Evaluating the role of local ODP teaching sessions in improving the provision of general anaesthesia in obstetrics.

H.Sheppard, J.Critchley, N. Freeman, N.Alexander, K.Theodosiou, J.Robertson
Simpson Centre for Reproductive Health, Royal Infirmary of Edinburgh, Scotland, UK

Introduction

General anaesthesia (GA) in obstetrics is associated with an increased rate of awareness and failed intubation, the rates of which have remained largely unchanged over the past 30 years. Furthermore the heightened sense of urgency that can often accompany category 1 caesarean sections only serves to accentuate the existing situational and human factors at play.

Aiming to reduce failed intubation rates and improve patient safety, an ongoing quality improvement project within our department has looked to standardise the approach to the induction of anaesthesia and particularly to Rapid Sequence Induction (RSI).

Introduction of an RSI checklist in November 2020 improved many aspects of our induction process but there remained much room for improvement. Use of nasal cannulae, bispectral index (BIS) , utilising a videolaryngoscope (VL) as first line, along with use of the checklist itself were areas that continued to show ongoing user variability.

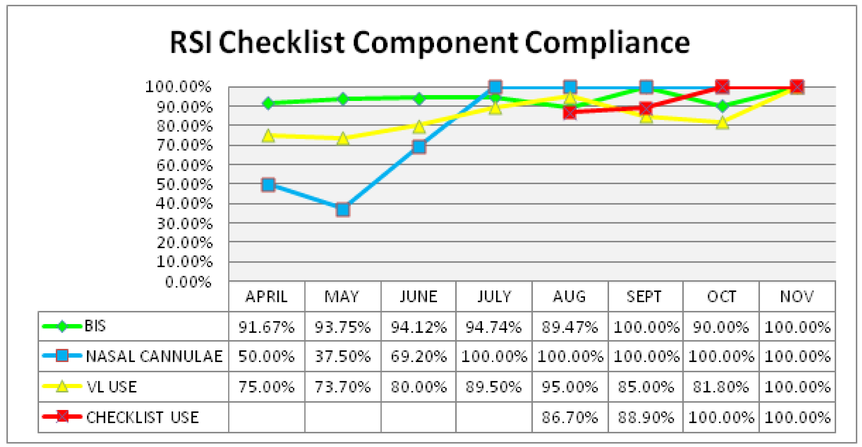
We introduced local small group teaching sessions with the Operating Department Practitioners (ODPs), aiming to reinforce the benefits of using a checklist in the peri-induction period, improve communication across the team and encourage active followership.

Results

Audit results showed that the introduction of the teaching sessions improved compliance with all the components of the RSI checklist which had previously shown greatest variability. The RSI checklist was used in all cases compared with an average of 86.7% previously.

Nasal cannulae were now being used in 100% of cases compared with the previous monthly average of 59.17%. BIS use increased to 94.87% on average compared to the previous 85.82%. Using a video laryngoscope as the first line device improved from an average of 83.05% to 90.45%.

Feedback from the ODPs reported that the checklist was a useful prompt which commonly helped maintain a calm and focussed environment at the time of induction. It was not perceived to be a barrier to efficiency but rather to effectively utilise the time when pre-oxygenation is occurring to improve patient safety. Furthermore ODP's reported that, in conjunction with the checklist, the teaching sessions had furthered their confidence in asking for components of the checklist to be implemented.



	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV
BIS	91.67%	93.75%	94.12%	94.74%	89.47%	100.00%	90.00%	100.00%
NASAL CANNULAE	50.00%	37.50%	69.20%	100.00%	100.00%	100.00%	100.00%	100.00%
VL USE	75.00%	73.70%	80.00%	89.50%	95.00%	85.00%	81.80%	100.00%
CHECKLIST USE					86.70%	88.90%	100.00%	100.00%

Method

Teaching sessions took the format of an interactive workshop centred around a slideshow presentation. Sessions reinforced key areas of knowledge, addressing factors that increase the risks of GAs in an obstetric setting with specific focus on those risks that are modifiable. The evidence behind each component of the RSI checklist, in reducing risk and improving safety margins, was highlighted. Reflective feedback from observation and experience of current practice in theatre was encouraged. An ongoing audit within the department was used as a tool to evaluate the efficacy of these teaching sessions. The audit recorded data on all aspects of the GA including time, date, category of procedure, if the RSI checklist had been utilised, number of intubation attempts, choice of induction drugs and layrngoscope used.

Conclusion

ODPs have commented frequently that the most important aspect of the relationship between themselves and the anaesthetist is communication.[2] Assigning the role of completing the RSI checklist to the ODP, ensures the lines of communication are opened, focussed and directed in what can often be a pressurised and busy environment.

ODPs are ideally positioned to help instigate long term change; teaching sessions highlighted the valuable role that they have within our team, improved their confidence in asking for components of the checklist to be implemented and encouraged pro-active followership.

A checklist approach to delivery of an RSI has previously been welcomed and seen to be highly effective in other high pressure environments across the hospital.[3] It looks to reduce variability arising from human and situational factors, lowering complication rates and improving patient safety.[2] The RSI checklist serves as an important prompt for each component of the induction process; performed during pre-oxygenation it does not delay proceedings but utilises the time to optimise intubation conditions. However, it can only be effective if utilised and we offer small group teaching sessions as one means to improve checklist compliance, and thus safety for our patients.

References

1.Mushambi, M. and Kinsella, S., 2015. Obstetric Anaesthetists' Association/Difficult Airway Society difficult and failed tracheal intubation guidelines – the way forward for the obstetric airway. British Journal of Anaesthesia, 115(6), pp.815-818.

2.Smith, A. and Mishra, K., 2010. Interaction between anaesthetists, their patients, and the anaesthesia team. British Journal of Anaesthesia, 105(1), pp.60-68.

3. Smith, K., High, K., Collins, S. and Self, W., 2015. A Pre-procedural Checklist Improves the Safety of Emergency Department Intubation of Trauma Patients. Academic Emergency Medicine, 22(8), pp.989-992.