

Introduction

Lumbar disc herniation causing Cauda Equina Syndrome (CES) is a rare event in pregnancy with an incidence of 1:10,000 pregnancies. Lumbar herniation resulting in Cauda Equina Syndrome is even more rare (1,2). Timely management of Cauda Equina is vital in preventing long term maternal neurological damage whilst also being cognizant of the well-being of the unborn child (3).

In this case we discuss the anaesthetic approach to the combined surgical requirements of this patient.

Case Report

A 33-year-old primiparous lady at 35+4 weeks presented with the following symptoms:

- Severe lower back pain radiating to the right foot with ipsilateral leg numbness.
- Associated weakness of both legs.
- Difficulty in voiding urine.

On examination she displayed:

- Reduced sensation in the region of L4, L5 and S1, S2 and S3 dermatomes.
- A per rectal examination revealed absent tone and decreased sensation in the S4 and S5 region.

Lumbar MRI showed a herniated lumbar disc causing cauda equina compression at L4/5 (Fig 1)

Imaging



Fig 1: MRI of lumbar spine - Cord compression at L4/L5 level.

Anaesthetic Management

Preoperative:

- Obstetrics in the Non-Obstetric setting - Detailed MDT required
- Preop iv betamethasone
- Pneumatic stockings applied

Induction:

- Position: Supine with head up with a left sided tilt
- Induction in OR with abdomen prepped and draped for the caesarean section
- Modified RSI performed
 - TIVA with TCI Propofol and Remifentanyl

Intraoperative:

- LSCS carried out supine with immediate proning of the patient for discectomy.
- Baby born with APGAR 6 and 9
- Enhance prophylactic management of PPH risk for proning:
 - Oxytocin bolus followed by an infusion of 10 U/hour after delivery.
 - Repeat bolus oxytocin and ergometrine given i.v
 - Bolus of tranexamic acid given
 - Intrauterine balloon insertion - on standby, if necessary
- Bilateral transverse abdominis plane block administered using 0.5% bupivacaine after closure.

Post-Op and Follow up

- Low molecular weight heparin started from 4th day and continued for 6 weeks
- The mother was discharged 12 days post-op with residual bladder and bowel symptoms
- The baby was admitted in special care for antibiotics for suspected sepsis, discharged in 5 days

Discussion

The management of CES in the third trimester has unique challenges. The challenges faced were multifaceted:

A primary issue was the undertaking of an emergency obstetric procedure in a non-obstetric environment. This called for meticulous planning and clear communication between the teams involved.

Intraoperatively, planning for immediate, prolonged proning of a patient after CS with ongoing post-partum haemorrhage (PPH) risk posed a unique challenge.

Post-operatively, to delineate the method, and timing, of venous thromboembolic (VTE) prophylaxis given the divergent surgical requirements.

Shared decision making through a combined MDT approach in such unique circumstances and in a relatively unfamiliar setting, helps improve maternal and foetal outcomes.

References

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3. Vakos A, Dean K, Reeder C, Louis-Jacques A. Management of cauda equina syndrome during pregnancy and postpartum. BMJ Case Rep. 2022;15(4).