

## **Cauda Equina in Pregnancy**

S. O. Ting<sup>1</sup>, L. Shailendranath<sup>1</sup>, M. Skehan<sup>1</sup>, P. Kiely<sup>2</sup>

1. University Maternity Hospital Limerick, Ireland.
2. Radiology Department, University Hospital Limerick, Ireland.

### **Abstract**

#### **Presentation**

A 29-year-old primiparous woman presented to the emergency room at gestation 31+4 weeks with severe pelvic and back pain, along with urinary retention, numbness and tingling sensation in her lower limbs and buttocks.

#### **Diagnosis**

She was reviewed by the physiotherapist and an MRI of the spine confirmed severe central canal stenosis at L4 and L5 with compression of cauda equina.

#### **Treatment**

Emergency discectomy was performed, and the patient recovered well. She underwent elective caesarean section at 38 weeks' gestation delivering a healthy baby boy weighing 3460g.

#### **Discussion**

Due to mechanical and positional overload, 56% pregnant women complain of lower back pain with the incidence of cauda equina reported as 1:10000. Conservative management is the primary treatment, but surgical intervention should be considered if symptoms worsen and surgery is not contraindicated at any stage of pregnancy.

### **Introduction**

It is reported that 56% of pregnant women complain of lower back pain secondary to mechanical and positional overload<sup>1</sup>. The incidence of cauda equina in pregnancy is 1:10000 which is considered very rare<sup>2</sup>. Delay in diagnosis and treatment may lead to permanent neurological deficit which might result in future disability<sup>3</sup>.

Pregnant woman with cauda equina normally present with weakness of the lower limbs, saddle hypoesthesia and urological problems such as urinary incontinence or inability to empty the bladder completely<sup>4</sup>.

### Case Report

A case report of a 29-year-old woman gravida 2 para 0+1 booked at gestation 13 weeks and 6 days in University Maternity Hospital Limerick with a booking BMI of 41.5 and has no significant personal medical history or family history. She presented to the emergency room at gestation 15 weeks with back pain which was treated as pelvic girdle pain with simple analgesia and she was also referred to physiotherapist. Over the course of 16 weeks, her pain became progressively worse with no relief from physiotherapy. She presented at 31 weeks and 4 days' gestation with severe pelvic and back pain, along with urinary retention, numbness and tingling sensation in the lower limbs and buttocks. She was reviewed by the physiotherapist and cauda equina syndrome was suspected. The patient had an urgent MRI of the spine and lumbar region which confirmed severe central canal stenosis at L4 and L5 with compression of cauda equina. Both discs were removed at 32 weeks' gestation after which she recovered well from and subsequently went on to have an elective caesarean section at 38 weeks gestation delivering a healthy baby boy weighing 3460g. She was discharged home on day 4 postnatally with recommendations of weight reduction and was commenced on prophylactic low molecular weight heparin for 6 weeks.



Figure 1A.



Figure 1B.

**Fig 1 (A)&(B):** MRI images showing severe central canal stenosis at L4 and L5 with compression of cauda equine.

## Discussion

Cauda equina is a rare disorder in the general population with an assumption of one case annually in larger hospitals and 1 in every 4-40 years in peripheral unit in Ireland. Cauda equina is a clinical diagnosis by detailed physical examination and imaging<sup>5</sup>. The most common presenting complaints are severe sciatica, bilateral leg weakness with saddle hypoesthesia and sometimes involving urinary and bowel dysfunction such as urinary incontinence, inability to empty the bladder completely, bladder tenderness with fullness, sexual dysfunction and faecal incontinence<sup>4</sup>. In pregnancy, Magnetic Resonance Imaging (MRI) is considered as the safest modality for detailed spinal imaging without transmitting radiation to the intrauterine fetus<sup>2,6,7</sup>. Conservative management is the primary treatment but surgical intervention should be considered if symptoms worsen<sup>6</sup> in which lumbar disc decompression is not contraindicated and can be performed at any gestational stage in pregnancy<sup>6,7</sup>. This is the first confirmed cauda equina case in pregnant woman in our maternity unit in University Hospital Limerick in 10 years'. In our case report, the patient presented with what seemed to look like worsening of her pelvic girdle pain but high suspicion of cauda equina was immediately identified with her sudden inability to micturate. Our hospital has the facility to perform urgent MRI investigation, but she had to be transferred to a tertiary unit for her L4 and L5 discectomy and decompression surgery as there was no specific expertise available in our local hospital. It is challenging to diagnose cauda equina as it is a rare disorder. The prognosis of this disorder is generally good with prompt diagnosis and intervention as failure to do so could lead to permanent damage to the patient such as lower limb paralysis, loss of nerve sensation of the lower body as well as dysfunction of the bowel and the bladder.

### Declaration of Conflicts of Interest:

The authors declare no conflicts of interest in preparing this article.

### Corresponding Author:

Sie Ong Ting

University Maternity Hospital Limerick,  
Ireland.

E-mail: sieong@yahoo.com

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