

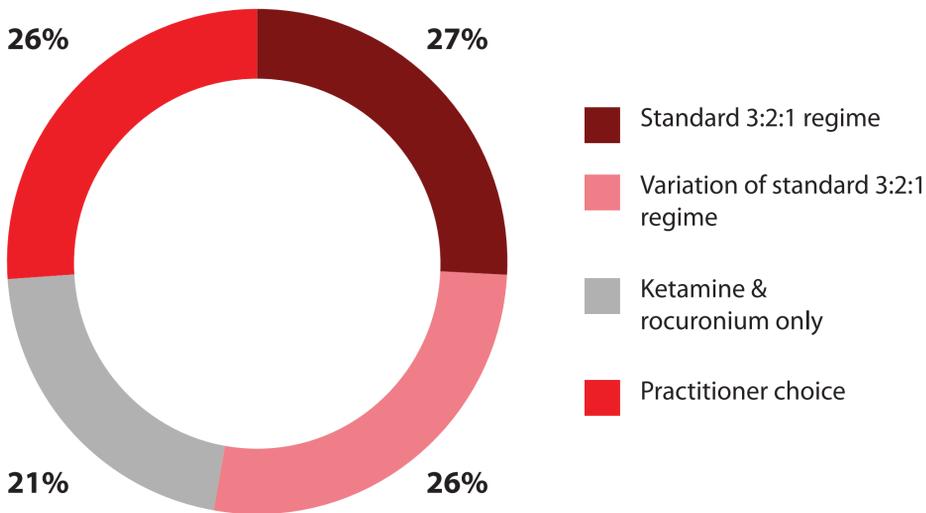
INDUCTION OF PRE-HOSPITAL EMERGENCY ANAESTHESIA I-PHEA: A NATIONAL SURVEY OF UK HEMS PRACTICE

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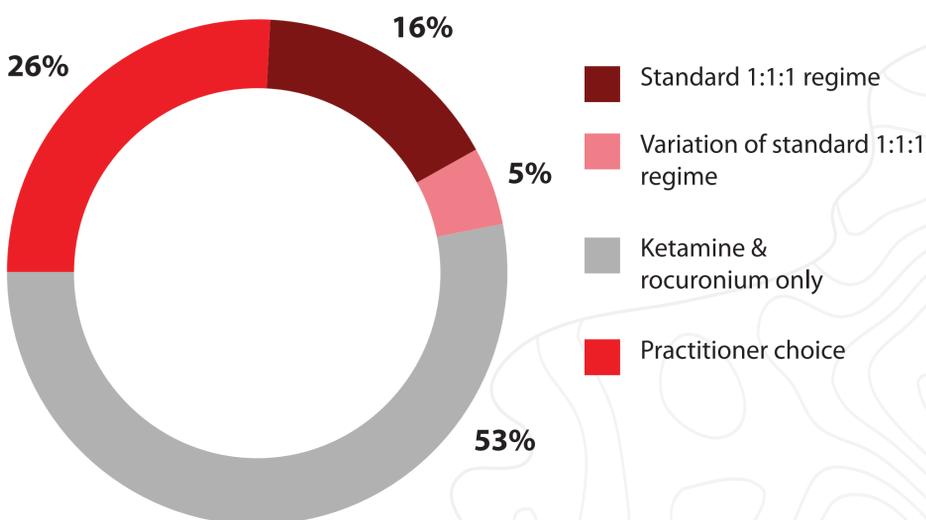
BACKGROUND

- Pre-hospital emergency anaesthesia (PHEA) is a critical intervention undertaken by helicopter emergency medical teams.
- Previous studies informed current practice for induction regimes, using a standardised approach of fentanyl, ketamine and rocuronium¹.
- There may be a trend towards post-induction hypotension attributed to the induction regime used^{2,3}.
- Several new combinations of fentanyl, ketamine and rocuronium are emerging in clinical practice³. There is currently no consensus on what induction regimes should be used.

Induction regime: haemodynamically stable patient



Induction regime: haemodynamically compromised patient



METHOD

- A semi-structured survey was distributed to the medical leads of all UK air ambulance organisations between December 2022 and February 2023.
- The survey sought to establish provision of pre-hospital emergency anaesthesia and current induction regimes for stable, unstable and post-cardiac arrest patients.
- Data was extracted from Microsoft Forms into Excel and reported using descriptive statistics.
- The survey was endorsed by the National HEMS Research and Audit Forum.

RESULTS

- Survey response rate 86% (n=19/22 air ambulances operating in the UK).
- 79% (n=15/19) services provide more than 100 PHEAs per annum.
- A combination of fentanyl, ketamine and rocuronium is used for induction of PHEA in all services, but dose regimes vary extensively.
- Ketamine and rocuronium is the predominant choice in unstable patients.
- There is variability in the dose of rocuronium from 1mg/kg to 2mg/kg, and the optimum dose remains unclear.
- There is no consensus on induction regimes used in patients with return of spontaneous circulation.

DISCUSSION

- There has been a change in how induction of anaesthesia is delivered, with an increasing trend towards practitioner choice of induction regime, over fixed regimes, adjusted to patient physiology/ needs.
- This demonstrates maturity and experience of pre-hospital services.
- There is some consensus in regimes used, particularly in haemodynamically compromised patients.
- There is a growing dataset that would enable development of a registry to better understand induction regimes and the impact on patient physiology.
- Further work on the optimal dose of rocuronium is warranted.

References

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