CASE REPORT

Infective discitis as an uncommon but important cause of back pain in older people

Vivek Goel, John B. Young, Chris J. Patterson

St Luke’s Hospital, Little Horton Lane, Bradford BD5 0NA, UK

Address correspondence to: V. Goel, 27 Westend, Walkington, East Yorkshire HU17 85X, UK.
Fax: (+44) 1482 675033. Email: vgoel35@hotmail.com

Abstract

Case reports: two elderly patients (aged 70 and 80 years) presented with severe back pain and restriction of spinal movements. Inflammatory markers were raised and in each case computed tomography findings confirmed infective discitis. One patient improved with antibiotics but the second developed paraplegia, a recognized complication of discitis.

Conclusion: the association of back pain, restricted spinal movements and raised inflammatory markers should act as ‘red flags’, alerting the clinician to the presence of serious, but potentially treatable pathology.

Keywords: back pain, infective discitis, inflammatory markers

Introduction

Back pain is a common problem, occurring in 50–80% of the population [1]. Although it usually lessens in frequency with increasing age [1], it is reported by one-quarter of people aged over 65 years, half of whom will have associated activity restriction [2]. Most back pain in older people is due to intervertebral disc desiccation (spondylosis) or a complication of vertebral body bone loss (osteoporosis). The important clinical task is to identify potentially serious causes early and thus prevent serious sequelae.

We present two cases of an uncommon cause of back pain to illustrate the principles of this important clinical distinction.

Case reports

Case 1

A previously fit, 80-year-old man presented with a 6-week history of severe, localized, non-radiating low back pain which was present at rest and exacerbated by movement. On examination, he had a temperature of 37.8°C and tenderness over the lumbar vertebrae. Forward flexion was impossible because of pain. There were no abnormal neurological signs in his legs. Investigations showed a haemoglobin of 12.7 g/dl, white blood cell count of 12.5 (neutrophils 10.1) and C-reactive protein of 175 mg/l. Lumbar spine X-rays, which had been normal 1 month previously, now showed reduced L2–3 disc space with erosion and sclerosis of adjacent vertebrae (Figure 1). We made a provisional diagnosis of lumbar discitis. Blood cultures revealed Staphylococcus aureus and we commenced intravenous flucloxacillin. Computed tomography (CT) scan of the lumbar spine confirmed the features of discitis at L2–3 and also at L3–4 spaces with destruction of the discs and erosion of the adjacent vertebrae. A CT-guided biopsy was undertaken, but cultures were sterile. His pain and mobility improved gradually over 2 months with settling of the C-reactive protein. He continued flucloxacillin for 6 months.

Case 2

A 70-year-old Asian woman was admitted with a 3-week history of severe, constant low back pain and reduced
mobility. She had a history of type II diabetes mellitus and osteoarthritis. On examination, she had marked tenderness of the lower thoracic and upper lumbar spine, and spinal movement was markedly restricted due to extreme pain. She was afebrile and had no abnormal neurological signs. Investigations revealed a white blood cell count of 13.5 (neutrophils 11.1), a C-reactive protein 86 mg/l and a normal chest X-ray. Thoracolumbar spine X-rays showed gross degenerative disease of T11, T12, L2 and L3 vertebrae. Myeloma screen was negative. A bone scan showed avid linear uptake centred on T10±11 and T11±12 disc spaces, suggesting discitis. Several blood cultures were sterile. CT scan and biopsy revealed extensive destruction of the disc at T11–12 and adjacent endplates, but bacteriology of the tissue biopsy, including for tubercle bacilli, was negative.

Unfortunately, she developed paraplegia with a level at T11–12 while she was undergoing investigations and had to undergo emergency spinal surgery. Although tissue obtained at surgery was sterile for pyogenic culture, one stain suggested the presence of an atypical mycobacterium and we therefore started her on anti-tuberculosis treatment. Subsequent cultures for tuberculosis were negative. After 2 months her back pain had settled and the C-reactive protein was normal but she remains paraplegic.

Discussion

Infective discitis is a rare cause of back pain in older people [3]. Delay in diagnosis (case 1) and serious neurological sequelae due to complicating spinal abscess (case 2) can occur. Useful pointers to the diagnosis include fever and raised inflammatory markers [4]. Changes in spinal X-ray take sometime to develop, and spinal imaging with CT or magnetic resonance is recommended. CT-guided biopsy is the definitive investigation, as bacterial isolation rates are high with this technique [5]. *Staphylococcus aureus* is by far the most common causative organism.

How can the rarer causes of back pain be discriminated from the common conditions of osteoporosis and spondylosis in older people? First, we should be aware that rarer conditions such as infective discitis will usually co-exist with X-ray appearances of ‘degenerative’ back disease (case 2). Secondly, several simple clinical clues to more serious back pathology have been identified. These have usefully been brought together as a set of clinical guidelines by the Clinical Standards Advisory Group [6]. In these, potentially discriminating clinical features are highlighted as ‘red flags’ (Table 1). Although this set of guidelines is of most relevance to middle-aged people, it can be applied with modification to older people. In our patients the history of new, severe, constant pain with persisting severe spinal movement restriction was the ‘red flag’ which, with the raised inflammatory markers, alerted to the presence of serious back pathology.

Key points

- Older patients commonly have evidence of degenerative back condition, and more serious spinal pathology may be overlooked.
- A list of warning features—the ‘red flags’ of the Clinical Standards Advisory Group Committee on Back Pain—is helpful in alerting the physician to the possibility of potentially serious back pathology.
• Raised inflammatory markers provide a useful pointer to the diagnosis of infective discitis. A spinal computed tomography scan with a biopsy is the best way to confirm diagnosis and guide treatment.

References


Received 9 December 1999; accepted 18 April 2000