

Prevention of Lip injuries following Laryngoscopy and Endotracheal Intubation during General Anesthesia

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Citation

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Abstract

Dear Editor,

Several studies have reported soft tissue injuries during laryngoscopy and endotracheal intubation required for general anesthesia (GA). They include lip injuries, tooth damage, laceration of oral mucosa and tongue and sore throat. [1, 2].

Lip injuries are frequently encountered during routine practice of GA- both, in tropical and temperate climates, conceivably attributable to preexistent desiccation of the lips (in the absence of any direct contact with the instruments and medical conditions that cause xerosis of skin and mucosa). Such injuries are potentially preventable possibly by the local use of emollients for few days prior to the GA [3]. Nonetheless, only modest concerns have been raised in regard to the factors involved in the injuries to the lips and their prevention. Lip injuries have significant physical, aesthetic and emotional consequences following the recovery of the patients from GA.

The role of emollient-Glycerin and its efficacy in the prevention of lip injuries (occurring even with gentle laryngoscopy and placid intubation during GA) was assessed in a prospective study carried out at Prince Saud Bin Jalawi Hospital, Mobarraz, Al-Hasa, Saudi Arabia, between July 2000 and June 2001.

The study involved 438 patients (240 male and 198 female) with a mean age 39.4 ± 9 years (range, 5- 65 years) and diverse diagnoses demanding surgical operations under GA. Patients were randomly assigned to one of the two groups; Group I (n =49) included patients (mean age, 33.8 ± 4.9 years) who were subjected to GA without prior use of emollient while Group II (n = 389) comprised of those (mean age, 40 ± 6.2 years) who underwent meticulous local application of Glycerol twice every day for 2 days preceding

the operation under GA. An overall incidence of lip injuries of 20.32% (89/438) was observed during the study period. In Group I, 65.3% (32/49) of patients and in Group II, 14.7% (57/389) of the patients recorded lip injuries following instrumentation during GA. This difference was statistically highly significant [Relative risk (RR)- 4.226, 95% Confidence Interval (95%CI)-2.639-7.203, $p < 0.001$]. The incidence of the lower lip injuries (midline cracks often with mild bleeding and swelling), was significantly higher than that of upper lips (68.4% versus 31.6%). This difference was highly significant, as well (RR-2.226, 95%CI-1.615-3.076, $p < 0.005$).

Overall significantly lower occurrence of lip injuries in Group II in comparison to those in Group I clearly show that the simple technique of application of Glycerin as an emollient can effectively decrease the incidence of lip injuries associated with laryngoscopy and tracheal intubation in the patients undergoing GA. Higher incidence of lower lip injuries could possibly be attributed to relatively increased stretching of the tissues of lower jaw, to widen the mouth- during these procedures. The observance of the patients 'nil per orally' prior to the surgical operations with inadequate intravenous fluids support may be an additional risk factor that may enhance the aridity of the lips and ensuing lip injuries further.

Sincerely yours,

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