CASE REPORT

It’s never too late: cauda equina syndrome in an octogenarian

P. Curtin*, R. Sankar, E.E. Fogarty

Department of Orthopaedics, Adelaide and Meath incorporating the National Children’s Hospital, Tallaght, Dublin 24, Ireland

Accepted 16 November 2004

Introduction

The cauda equina is formed by the nerve roots below the level of the spinal cord termination. Cauda equina syndrome (CES) is defined as a complex of low-back pain, bilateral radicular leg pain, saddle anesthesia, bilateral motor weakness and sensory loss in the lower extremities, as well as bowel and bladder dysfunction. CES is uncommon, but presentations vary. All of the classical symptoms do not need to be present for the syndrome to occur and unilateral lower limb involvement has been reported to occur more commonly. CES occurs due to excessive compression on the cauda equina and is most commonly caused by a herniated lumbar disc. Clinical suspicion requires prompt evaluation with magnetic resonance imaging to identify and localize the cause. Emergency surgical decompression within 48 h of the onset of symptoms reduces permanent neurological damage and improves patient outcome.

In the following report, we describe a case of cauda equina syndrome occurring in an 84-year-old man. CES is reported to occur most often in the fourth and fifth decades but to our knowledge, there is no report in the literature of it occurring in a patient in their eighties.

Case report

An 84-year gentleman with a history of chronic low-back pain was admitted complaining of pain, weakness and numbness in both lower limbs, worse on the left side. There was no history of trauma but he felt, he had twisted his back. In the past, he had an abdominal aortic aneurysm repair 20 years previously, a partial colectomy and a subsequent reversal of a colostomy in 1991 and took an aspirin tablet daily. He was incontinent of feces and urinary retention. Straight leg raise was 80° on the right and 70° on the left. Knee flexion and extension were grade 3. He had bilateral foot drop with ankle dorsiflexion, plantar flexion and extensor hallucis longus power, all grade 2. Knee reflexes were present but ankle jerks absent bilaterally. Decreased sensation was noted in L4, L5 and SI dermatomes of the left leg and the SI dermatome of the right leg. Additionally, there was decreased perineal sensation and no discernible anal tone.

MRI of his lumbosacral spine showed multiple level degenerative disc disease (see Fig. 1) with a...
massive disc herniation causing severe compression of the cauda equina at L3—L4, primarily on the left side (see Fig. 2). There was no evidence of a neoplastic lesion. Approximately 24 h following admission, the patient underwent emergency decompression with laminectomy and discectomy at L3—L4. Post-operatively the patient regained bowel control and sensation improved in both lower limbs but still has an indwelling urinary catheter. Hydrotherapy has helped improve muscle strength in both lower limbs (now grade 4), but five months following his surgery the patient still required the assistance of one to mobilize.

Discussion

Degenerative lumbar disc disease is the commonest cause of cauda equina syndrome (CES) but it can also occur due to trauma, primary or metastatic spinal tumours or abscesses, and following spinal anaesthesia or spinal surgery. CES can occur either acutely or can be the result of a chronic problem with radiculopathy that develops into a cauda equina syndrome. More than 80% of patients have a pre-existing history of chronic low back problems with or without sciatica. Patients with a chronic back problem have a poorer prognosis for the return of bladder and bowel function. CES secondary to lumbar disc herniation has been reported to occur most commonly in males in their fourth or fifth decades. The disc spaces most often involved are L4—L5, followed by L5-S1, followed by L3—L4.

Considerable controversy exists about the timing of surgery and traditional thinking has been that the problem requires surgical intervention within 6 h for a favourable outcome. Significant differences have been demonstrated with improved outcomes when surgery is performed within 48 h and poor outcomes when surgery is delayed for more than 48 h. However, published series of CES are small (19–31 patients) and most authors still warn against delayed diagnosis and recommend emergency surgery within 24–48 h of onset of CES.

Cauda equina syndrome is a diagnostic and surgical emergency. It can occur at any age, even in
elderly patient groups and when suspected urgent evaluation with MRI to make a diagnosis, and localize the pathology, allows early surgery and improves patient outcomes.

References


Figure 2  Axial T1 MRI images at L3 where, there is no spinal canal compromise and at the L3–L4 level where a herniated lumbar disc has caused the cauda equina to be compressed into a small space on the right side of the spinal canal.