

A Case of Cauda Equina Syndrome and Morbidly Adherent Placenta

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INTRODUCTION

We present the case of a young woman with spontaneous cauda equina syndrome (CES) at 31 weeks of pregnancy, coinciding with a morbidly adherent placenta (MAP) in the absence of recognised risk factors, presenting significant diagnostic and management challenges.

EPIDEMIOLOGY OF CAUDA EQUINA SYNDROME

Estimated incidence of 1:33,000 to 1:100,000 in the general population⁽¹⁾. CES is extremely rare in pregnancy with only a handful of case reports published worldwide⁽²⁾.

EPIDEMIOLOGY OF MORBIDLY ADHERENT PLACENTA

MAP has an incidence of 1:300 to 1:2000 maternities. Incidence of MAP in placenta praevia with no previous LSCS is 3.3-4%. Major risk factors include previous MAP, previous Caesarean section and previous uterine surgery including recurrent curettage⁽³⁾.

CASE REPORT

- 27-year-old nullipara presenting at 30 weeks of pregnancy with vaginal bleeding on a background of known low lying placenta with a subsequent diagnosis of major placenta praevia. The patient had no prior history of uterine surgery.
- During admission the patient reported urinary incontinence without the sensation to void with further episodes occurring over a three day period. Urinary tract infection and ruptured membranes were ruled out and neurological examination was unremarkable.
- Three days after first reporting urinary incontinence, the patient reported shooting pain from lower back to legs. Neurology assessment was arranged and urgent MRI spine requested. However major APH necessitated transfer to the delivery suite and immediate delivery by Caesarean section.
- During delivery the patient was found to have a morbidly adherent placenta. Haemostasis was achieved by leaving a portion of the placenta in situ, B-lynch suture and Bakri balloon insertion. Blood loss was 4100mls.
- MRI spine took place the following day and L5/S1 disc protrusion causing compression of the cauda equina was reported (Figure 1). The patient was transferred urgently to Neurosurgical theatre and underwent L5/S1 decompression and discectomy.
- The patient was discharged home on day 10 post-natal and made a full recovery with no neurological or functional deficit.

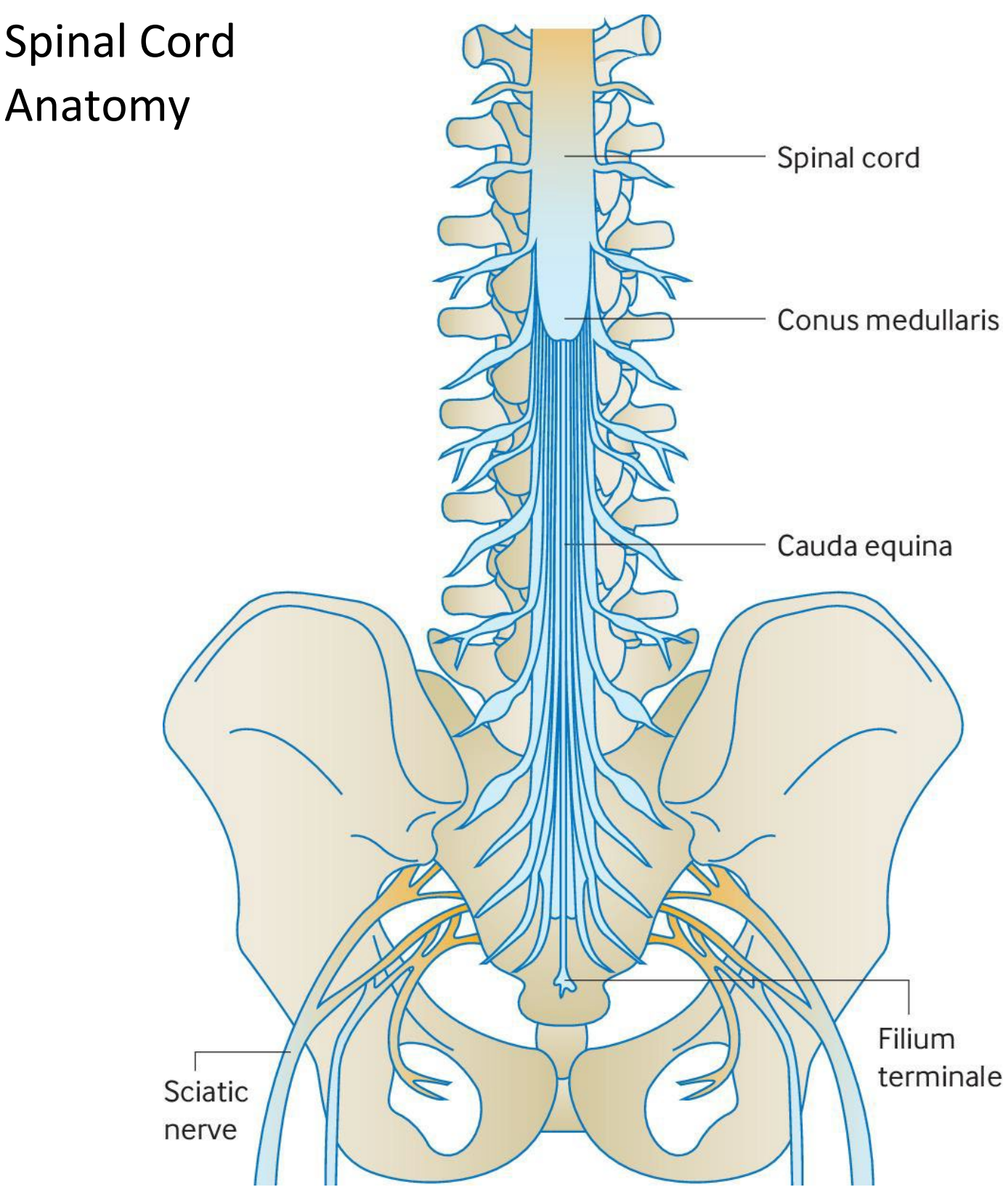
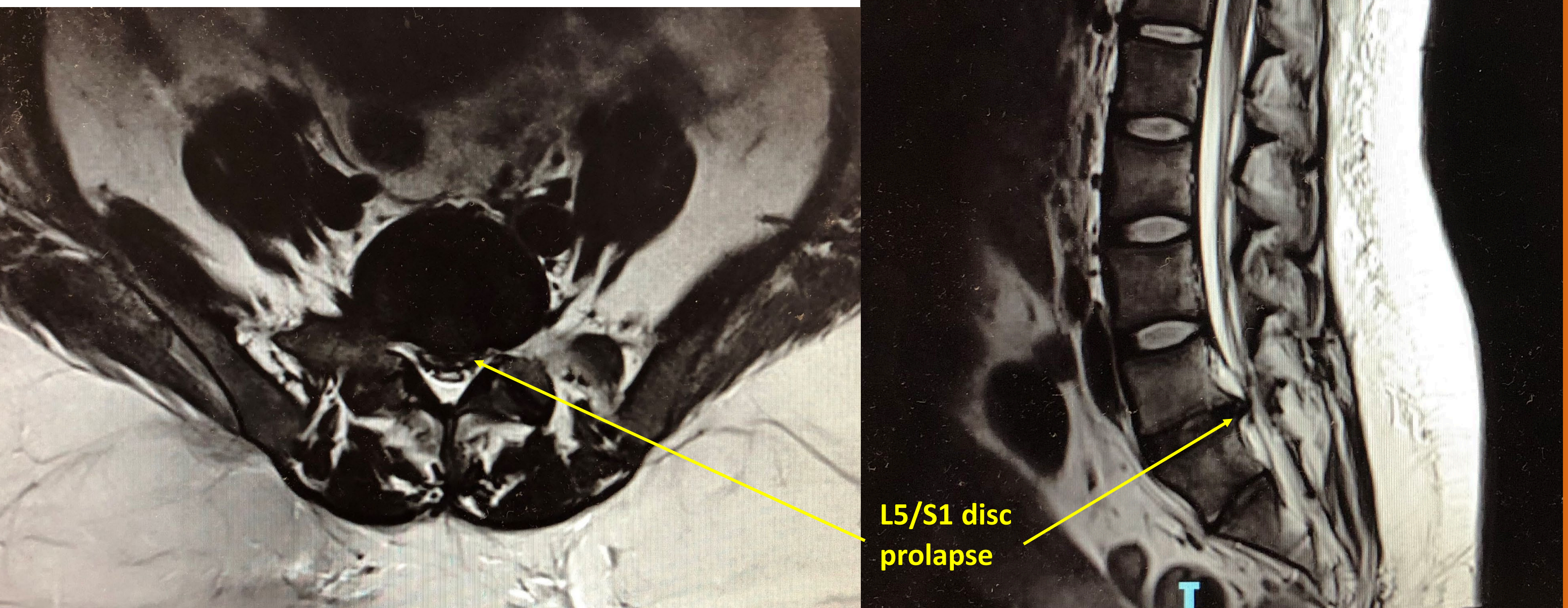


Figure 1 - MRI Report: Large disc-osteophyte complex at the L5/S1 level combining with a small focus of prominent epidural fat and mild hypertrophy of the ligamentum flavum resulting in marked central canal stenosis with moderately severe compression of the cauda equina.



CAUDA EQUINA SYNDROME

CES is a rare condition in which the lumbosacral nerve roots that extend below the spinal cord are compressed within the lumbosacral spinal canal⁽⁴⁾.

Clinical features include acute or chronic back pain, disturbance of urinary function, abnormal saddle sensation, reduced anal tone, and occasionally bilateral sciatica⁽⁴⁾.

Red flags symptoms include:

- Bilateral leg numbness or weakness
- Saddle anaesthesia involving anus, buttocks or genitals
- Urinary retention / urinary or faecal incontinence
- Sciatica
- Sexual dysfunction⁽⁵⁾

The commonest cause of CES is a central disc prolapse at the L4/5 or L5/S1 level. Rarely, compression can occur due to pathology in a higher disc or due to infection or a tumour⁽⁴⁾. Other causes include spinal stenosis, trauma and spondylitis⁽⁶⁾.

Management involves:

- Diagnosis by a combination of suggestive clinical features and MRI evidence of cauda equina compression
- Establishing the aetiology
- Treatment by urgent surgical decompression under Neurosurgery⁽⁴⁾

Outcomes are dependent on speed of diagnosis and treatment. Left untreated, CES can result in permanent paralysis and incontinence. Initiating treatment within 48 hours of symptom onset is likely to result in the most favourable outcomes and restoration of sensation and function⁽⁷⁾.

DISCUSSION

- Urinary incontinence and back pain are common symptoms in pregnancy and CES is extremely rare, likely leading to a lower index of suspicion.
- The patient's presentation was atypical with urinary incontinence (typically a late sign) presenting before back/leg pain in the absence of characteristic saddle paraesthesia.
- A normal neurological examination by a non-specialist may not be adequate to rule out CES.
- The patient was noted to have lumbralisation of the sacral vertebrae, a congenital variant in which the S1 vertebra is partially mobile akin to a lumbar rather than sacral vertebra⁽⁸⁾. This may have increased her risk of CES.
- The coincident occurrence of major APH lead to unavoidable delay in obtaining diagnostic MRI.
- Surgery post-natally beneficially eliminated the challenges associated with prone positioning for spinal surgery in the third trimester⁽⁹⁾.

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