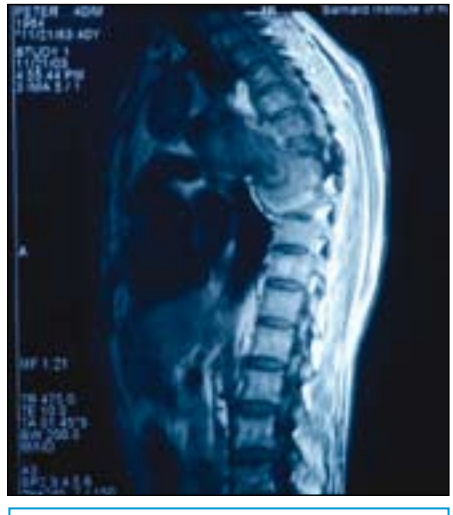
Gribbin B, Byren I (2003) Cardiovascular syphilis. In: Warrell DA, Cox TM, Firth JD, eds. *Oxford Textbook of Medicine.* 4th edn. Oxford University Press, New York: 1066–7

Miura M, Kuraoka S, Kanazawa H et al (1995) Sypilitic thoracic aortic aneurysm with destruction of vertebral body, producing numbness of lower extremities and paraplegia. *Kyoby Geka* **48:** 953–6

Waugh MA (2000) Re-emergence of syphilis. *Hosp Med* **61:** 454–5

Youatou P, Derluyn M, Roman A et al (2004) Ascending aorta syphilitic aneurysm presenting as a dystrophic disease. *Acta Chir Belg* **104:** 231–3

Figure 2. Magnetic resonance image showing destruction of vertebrae and cord compression caused by an aneurysm.



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