The effect of prophylactic dexamethasone on early postoperative nausea, vomiting and pain in pediatric patients undergoing adeno/tonsillectomy surgery

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Abstract

Introduction: Adeno/tonsillectomy surgery associated with multiple complication such as nausea, vomiting, and pain as a result the patient´s ability to resume daily activities decline, so postoperative symptoms should be controlled .
The aims of this study were to evaluate the effect of prophylactic dexamethasone on postoperative nausea, vomiting, and pain for pediatric patients with moderate to high risk for PONV undergoing adeno/tonsillectomy surgery under general anesthesia and to identify disturbing postoperative symptoms reported by patients after surgery.

Methodology: A prospective, randomized, double-blind and placebo controlled trial conducted to evaluate the effect of prophylactic dexamethasone on postoperative nausea, vomiting and pain in 60 pediatric patients, ASA physical status I and II patients undergoing adeno/tonsillectomy surgery under general anesthesia with a risk of ≥ 30% for PONV are randomly assigned to two groups (n = 30 each). Group one, a dexamethasone group, group two a, placebo group. The incidence of postoperative symptoms focusing on the incidence and severity of nausea, pain and frequency of vomiting and the need for “rescue” therapy are assessed at specific time intervals until discharge after surgery. Patient satisfaction with the management of their PONV is assessed at time of discharge.

Settings: Patients are recruited from a governmental hospital in Nablus/Palestine (Rafeedia Hospital).

Results: There's no differences in demographic characteristics, pain and rescue medication.
There are significant differences in vomiting episodes on the whole entire period of the study at the 0.05 level between the dexamethasone group 4 (26%) compared to placebo 11 (73%) (P = 0.0114). Benefit for the dexamethasone group .
There are significant differences in nausea episodes on the whole entire period of the study at the 0.05 level between dexamethasone group 7 (46%) compared with placebo 14 (93%) (P = 0.006). Benefit of the dexamethasone group.

There are significant differences in PONV on the whole entire period of the study at the 0.05 level between the dexamethasone group 7 (46%) compared to placebo, 14 (93%) (P = 0.0060). Benefit for the dexamethasone group .
There is a significant difference for complete response on the whole entire period of the study at the 0.05 level between the dexamethasone group 8(53%) compared with placebo group 1 (6%) with (P=0.002). The benefits for the dexamethasone group.

Conclusion: The use of dexamethasone for the prevention of PONV of the dose 0.1 mg/kg is effective and safe. It is recommended that dexamethasone be administered immediately at the induction of anesthesia. Dexamethasone is effective in preventing an early onset of PONV. Dexamethasone reduces pain at discharge therefore pain medication postoperatively should be given as a regular schedule, rather than waiting for the child to complain of pain.

Keywords: Dexamethasone, placebo, peadiatric, Nausea, Vomiting, adeno/tonsillectomy, PONV.