

A “CSE-ries” of questions. Current practice in combined spinal epidural anaesthesia for caesarean delivery across two large obstetric units.

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Introduction

Combined Spinal Epidural (CSE) anaesthesia may be considered for caesarean delivery when additional considerations preclude spinal anaesthesia alone (1). Within our organisation there is no standardised guideline for CSE usage with practice left to the clinical judgement of the anaesthetist. We retrospectively reviewed records across two units (approx 6000 deliveries/year each) with a focus on indications for top up of the epidural component.

Methods

Caldicott Guardian approval was obtained for review of records between August 2023 and mid January 2024. A report from the Badgernet electronic record was used to identify woman who had CSE anaesthesia followed by review of the scanned anaesthetic charts. Information collected included baseline demographics, indications for CSE, type of technique, spinal, dose, time since spinal anaesthesia, indications for epidural top up, and supplementary analgesia or anaesthesia.

References:

1. Ong K-B, Sashidharan R. Combined spinal–epidural techniques. Cont Educ Anaesth Crit Care Pain 2007;7(2):38–41. Doi: 10.1093/bjaceaccp/mkm003.
2. Colvin JR, Peden CJ. The Royal College of Anaesthetists. Raising the standard: a compendium of audit recipes for continuous quality improvement in anaesthesia. London, UK: The Royal College of Anaesthetists; 2012 n.d.

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Results

68 available records were identified across our units (a further 8 records did not have scanned paper anaesthetic charts). The most common justifications for CSE were abdominal pathology or surgery (14 women), early gestational age, (14 women) 3 or more previous caesarean sections (11 women), and planned sterilisation procedure (9 women). 4 women had cardiac disease, and 1 woman was a placenta accreta case which had a pre planned conversion to general anaesthesia post delivery. 13 women received an anticipatory epidural top up during the case (range 45 to 70 minutes post spinal), and 6 women received an epidural top up in response to intraoperative pain (range 45 to 68 mins post spinal). 8 woman required additional analgesia or anaesthesia, with 6 of these being those who had received an epidural top up in response to pain. 75% of women did not receive an epidural top up during the delivery.

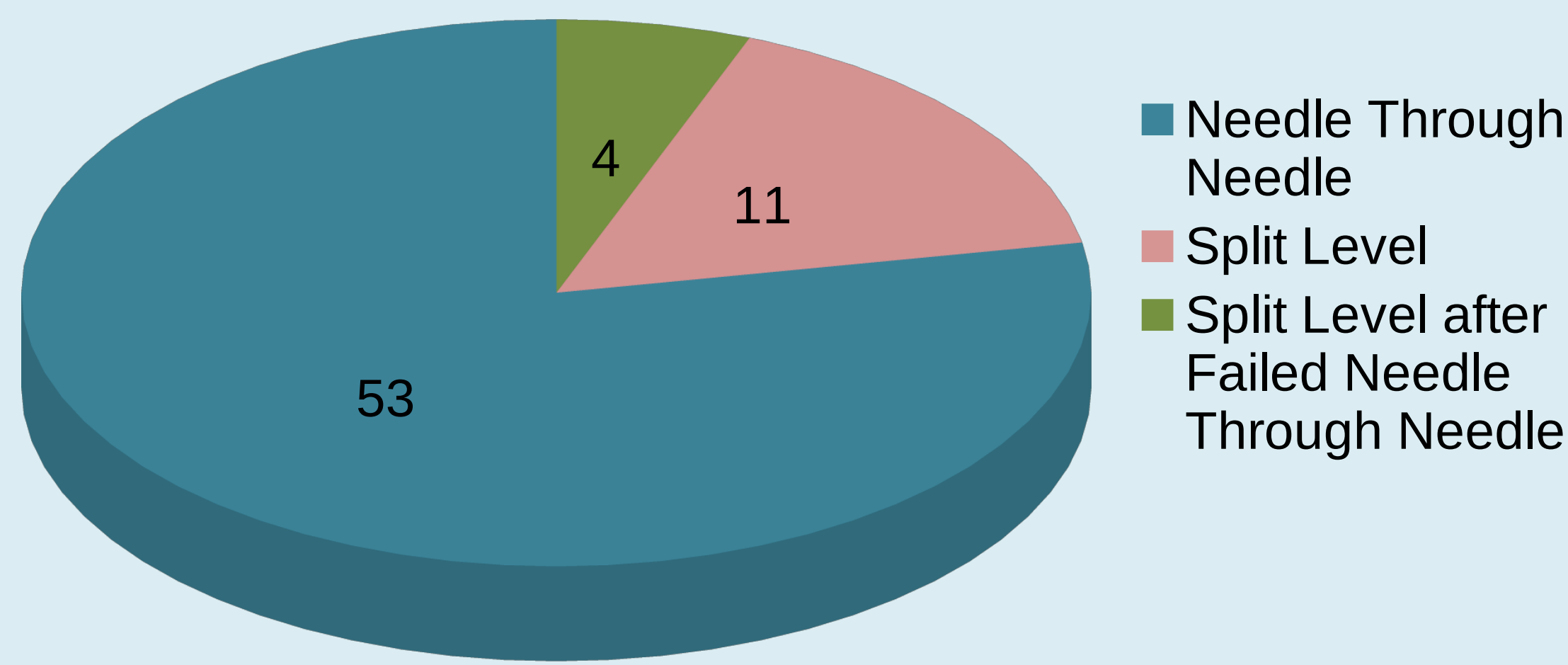
Discussion

Indications for CSE were broadly similar across both hospital sites with the exception of specialised cardiac and accreta cases. Although the majority of woman did not require top up of the epidural component, all had appropriate indications for CSE. We did not identify any incidences unplanned conversion to general anaesthesia which is in line with RCOA best practice, but this may also be due to a clinical coding issue with the recording of anaesthesia type in Badgernet (2).

Table 1: Indications for CSE Anaesthesia

Indication Type	n
Previous or active intra-abdomiinal pathology	14
Early delivery for maternal AND/OR fetal reason	14
Three or more C-sections	11
Early delivery for maternal reasons	10
Planned sterilisation procedure	9
Uteroplacental abnormality or pathology	8
High BMI	8
Early delivery for fetal reasons	5
Maternal cardiac disease	4
Technical difficulties with spinal anaesthesia	4
Additional obstetric procedure	3
Other medical reason for avoiding general anaesthesia	3
Known difficult airway	1
Other patient factors	1

Figure 1: Type of CSE Technique Used



Pre emptive epidural top ups were given between 45 and 70 minutes post spinal

Top up for intraoperative pain was required between 45 and 68 mins post spinal

Figure 2: Spinal volume of 0.5% heavy marcaine

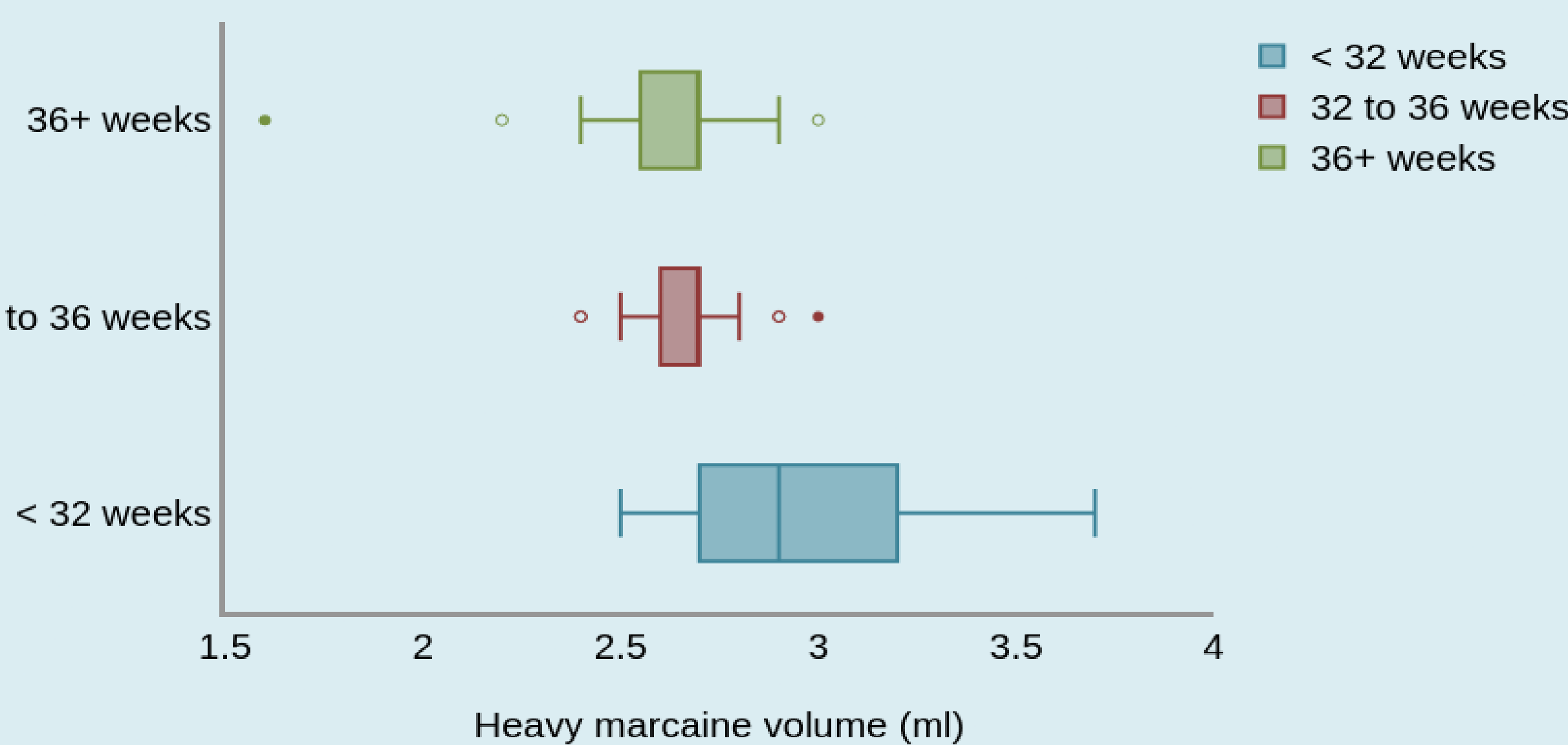


Figure 3: Anaesthetic and Surgical Time

