

RAPID SEQUENCE INDUCTION IN OBSTETRICS: A SURVEY OF PRACTICE ACROSS THE NORTH EAST AND CUMBRIA

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INTRODUCTION

Induction of general anaesthesia in Obstetric patients is usually performed with a Rapid Sequence Induction (RSI), which is a core anaesthetic technique that was first described in 1961¹. The classical method involves the use of thiopentone for induction of anaesthesia, suxamethonium for neuromuscular blockade and the application of cricoid pressure to reduce the risk of regurgitation. There is now heterogeneity of practice and evidence that performance of this technique has undergone change from the classical method, both in an Obstetric² and in a general adult^{3,4,5} population. We aimed to investigate whether this change was ongoing and to quantify the methods in common use across our region.

METHODS

We conducted a service evaluation across 8 hospitals in the North East and Cumbria between 17/4/23 and 1/8/23. Clinicians performing any procedure on an Obstetric patient that they categorised as an RSI were asked to complete a survey on Google Forms. This was advertised via email, poster and verbally by the study team. Clinician involvement was voluntary.

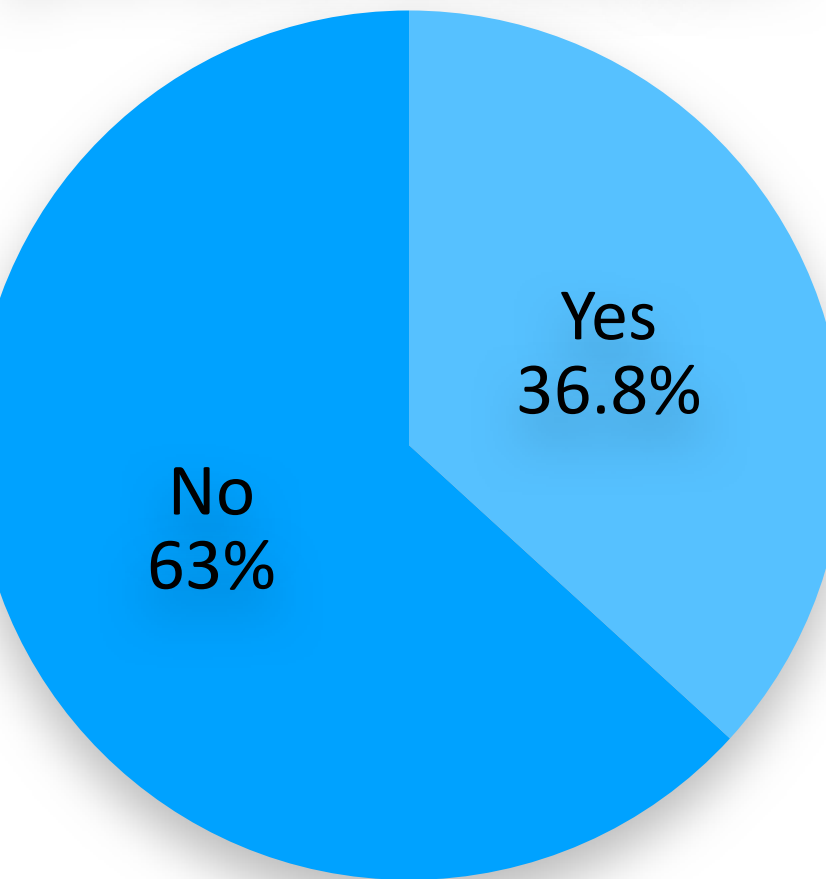
RESULTS

- We received a total of 87 responses
- 69 responses (79.3%) were from doctors in training and 16 (18.4%) were from consultants
- A large majority (85.1%) were for anaesthesia for Caesarean section

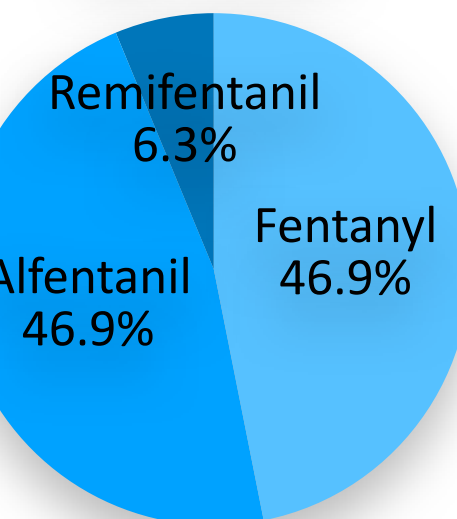
Opiates:

- Intravenous opiates were given at, or prior to, induction, by 36.8% of respondents (32 cases)
- Additionally, some cases had received pethidine, intrathecal or epidural opiates
- If an intravenous opiate was given, this was most commonly fentanyl or alfentanil (46.9% and 15 cases each)

Were intravenous opiates given prior to induction?



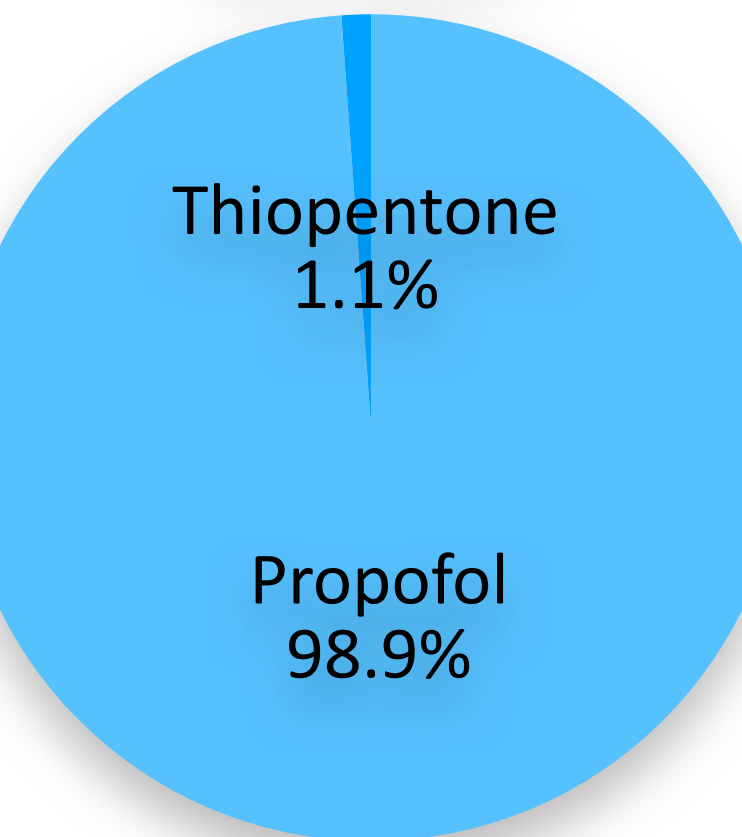
If opiates were given, which one was used?



Induction agent:

- In an overwhelming majority of cases, propofol was the induction agent used
- Only one case reported the use of thiopentone
- 8 respondents (9.3% of cases using propofol) reported the use of TIVA

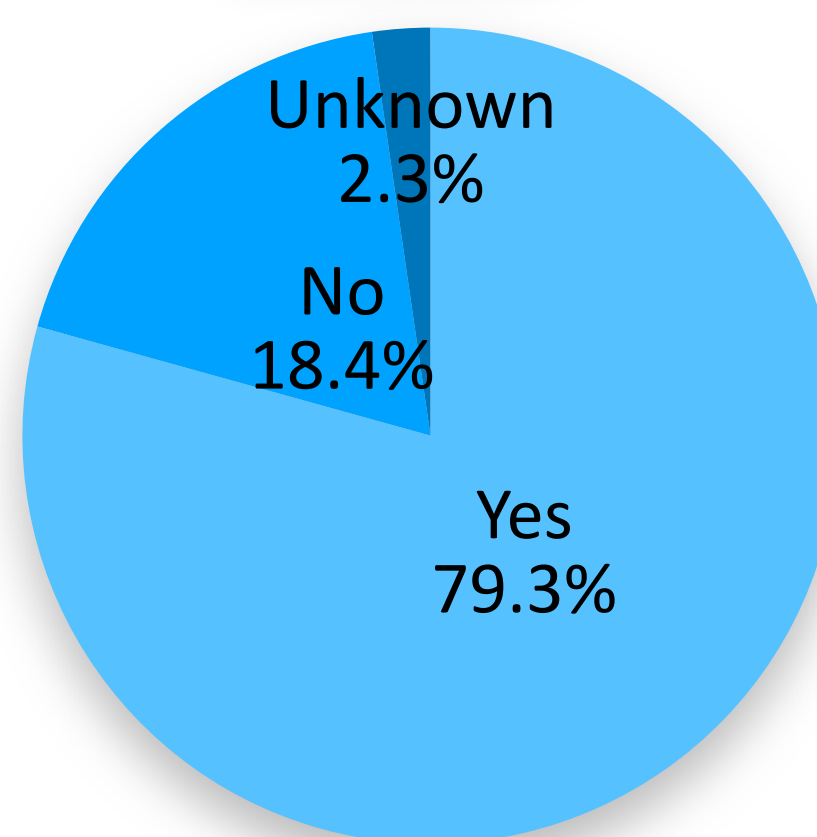
Which induction agent was used?



Ventilation:

- A large majority of responses indicated that the parturient had been given at least some breaths via bag-mask ventilation

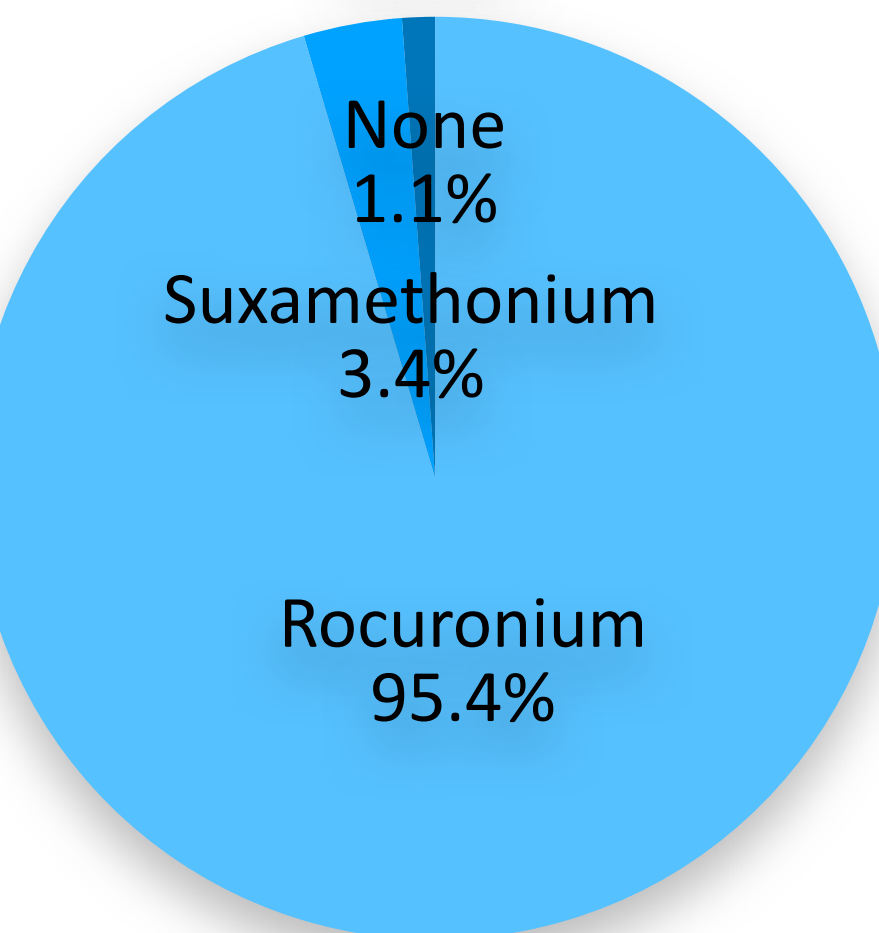
Did the patient receive any breaths via bag-mask ventilation?



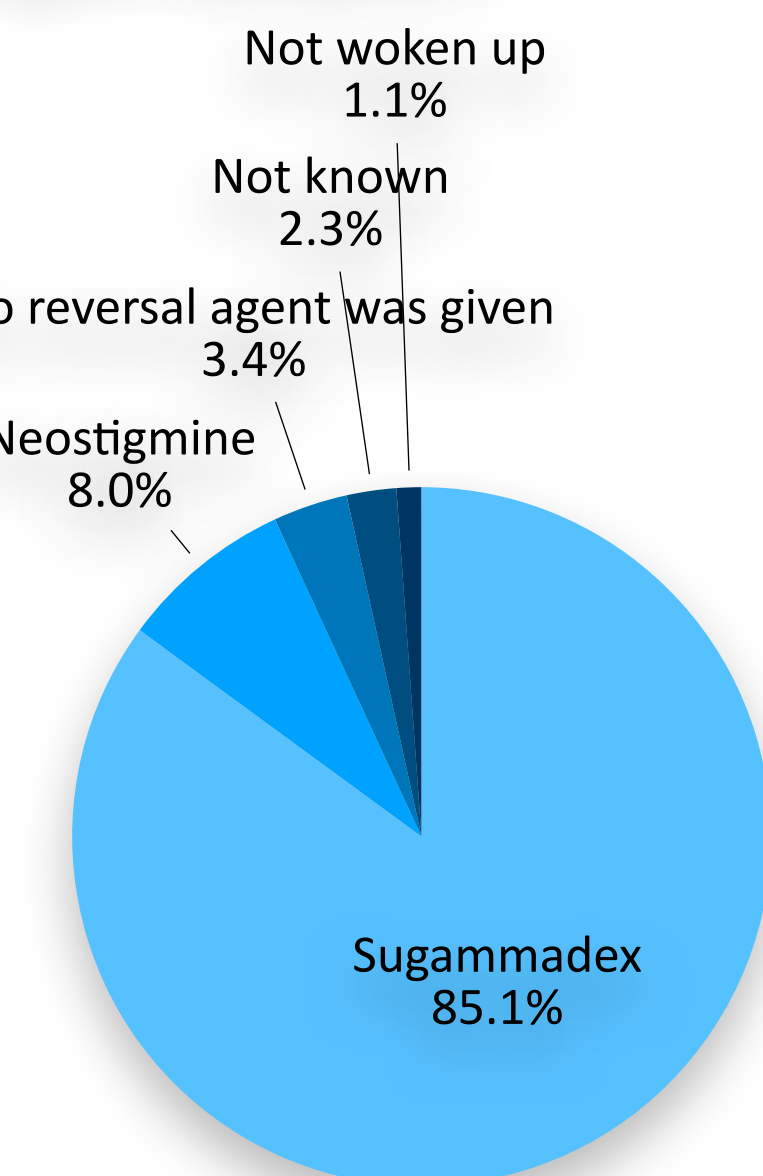
Muscle relaxant:

- Rocuronium was by far the most commonly used muscle relaxant
- Only three cases reported the use of suxamethonium
- Unsurprisingly given the high rate of rocuronium use, the majority of patients were given sugammadex as a reversal agent (89.2% of those given rocuronium were given it)

Which muscle relaxant was used?



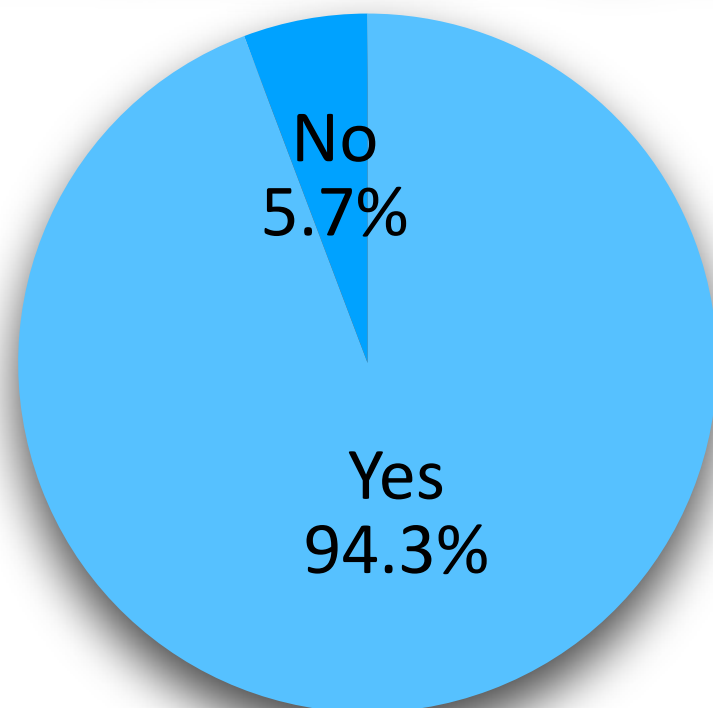
Which reversal agent was given?



Cricoid pressure:

- A large majority of respondents indicated the use of cricoid pressure, in line with the traditional technique

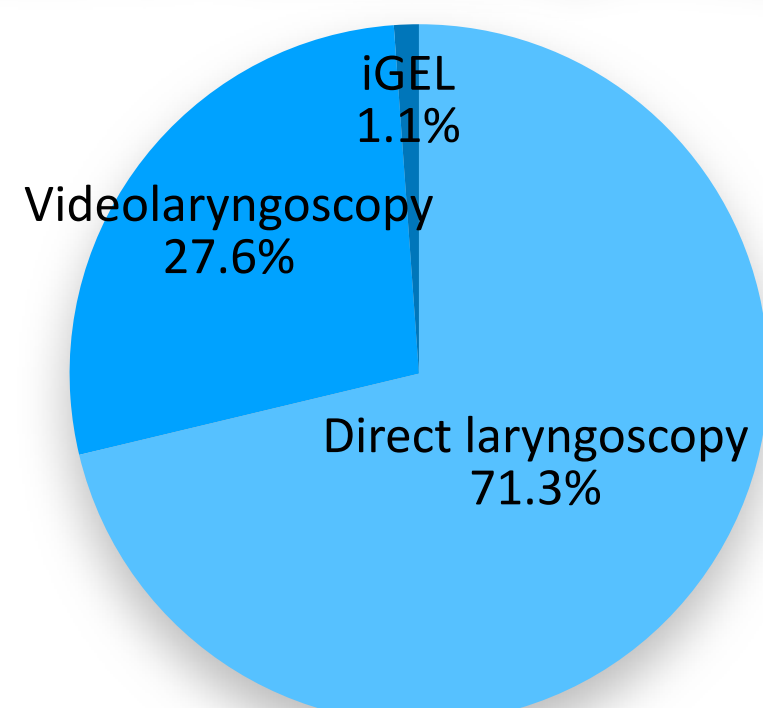
Was cricoid pressure applied?



Laryngoscopy:

- Most cases had used direct laryngoscopy
- However, a significant minority - over a quarter - used videolaryngoscopy

Was direct or videolaryngoscopy used?



CONCLUSIONS

Our results suggest a significant change in the conduct of RSIs in Obstetrics. Only a decade ago, the NAP5 activity survey⁶ found that thiopentone and suxamethonium were used in 100% of RSIs performed for general anaesthesia for Caesarean section. Our results show almost the complete inverse of this. There is existing evidence of evolution of the classically described RSI technique in both an an Obstetric² and in a general adult^{3,4,5} population and our results are consistent with this trend continuing. We have also observed considerably higher use of videolaryngoscopy and increased use of TIVA. Our conclusions are limited by the fact that participation in the survey was voluntary. In addition, they may not be valid if extrapolated across the UK, as there has previously been noted to be regional variation in choice of induction agent in this population².

REFERENCES

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