Techniques of securing endotracheal tube during cosmetic facial surgeries involving nose, cheeks, and chin

Dear Editor,

Securing endotracheal tubes (ETT) during facial cosmetic surgeries can be challenging.[1] We are reporting how ETT was secured in two patients who underwent cosmetic facial surgeries which demanded bilateral cheeks, chin, and nose to be free. Flexometallic ETTs were used and were secured to incisors.

In case 1, a 25-year-old female was posted for rhinoplasty, chin implant placement, and liposuction of the cheeks. After intubation, ETT was brought to the midline and a firm knot was made around ETT using size 1.0 silk (Centisilk, Centenial Surgical Suture Ltd, India) that was tied twice around ETT, and the knot was kept near the inner aspect of the upper incisors. Threads were then slipped down to gum through either side of one upper incisor, like performing dental flossing, and tied firmly on the buccal aspect of the incisor [Figure 1a].

In case 2, a 55-year-old female was posted for a chin implant, neck lift, lip lift, and liposuction of nasolabial folds. As incisors were closely placed, we failed to slip the thread between teeth down to the gum. Therefore, we decided to use a pre-stretched 26 G stainless steel wire (Ortho Max Mfg Co Pvt Ltd, India) which is commonly used by dental surgeons for arch bar fixation. The wire was wound twice around ETT and twisted repeatedly by holding both wires at a short distance from ETT using a needle holder. Once the wire was tightly wound around

Figure 1: (a) ETT secured with thread to the upper incisor, (b) ETT secured with stainless steel wire to lower incisors

ETT, both the free ends of the wire were brought out to the buccal aspect through the lateral part of the first two lower incisors close to the gum. Both the ends were held together and twisted repeatedly till it was secured tightly around the incisors. The extra length of twisted wire was then cut short, the free end turned away from the lip, and covered with a piece of transparent incision drape to avoid lip trauma [Figure 1b].

Fixing ETT using adhesive tapes to cheeks or chin was not practical in both patients as surgeries involved the chin and both cheeks and frequent assessment of facial symmetry intraoperatively was required. Preformed tube (oral/nasal) was avoided as surgeries involved the nose, chin, and neck. The use of a flexometallic tube prevented kinking of ETT and gave surgeons freedom to move the proximal part of ETT with an attached breathing circuit (covered in sterile plastic sheet) away from the surgical field with no distortion of facial anatomy. These requirements could have been met with submental intubation as in panfacial trauma,[2-4] but not considered as our patients were undergoing cosmetic procedures.

Though tying ETT with silk to incisors is totally atraumatic, dental wires may cause minimal gum injury. As tips of incisors are always broader than root, the chance of suture slipping out intraoperatively is rare, if the knot is tied firmly close to the root of incisors. ETT should not be tied to loose or partly broken incisors. Size 1.0 silk is thick and does not break easily. Double threads, if possible, can be used. However, the rare possibility of accidental extubation as in any facial surgery should be kept in mind. Interdental wiring is a safe technique even when used for long periods.[5] We recommend these two techniques of securing ETT to be considered during facial cosmetic surgeries.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initial s will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Quick Response Code:	Website: https://journals.lww.com/joacp
	DOI: 10.4103/joacp.joacp_132_22

How to cite this article: Rajan S, Suresh AP, Ramakrishnan M, Paul J. Techniques of securing endotracheal tube during cosmetic facial surgeries involving nose, cheeks, and chin. J Anaesthesiol Clin Pharmacol 2023;39:668-9.
Submitted: 10-Apr-2022 **Revised:** 01-May-2022
Accepted: 30-May-2022 **Published:** 18-Sep-2023