



A PROSPECTIVE RANDOMISED DOUBLE BLINDED COMPARATIVE STUDY BETWEEN NASAL ATOMIZED DEXMEDETOMIDINE AND MIDAZOLAM AS PREMEDICANTS IN PAEDIATRIC ADENOTONSILLECTOMY

Anaesthesiology

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KEYWORDS

Adenotonsillectomy Midazolam Premedication Dexmedetomidine Nasal-atomiser

INTRODUCTION:

Adenotonsillectomy is a major ambulatory paediatric surgical procedure. Psychological trauma at the time of parental separation causes increase in haemodynamic variables. Midazolam is the gold standard premedicant(1). The latest route of premedication is the nasal route(2).Dexmedetomidine is a popular premedicant but there are so far no studies using nasal-atomizer.

OBJECTIVES:

Primary. To compare atomized nasal dexmedetomidine and midazolam regarding sedation and behavior scores at parental separation and mask induction and wake up score at extubation

Secondary. Haemodynamic parameters, time to reach Modified Aldrete score of 9,side-effects

Sample size based on Sedation score at parental separation.Minimum sample was 13 per group but we chose 30.

Inclusion criteria:

60 children,3-8years,of either sex ,10-25kg,for elective adenotonsillectomy,in whom parental consent was obtained ,were randomized by computer-generated sequence into 2 groups.

Exclusion criteria:

Children with respiratory infection, anatomical defects of the nose and upper airway, cardiovascular disease, allergy to study drugs, organ dysfunction.

METHOD:

Group A received nasal atomized midazolam 0.2mg/kg using INSED ATOMISER and Group B received dexmedetomidine 1mcg/kg using LMA MADNASAL. Premedicant was given 45mts before induction. Age, sex, weight and height were noted. Sedation was assessed every 15mts using 6 point scale for 45 mts and at parental separation and mask induction. Behaviour was assessed using 4 point scale. Wake up score using 4 point scale was assessed at extubation. Sedation score less than 4, behavior less than 2 and wake up less than 2 were taken as satisfactory. Systolic blood pressure, heart rate and oxygen saturation were assessed till patient was discharged from recovery. Time to reach Modified Aldrete score of 9 and side effects were noted. Data was collected by the blinded investigator and analysed statistically.

Statistical tests: Chi-square test, Independent student's t-test, repeated measures of Anova

RESULT:

Nasal atomized dexmedetomidine 1 mcg/kg provides better sedation than nasal atomized midazolam at 0.2mg/kg (93.3% vs 33.3%,p=0.000).Behaviour and wake-up scores, time taken to reach Modified Aldrete score of 9 were similar. No adverse side-effects.

CONCLUSION:

Nasal atomized dexmedetomidine is a better sedative premedicant in young children compared to midazolam.

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