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Retrospective review of conduct of general anaesthesia for caesarean section in a tertiary maternity unit

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Introduction

With the increasing use of neuraxial techniques, general anaesthesia for caesarean section is now a relatively rare occurrence. However, there remains a small number of clinical scenarios where it is unavoidable.

Obstetric patients have consistently been shown to be at higher risk of failed intubation,[1] aspiration complications and awareness under anaesthesia.[2] We conducted this study to review current practises within our institution in regards to conduct of general anaesthesia for caesarean section, and to assess the incidence of any potential adverse events related to general anaesthesia.

Methods

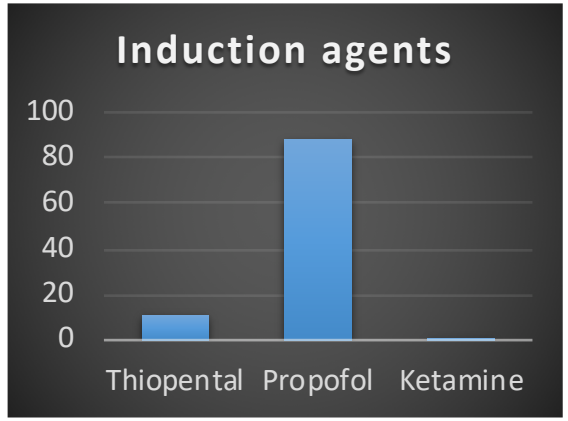
Retrospective data was collected via a chart review of anaesthetic records on all women who underwent general anaesthesia for caesarean section in a large tertiary maternity unit over an 18-month period (July 2018- December 2019).

Results

A total of 140 cases were identified, two of whom had no anaesthetic record and so were excluded. Most cases occurred in the context of a time critical emergency, with 38.5% and 37% being category 1 and 2 caesarean sections, respectively. A consultant anaesthetist was present for 44% of cases, with 87% of these occurring during regular weekday working hours.

Documentation of mode of intubation was poor, with only 46% documenting the method used. However, videolaryngoscopy was reported in 37% and direct laryngoscopy in 9%. A bougie was required in only 14% of cases. Rapid sequence induction with propofol was by far the most common approach, accounting for 88% of cases, while the choice of muscle relaxant was evenly distributed between rocuronium and suxamethonium (49 vs 51% respectively).

The vast majority did not use an opioid at induction (65%), with fentanyl being the most common if used. A tracheal tube was the mode of ventilation for all but one case, which was the only documented instance of failed intubation or adverse event related to anaesthesia and required ventilation with a supraglottic airway device.



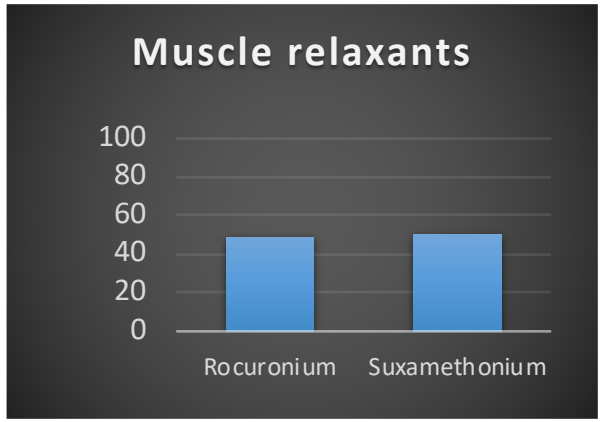


Table 1 & 2; Illustrate the prevalence of various induction agents and muscle relaxants used.

Discussion

The rising prevalence of rapid sequence induction with propofol and rocuronium in our study is in notable contrast to the traditional approach of thiopental and suxamethonium for general anaesthesia for caesarean section.[3] This likely reflects an increasing lack of familiarity with thiopental as an induction agent and an attempt to avoid adverse events by using drugs that are more commonplace in anaesthetists day-to-day practice. Of note there were no episodes of accidental awareness reported despite this higher use of propofol, which is often quoted as a reason to avoid it's use in this cohort.

Although airway documentation was poor, the higher reported use of videolaryngoscopy also reflects a potential change in clinical practice, recognising the increased risks associated with the obstetric airway. Our results have also led to the introduction of a specific document for all cases of general anaesthesia for caesarean section within our department, to ensure more accurate recording of airway management.

References

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2. Delgado C, Ring L et al. General Anaesthesia in Obstetrics. BJA Educ 2020; 20; 201-7.
3. Odor PM, Bampoe S, et al. General anaesthetic and airway management prctise for obstetric surgery in England: a prospective, multicentre observational study. Anaesthesia 2020; https://doi.org/10.1111/anae.15250