



# Emergence delirium in children

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## Background

Emergence delirium (ED) is a dissociated state of consciousness in which the child is irritable, uncompromising, uncooperative, incoherent, and inconsolably crying, moaning, kicking, or thrashing'.<sup>(1)</sup> ED can disrupt the surgical repair, be distressing for parents and staff and may cause parental dissatisfaction with their child's care.<sup>(2)</sup> ED is much more likely to occur in paediatric patients between 2 and 5 years undergoing relatively painful procedures. Children who have ED are more likely to have new-onset postoperative maladaptive behavioural changes.

## Objective

This study was designed to compare the incidence of emergence delirium (ED) in children receiving induction by inhalational or intravenous anaesthesia.

## Methods

117 children included in the trial, ASA I-II, aged between 2 and 10 years. 69 scheduled for elective dental extraction and 48 scheduled for diagnostic magnetic resonance imaging (MRI). Study was initially done on dental and repeated on MRI patients to exclude pain as cofactor in emergence delirium. None of them received drug premedication, choice of induction agent was based on anaesthetist's clinical decision and all children were accompanied by at least one parent. Pre-induction anxiety was subjectively assessed by anaesthetist on that day. ED was defined as a Paediatric Anaesthesia Emergence Delirium scale (PAED)  $\geq 10$  points. A delirium-specific score (Scale A) was calculated from the first three items of the PAED score (eye contact, purposeful actions, awareness of the surroundings) and a nonspecific score (Scale B) from the last two items on the PAED score (restlessness and inconsolability).

## Results

There was no statistical significance regarding age, sex or weight between both groups (P value 0.12, 0.07, 0.19 respectively). Pre-induction anxiety did not show any significance difference between both groups (P value 0.61). Incidence of ED on waking and after 10 minutes was slightly higher with sevoflurane but average PAED score on waking and after 10 minutes did not show any statistical significance (P value 0.31, 0.65 respectively).

## Conclusion

The present study did not show statistical significance regarding the incidence or average PAED score following induction by inhalational or intravenous anaesthetics. There was always historical increase in the incidence of ED correlating with the introduction of modern short-acting inhalation anaesthetics.<sup>(3)</sup>

## References

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