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Reasons for Providing General Anaesthesia for Elective Caesarean Section

AR McCallum, K Litchfield, RJ Kearns
Department of Anaesthesia, Princess Royal Maternity Hospital, Glasgow, UK

Introduction

The Royal College of Anaesthetists (RCoA) suggest that >95% of elective (category 4) caesarean sections (CS) should be carried out under regional anaesthesia, due to the lower risk of maternal and neonatal morbidity.[1] General anaesthesia (GA) does, however, retain a place within category 4 CS in cases where regional anaesthesia is refused or medically contraindicated. Within our large tertiary obstetric unit, we wished to characterise the reasons for undertaking planned elective general anaesthesia for caesarean section.

Methods

Caldicott Guardian approval was obtained for retrospective review of all patients undergoing elective CS under GA between 1st January 2018 and 31st December 2019. Patients were identified through interrogation of the local theatre management system (Centricity Opera, GE Healthcare). In cases where GA was not the initial agreed plan for anaesthesia (i.e. in cases of failed regional anaesthesia) patients were excluded. Data on patient demographics, co-morbidities and reasons for elective GA were then collected from the electronic patient records (Badgernet, Clevermed and Clinical Portal, Orion Healthcare). Analysis was performed using Microsoft Excel and descriptive statistics presented as median [IQR] or n (%).

Results

A total of 1956 elective caesarean sections were carried out over the two year study period, in thirty-three cases (1.7%) general anaesthesia was the pre-planned anaesthetic technique. Patient demographics are shown in Table 1, with the reasons listed for GA shown in Figure 1. The underlying reasons for the 10 maternal requests for GA are explored in table 2.

Variable	Median [IQR]
Age, years	30 [25-34]
Previous live births, n	1 [0-2]
Gestation at Delivery, completed weeks	39 [37-39]
Weight at booking, Kg	65 [59-85]
BMI at booking, Kg/m^2	25.0 [21.0-31.3]

Table 1: *Demographics of studied patients*

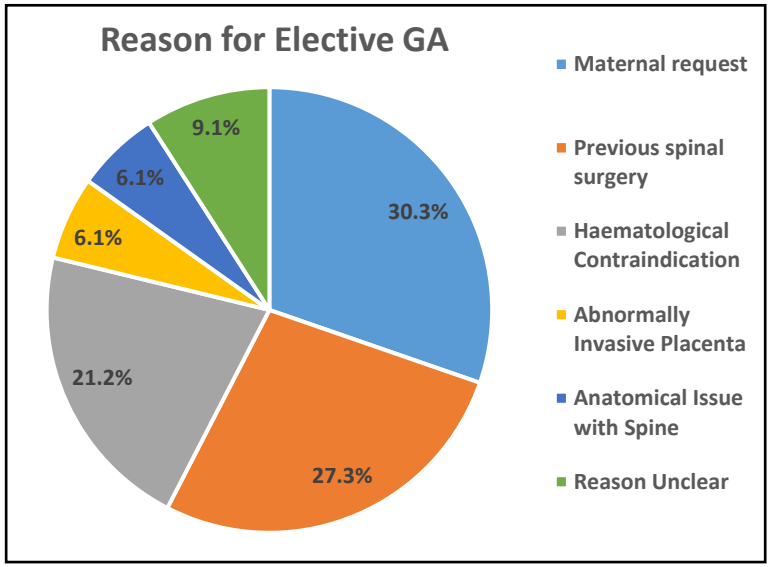


Figure 1: *Reason for elective GA for caesarean section*

Reasons for Maternal Request
Needle Phobia *[3 patients]*
Previous positive experience of obstetric GA *[2 patients]*
Previous negative experience of regional anaesthesia *[2 patients]*
Anxiety regarding having operation whilst awake *[2 patients]*
Palpation of spinous processes extremely painful *[1 patient]*

Table 2: *Reasons why mothers requested GA for elective CS*

Discussion

Compared to published literature, our rates of GA of elective CS are low and fall well within the RCOA's audit standard.[1,2] Maternal request was the single most common indication of providing general anaesthesia for CS, being responsible for almost one third of GAs performed. Amongst these patients needle phobia is common (30% of cases) as was either a previous positive experience with GA or negative experience of regional anaesthesia. Further work may include interventions to address the barriers to regional anaesthesia (such as psychological support for needle phobia). A larger timeframe and cohort of patients may also allow for greater understanding of the subject, and an analysis of whether rates of elective GA for CS are changing with time.

References

1. Royal College of Anaesthetists. Raising the Standards: RCOA Quality Improvement Compendium. Chapter 7: Obstetric Practice. Available from: https://rcoa.ac.uk/sites/default/files/documents/2020-08/21075%20RCoA%20Audit%20Recipe%20Book_16%20Section%20B.7_p241-268_AW.pdf

2. Juang J, Gabriel RA, Dutton RP et al. Choice of Anesthesia for Cesarean Delivery: An Analysis of the National Anesthesia Clinical Outcomes Registry. Anesth Analg, 2017; 124: 1914-7