

Spotlight Series

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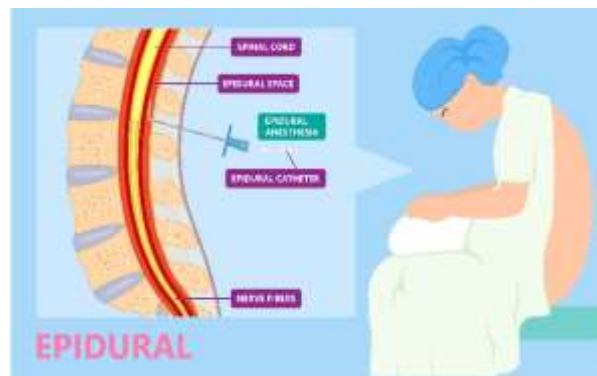
Perils and Pitfalls of Obstetric Neuraxial Anaesthesia

Introduction

The Patient Safety Together Spotlight Series highlights different patient safety initiatives, examples of local shared learning or patient safety content that may impact the wider healthcare audience in Ireland.

In this first instalment we shine a spotlight on a recent blog post by the *College of Anaesthesiologists in Ireland (CAI)*. The blog written by Dr Colleen Hartnett (Fellow in High Risk Obstetric Anaesthesia, and Quality & Patient Safety) and Dr Terry Tan (Consultant Anaesthesiologist) from the Coombe Hospital is titled *Perils and Pitfalls of Obstetric Neuraxial Anaesthesia*.

Neuraxial anaesthesia and analgesia techniques include spinal, epidural, and combined spinal-epidural.



This blog discusses five anaesthesia incidents included in the Serious Maternal Morbidity (SMM) data for 2021, published by the National Perinatal Epidemiology Centre (NPEC) that led to serious maternal morbidity (illness).

Incidents

All five incidents were related to neuraxial anaesthesia [spinal/epidural] for caesarean section. There were 21,523 caesarean sections carried out in Ireland in 2021 giving an SMM incidence of 1:500,000 (0.0002%) due to anaesthesia complications.

Although these incidents are extremely rare, it can be life threatening or cause serious harm to mother and baby. By reviewing these incidents and sharing the learning identified widely the CAI is contributing to the safety culture and helping to improve outcomes for those who use and work in our health services.

A high-level summary of the incidents included in the 2021 SMM data is shown in Table 1 overleaf.



Table 1: Summary of the five anaesthesia in the SMM

Mode of delivery	SMM event	Relevant information
		No deaths occurred following the incidents below
Emergency LSCS*	Total spinal block	Epidural top up for LSCS. Patient became unresponsive and apnoeic (stopped breathing) after epidural top up requiring intubation and ventilation.
Elective LSCS	Severe bradycardia; cardiac arrest	Severe bradycardia proceeding to cardiac arrest after spinal anaesthesia. Resumption of pulse after 60 seconds of cardiopulmonary resuscitation
Elective LSCS	High spinal block	Respiratory distress after spinal anaesthesia.
Elective LSCS	High spinal block	No information.
Emergency-LSCS	High spinal block	High spinal block; fetal bradycardia requiring general anaesthesia for category 1 LSCS.

*LSCS – Lower segment caesarean section

What the blog highlights

The blog discusses the anonymous SMM events that occurred in the incidents described for the purpose of shared learning. It gives a high level explanation of *High/Total spinal block*, it highlights the incidence of such events and advises how such events can both be prevented and managed. The blog also discusses ‘*Severe bradycardia after spinal anaesthesia for caesarean section*’ and highlights some prevention and management approaches.

The blog concludes that neuraxial anaesthesia for caesarean section has multiple benefits over general anaesthesia such as reduced risk of aspiration, airway morbidity, reduced risk of hypoxic brain damage, less neonatal depression, better birthing experience (awake for birth, skin to skin contact) and is the preferred technique of anaesthesia for caesarean section. However, neuraxial anaesthesia for caesarean section can also have severe complications and constant vigilance and awareness is required to ensure prevention, early detection, and management of complications to ensure optimal outcomes for mother and baby.

How can I get further information?



You can access the full blog on the College of Anaesthesiologists of Ireland website at

<https://www.anaesthesia.ie/latest-news/perils-and-pitfalls-of-obstetric-neuraxial-anaesthesia/>



The Spotlight Series is available on the Patient Safety Together website www.hse.ie/pst

If you would like to discuss a potential Spotlight Series instalment please contact patientsafetytogether@hse.ie

