

An audit of regional analgesia in labour - can standards be met for obese patients?

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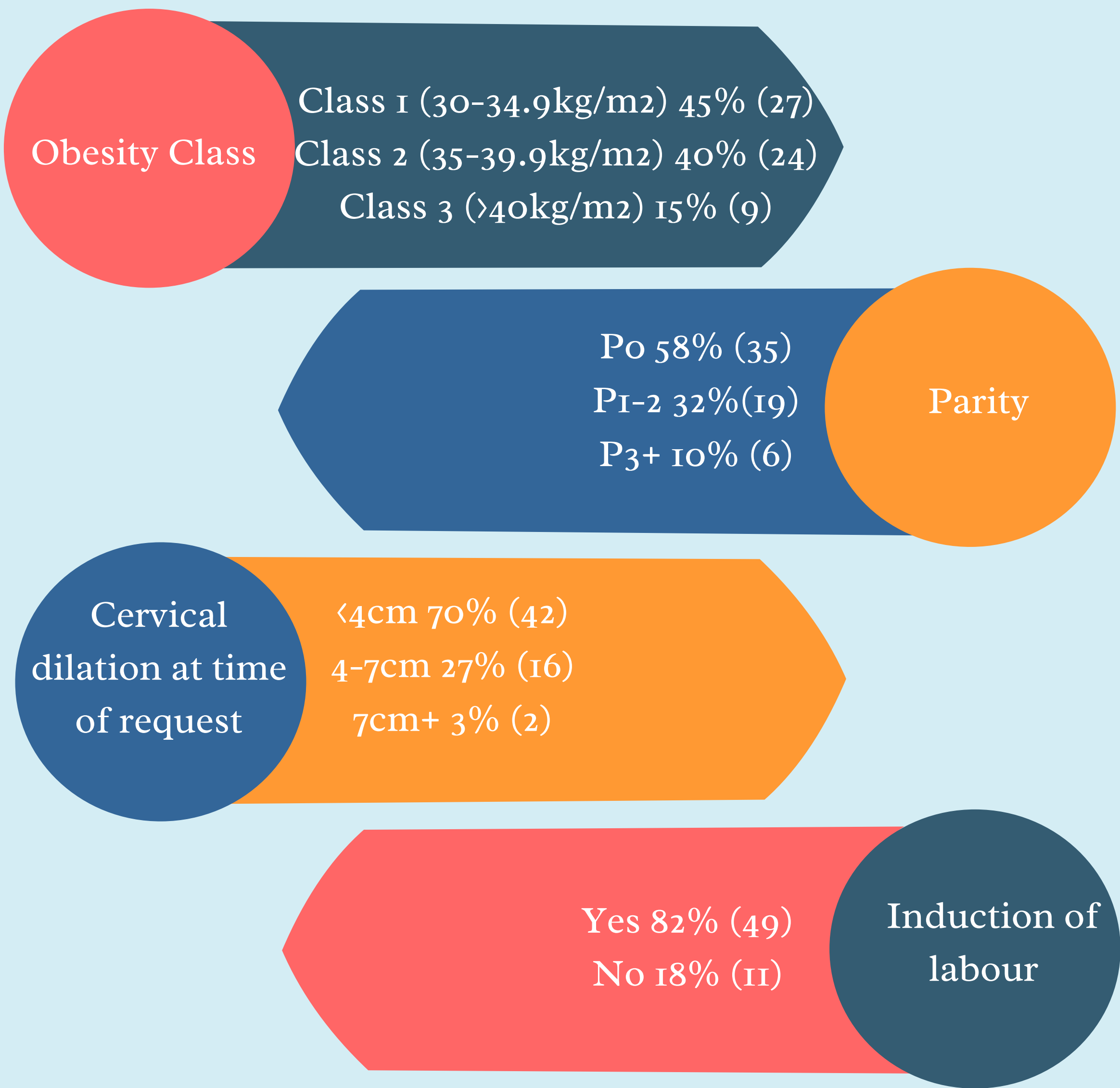
Introduction

The benefits of neuraxial labour analgesia for parturients with a high body mass index (BMI) are well established, as is the increased technical difficulty of placement and the risk failurer. Best practice standards for the provision of labour analgesia have been defined by the Royal College of Anaesthetists in the Quality Improvement Compendium². The aim of this audit was to establish whether these best practice standards could be adhered to when managing patients with a high BMI in a district general hospital.

Methods

Patients were identified retrospectively over a five-month period from February-June 2023 via an obstetric anaesthetic logbook maintained by the anaesthetic department. All patients who underwent neuraxial labour analgesia with a booking BMI of greater than 30 kg/m² were included in the audit. Subsequent data collection was conducted via the electronic patient records and the audit was registered as per local policy

Figure 1



Discussion

Despite not meeting the audit standards set for the general obstetric population, the rate of successful block placement is high. The definition of failed neuraxial block placement includes lack of adequate pain relief after 45 minutes as this has been shown to correlate to a lower patient satisfaction². The Obstetric Anaesthetists Association advises patients with a high BMI that it could take longer to both site a neuraxial block and get benefit from it. Despite this, improvements could be made in order to meet audit standards. The routine use of ultrasound in this patient population has been shown to reduce the number of attempts and needle redirections for successful block placement. Increased training and guidance in ultrasound use should therefore be encouraged. The low rate of re-sites during labour is positive and suggests that although taking longer to site/receive benefit from, epidurals are being used for labour analgesia effectively.

Results

Sixty patients were identified during the audit period and the patient characteristics are illustrated in figure 1
65% (38) of blocks were sited ‘out-of-hours’ (1800–0800) and 90% (54) were sited by non-consultant anaesthetists.. Table 1 describes the audit standards and the audit results.

Of the 18% (11) that did not have successful blocks:

- 5% (3) went on to have a re-site (one successful)
- 5% (3) had a spinal in theatre
- 8% (5) had successful blocks after 45 minutes after siting

Although not an audit standard, additional data was collected on the time taken to site the neuraxial block:

- 55% (33) were sited within 20 minutes of sitting for the procedure
- 13% (8) took longer than 40 minutes.

47% (28) of patients had an instrumental delivery or caesarean section in theatre and of these:

- 64% (18) had their epidural topped up successfully
- 32% (9) converted to spinal one patient underwent a general anaesthetic

Table 1

Best practice standards as defined by RCoA	Audit Standard	Results from WSH
Block Successful	85%	82%
Re-sites during labour	<15%	5%
Accidental dural puncture	<1%	No accidental dural punctures
Adequate analgesia at 45 minutes after start of procedure	>88%	75%

References:
1. Patel SD, Habib AS. British Journal of Anaesthesia Education. Anaesthesia for the parturient with obesity. 2021;21:180-186
2. Royal College of Anaesthetists. Raising the Standards: RCoA quality improvement. 4th edition, September 2020. Chapter 7. accessed on 25/01/2024