

An audit of intra-operative pain during Caesarean section in a tertiary maternity hospital

Introduction

Intra-operative pain during caesarean section (PDS)/ (CS) is the leading cause of successful litigation against obstetric anaesthesiologists

Current standards set by the Royal College of Anaesthetists (**RCoA**) suggest that rates of PDS should be :

<5% for category 4,
<15% for categories 2-3,
and <20 % for category 1 sections

and that conversion rates to GA due to neuraxial complications should be:

<1% for category 4,
<5% for categories 2-3,
and <15% for category 1 patients

The recommended sensory level blockade from neuraxial anaesthesia as per the AAGBI guideline (2022) is up to and including T5. Optimal motor blockade recommendation remains unclear, at a minimum the mother should be unable to straight leg raise as per the same guideline (motor level 2)

Methods

From July 2022-June 2023, data were collected from the clinical incident management system and the electronic patient records.

Approval for auditing was obtained from the hospital audit department and Clinical Director.

Results

Incidence of PDS

12 month period
(2.1%, n = 52)



■ PDS ■ No pain

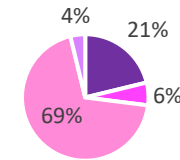
Rates of conversion to GA

0.7% of patients required conversion to GA for PDS (17/2,429)

CAT 1-3 = **1.1% conversion to GA rate** (14/1,309)
34% of the PDS cohort

Elective CS = **0.3% conversion to GA rate** (3/1,120)
27% of the PDS cohort

PDS by CS category

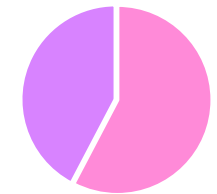


■ Elective CS ■ CAT 1 ■ CAT 2 ■ CAT 3

Mean age – 32.2

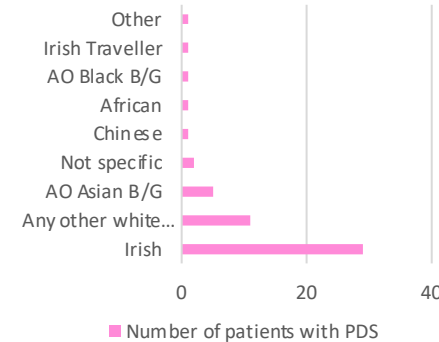
Mean BMI – 25.7

Parity



■ Nulliparous ■ Multiparous

Ethnicity of PDS Cohort



Category of pain (n=52 total)	Spinal anaesthetic (n = 24/46.2%)	Epidural top-up (n = 28/53.2%)	Level of sensory block	Degree of motor block	Conversion to GA
On-incision n = 4	2/4 (50%)	2/4 (50%)	Mean = 5 (Range 4-6)	Mean = 2.5 (Range = 2-3)	3/4 (75%) 2 spinals, 1 epidural
Pre-delivery n = 9	2/9 (22.2%)	7/9 (77.8%)	Mean = 5.5 (Range = 3-8)	Mean = 2 (Range = 1-3)	8/9 (88.9%) 2 spinals, 6 epidurals
Post-delivery n = 18	7/18 (38.8%)	11/18 (61.2%)	Mean = 4 (Range = 2-7)	Mean = 2.2 (Range = 0-3)	5/18 (27.8%) 2 spinals, 3 epidurals
Non-incisional pain (shoulder-tip pain/chest pain) n = 15	9/15 (60%)	6/15 (40%)	Mean = 4.1 (Range = 2-6)	Mean = 2.3 (Range = 1-3)	0/15
No description n = 6	4/6 (66%)	2/6 (34%)	Mean = 4.3 (Range = 3-6)	Mean = 2 (Range = 1-3)	1/6 (16.7%) 1 epidural

Conclusion

PDS occurred in 2.1% of women delivered in our centre during a twelve-month period. Conversion to GA due to PDS in CAT 1-3 occurred in 34%, and in 27% of PDS elective cases. The majority of patients who experienced PDS received an epidural top-up (53.2%) compared to 46.8% who received a spinal anaesthetic.

The mean sensory level achieved in the PDS cohort was T4.4. The majority of patients in the PDS cohort achieved a motor block of 2 or higher (61.5%). Almost a third of patients (29%) experienced non-incisional pain such as chest pain or shoulder-tip pain. Most patients who experienced PDS reported it after delivery of the newborn (34.6%). Most women were nulliparous, Irish in ethnicity, with a mean BMI of 25.7 and age of 32.2.