

Paediatric Emergency Department Intubation Audit

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Background

- Safety
 - Reported incidence of adverse events high
 - Predictability of adverse events unknown
 - Incidence of difficult laryngoscopy unknown
 - First pass success rate without desaturation / hypotension unknown

Aim

- Prospective description of practice and adverse events of endotracheal intubation in a large urban paediatric ED

Methods

- Prospective observational study
- Data recorded for all ED intubations including:
 - First pass success rate without desaturation or hypotension
 - Laryngoscopy grade (Cormack and Lehane)
 - Adverse Events

Degree of “unwellness” prior to intubation

- IV fluid / vasopressor support prior to intubation: 44%
- Desaturation (<90%) prior to intubation: 87%
- GCS <9 prior to intubation: 70%

Indication for intubation

- medical conditions (79%), most commonly status epilepticus (31%)
- trauma (21%), most commonly closed head injury (18%)

First pass success rate without Hypotension or hypoxia **49%**

- Overall first pass success rate **79%**

Adverse Events during intubation

- Hypotension **21%** (risk factors- CVS compromise prior to intubation, fentanyl or no dose reduction in induction agent)
- Desaturation (<90%) **14%** (risk factor- no apnoeic oxygenation)
- Cardiac arrest **0%**

Difficult Intubation

- 7% required <2 intubation attempts
- 0% required >3 intubation attempts

Difficult Laryngoscopy

- 2/71 (3%), both neonates Cormack and Lehane grade 3 on initial laryngoscopy, improved view with ELM

Summary

- ED intubation in children is a low frequency, high risk procedure
- The patient group is unwell prior to intubation
- Incidence of unanticipated difficult laryngoscopy is low
- Incidence of adverse events is high and predictable

Conclusion

**Avoidance of hypoxia
and hypotension
should be prioritised
during the peri-
intubation period**

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