Gas induction for a severely needle phobic parturient: Are the risks truly understood?

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Introduction

Problem

- Severe needle phobia is well recognised but presents a challenge to anaesthetists, especially for parturients requiring caesarean sections
- Extreme needle-phobia may rule out regional so a general anaesthetic (GA) with an inhalational induction seems to be the only option - however risks, especially of aspiration, are high

Literature review

- There are limited case reports in the literature describing gas induction GA for needle-phobic parturients for caesarean sections [1,2]
- This case report adds to the body of evidence of this challenging anaesthetic, with the added complication here of a post-partum haemorrhage

Case Report

Background

A 19-year-old primiparous patient presented to antenatal services giving a history of severe needle phobia, declining all antenatal blood tests. Despite early referral for psychological input, therapy only began at 35 weeks gestation. At anaesthetic clinic, needle free options were discussed and, despite explaining the increased risk of gastric aspiration, an elective CS with inhalational induction at 37 weeks was planned.

Management

Induction was with oxygen/sevoflurane 1-8%, and once consciousness was lost intravenous (IV) access secured. Cricoid was applied throughout and 100mg propofol & 100mg rocuronium were administered prior to successful first pass endotracheal intubation. Surgery immediately commenced and a male neonate was delivered 9 min post-induction, with Apgar scores of 4 at 1min, 6 at 5min and 9 at 10 min. Significant uterine atony resulted in a post-partum haemorrhage intraoperatively of 1400mls. This was managed medically with a total of IV oxytocin 10 i.u. followed by 10i.u./hr infusion, intramuscular (IM) ergometrine 500ug, IM carboprost 250ug IM and misoprostol 1mg per rectum. Furthermore, sevoflurane was stopped and a propofol infusion was started to maintain anaesthesia. Surgical management included B-Lynch sutures. Cell salvage was used with 200mls autologously transfused back to the patient. She was extubated without incident, declined further blood tests post CS and was discharged on day two.

Discussion

- Inhalational induction of GA remains a high-risk option for caesarean section and should only be used as a last resort for the most severe needle-phobic parturients
- A higher concentration of sevoflurane is required for induction, which may exacerbate uterine atony leading to an increased risk of post-partum haemorrhage
- Efforts should be made to have early psychological input, ideally prior to pregnancy

1. Simon GR, Wilkins CJ, Smith I. Sevoflurane induction for emergency caesarean section: two case reports in women with needle phobia. International Journal of Obstetric Anesthesia. 2002 Oct 1;11(4):296–300.

2. Parrott N, Prabhu P, Yeow C. Inhalational induction of general anaesthesia for elective caesarean: ethical acceptability in treatment-resistant needle phobia? International Journal of Obstetric Anesthesia. 2020 Aug 1;43:27–9.

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