Cauda equina syndrome

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CES is a very serious and urgent condition that arises from compression of the cauda equina nerve roots, which supply the perineum and genital regions and bladder, bowel and sexual function. The most frequent cause is a massive central lumbar disc protrusion at L4/5 or L5/S1; other causes include lumbar fractures, postoperative epidural haematoma, spinal stenosis and spinal tumours. Occlusion of the lumbar arteries by dissection or aneurysm of the abdominal aorta can lead to similar dysfunction of the cauda equina without compression. CES is rare, accounting for only 2–6% of all lumbar disc herniations. However, it is important as timely treatment can y in treatment is a prevent catastrophic incontinence; dela major cause of litigation in many countries. CES presents most commonly in the 20- to 45-year age group, with some or all of the following symptoms: low back pain; unilateral or bilateral sciatica; lower limb motor weak - ness; and sensory abnormalities, including saddle anaesthesia, b ladder dysfunction (initially sensory changes, later painless retention and overflow incontinence in la ter stages) and sexual and bowel dysfunction. CES may result from acute or chronic compression of the cauda equina nerve roots.

TABLE 37.7 Classi /f_i cation of cauda equina syndrome (CES). Name Abbreviation De /f_i nition CES suspected CES-S Large disc herniation or bilateral sciatica but normal S2–5 motor and sensory function CES early CES-E Some perineal sensory change but normal bladder and bowel function CES incomplete CES-I Impaired bladder function or sensation but executive/ voluntary control of bladder maintained CES retention CES-R Bladder retention and over /f_l ow incontinence CES complete CES-C Complete loss of cauda equina function MRI, magnetic resonance imaging. Investigation after initial Treatment if MRI positive for diagnosis compression of CES MRI within 24 hours Discuss risks and bene /f_i ts of surgery versus conservative treatment MRI immediate Urgent decompression MRI immediate Urgent decompression MRI immediate Urgent decompression on next daytime list if patient presents overnight MRI in working hours Decompression if improvement considered possible

rium and only have a thin endoneurium root sheath, making them more susceptible to compression forces when compared with peripheral nerves. The syndrome can result in permanent motor deficit and b ladder, bowel and sexual dysfunction. It represents a true spinal emergency and requires urgent sur gical decompression. The outcome for patients who undergo surgical decompression within 24 hours of the onset of loss of bladder or bowel control is significantly better than that of those who undergo surgery beyond this 24-hour period. Cauda equina syndrome classification The key classification of CES (Table 37.7) is into cases where there is still executive or voluntary control of the bladder (CES-I) and cases where there is bladder retention and over flow incontinence (CES-R). CES-I cases are considered to be more urgently in need of decompression to prevent deterio ration to CES-R. Most surgeons now believe that continued compression causes a continuous deterioration in function and therefore early decompression is of benefit. Summary box 37.4 Cauda equina syndrome /uni25CF /uni25CF /uni25CF

Commonest presenting symptoms: perineal numbness, alteration in bladder function and sensation leading to painless urinary retention, over /f_l ow incontinence and faecal incontinence Urgent investigation with MRI is required for all suspected cases Con /f_i rmed CES requires surgical decompression within 24 hours to achieve optimum outcomes

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