Lidocaine 5% spray instillation for post-extubation laryngeal spasm management following minor ENT procedures

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Background - Aim

Post-extubation laryngeal spasm is a rather common complication following ENT procedures. On a prospective study in a course of 15 years we studied 1879 patients aged 15-64, who underwent minor surgical procedures, such as amygdalectomy, microlaryngoscopy, adenotomy, sinusotomy, and nasal septoplasty or polypectomy.

Material-Methods

Anaesthetic protocol was the same for all studied patients. Ranitidine 50mg and dexamethasone 8mg iv were administered preoperatively as gastric protection and antiemesis, anaesthesia was induced by midazolam 0.03-0.05mg/kg and propofol 1.5mg/kg, muscle paralysis was achieved by cis-atracurium 0.15mg/kg and analgesic needs were covered by 2-4µg/kg accordingly. Mean operation duration was 38±6,5min. Most patients 1765 (93.9%) received clonidine 1.5µg/kg iv as hypotensive agent to control excessive bleeding. Paracetamol 1gr and lornoxicam 8mg iv were administered to all patients as postoperative analgesia. For muscle paralysis reversal patients were given atropine (0.014mg/kg) and neostigmine (0.05-0.08mg/kg). Among studied patients, 341(3,72%) demonstrated post-extubation inspiratory stridor, SpO₂ decrease and agitation which indicated laryngospasm. Drug allergies and vocal cord dysfunction due to residual muscle paralysis were excluded.

Results

In all patients slight positive pressure ventilation with face mask 100% O₂ was applied and lidocaine 5% spray (5-10 times) was intrabuccally administered. In 306 (89.7% among patients who developed stridor), signs of laryngeal spasm improved and they did not need any other medication. In 39 patients (11.43%), lidocaine 1.5 mg/kg and diazepam 0.04-0.08mg/kg iv were administered in order to manage laryngospasm and none of the patients needed re-intubation. All patients did not seem to remember anything afterwards and their overall satisfaction was high.

Conclusion

A few publications report laryngeal spasm, or bronchospasm improvement by lidocaine used in aerosol mask, but there are no data about using lidocaine spray directly intrabuccally in post extubation laryngospasm.