

Dexamethasone combined with ondansetron is more effective than with droperidol against nausea and vomiting after pediatric tonsillectomy. A randomized, double-blind trial.

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Background and Goal of Study

Rate of postoperative nausea and vomiting varies between 40 and 75% in children. Dexamethasone, ondansetron and droperidol are effective antiemetic drugs that have never been investigated when administered in combination. This randomized, double-blind trial tested the hypothesis that the combination of dexamethasone with droperidol is as effective as the combination of dexamethasone with ondansetron for the prophylaxis of nausea and vomiting after pediatric tonsillectomy.

Materials and Methods

Three hundred children scheduled for bilateral tonsillectomy with or without adenoidectomy were randomized into three groups according to an intravenous regimen administered after induction of anaesthesia: Group D received dexamethasone (250 mcg/kg); Group DD received dexamethasone (250 mcg/kg) and droperidol (10 mcg/kg); Group DO received dexamethasone (250 mcg/kg) and ondansetron (150 mcg/kg). The primary outcome was the rate of postoperative nausea and vomiting on postanaesthetic care unit. Secondary outcomes included rates of side effects such as hemorrhage, extrapyramidal syndrome or somnolence.

Results

The rate of postoperative nausea and vomiting on postanaesthetic care unit was significantly reduced in Group DO (Group D = 44%, Group DD = 36%, Group DO = 9%; $p < 0.0001$). There were no differences in the rates of side-effects between groups.

Conclusions

Based on our results, we conclude that the combination of dexamethasone with ondansetron is more effective than the combination of dexamethasone with droperidol for the prophylaxis of nausea and vomiting after pediatric tonsillectomy.