

Ilker Onguc Ayca<sup>a,\*</sup>, Huseyin Turgut<sup>b</sup>,  
Abdulmenap Guzel<sup>a</sup>, Erdal Dogan<sup>a</sup>, Gonul Olmez Kavak<sup>a</sup>

<sup>a</sup> Department of Anaesthesiology and Reanimation,  
Medical Faculty, Dicle University, Diyarbakir, Turkey

<sup>b</sup> Department of Anaesthesiology and Reanimation, Women  
Health and Gynecology Hospital, Diyarbakir, Turkey

\* Corresponding author.

E-mail: [ilkeraycan@gmail.com](mailto:ilkeraycan@gmail.com) (I.O. Ayca).

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## Is it a matter of habit?



## Será uma questão de hábito?

Dear Editor,

Postoperative respiratory complications reportedly occur in 4.3% of surgical cases (1.7% and 7.4% of cleft lip and cleft palate repairs, respectively).<sup>1</sup> Airway obstruction is the main early postoperative respiratory complication with an overall frequency of 2.3%.<sup>2,3</sup> Airway obstruction usually occurs following closure of a wide cleft palate or syndromic cleft associated with hypoplasia of the mandible, the presence of a hematoma, or the presence of packs accidentally left in the surgical site. However, an airway obstruction due to surgical repair of cleft as regard to a closure of the habitual anatomical airway and the reason for its postoperative unexpected respiratory complications have not been considered in cleft reports until now.

Patients with cleft lip may develop a habitual airway preoperatively, based on their cleft type and size. Because they do not have symptoms of breathing difficulty in the preoperative period, their main airway is not considered during preoperative anesthetic assessment; thus, the anesthetist may not be ready for an airway problem in the postoperative period. We reviewed our recent case series with respect to the incidence and possible causes of postoperative airway obstruction. Postoperative desaturation occurred in only one case in our series; all other reasons, such as opiate analgesic use and postoperative swelling or edema that may cause similar symptoms, were excluded. We present herein our view of airway obstruction, with consideration of a patient with unilateral lip cleft who developed postoperative desaturation.

Patients with clefts breathe mainly through one of the following routes:

- Oral airway
- Nasal airway
- Cleft airway

Breathing through the nasal airway is possible through the intact nostril in a patient with a unilateral complete cleft. Oral airway patency is more or less dependent on the positioning of the jaw and lower lip. However, the cleft airway will be occluded by the end of the operation. Therefore, during the preoperative period, infant patients who breathe predominantly through the cleft airway can manifest airway problems because of desaturation and

cyanosis related to closure of the cleft until they are able to change their breathing habit in the early postoperative period. Closing the cleft can be problematic, and a transitional period may be necessary to relieve the agitation and symptoms, similar to those observed during the postoperative period, in patients who have undergone nasal septum or rhinoplasty operations. Therefore, a relatively long period of airway use may be necessary until these patients learn to breathe through their "new" airway.

We recently encountered a 5-month-old patient with a unilateral complete cleft lip in whom the oropharyngeal airway had to be maintained in the mouth for 24 hours postoperatively. The baby tolerated the airway in his mouth even when fully awake without manifesting any signs of irritation, acting as if it were a pacifier (Fig. 1). Thus, cyanosis and desaturation were restored. Afterward, we taught his mother how to insert the airway into, and remove it, from his mouth as needed. When the baby needed to be fed and the airway had to be removed, we observed that he had learned to breathe through his new anatomical airway and no longer required the artificial airway. Remote

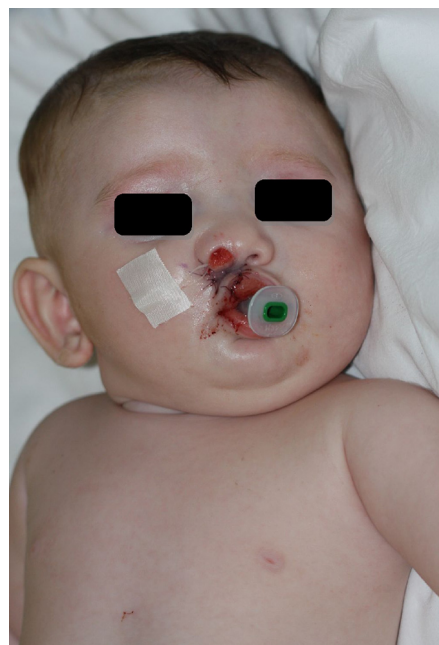
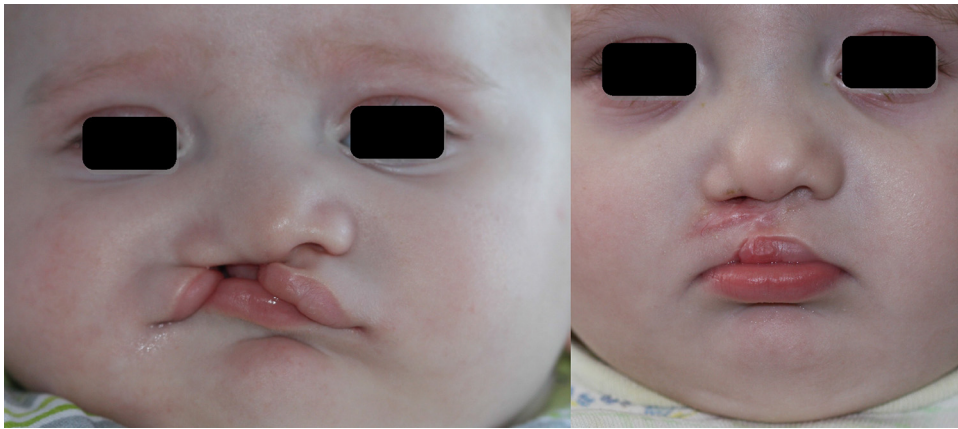


Figure 1 Awake baby with the airway in his mouth without any signs of irritation.



**Figure 2** Pre- and postoperative photographs of the patient.

monitoring of the patient for 24 hours postoperatively was adequately safe.

As we reviewed the preoperative photographs of the patient, we realized that his oral airway was structurally obliterated (Fig. 2). The lower lip was displaced and invading the cleft area. As we retrospectively reviewed our series of postoperative cleft lip photographs, we realized that this was not a consistent problem present in every patient.

In conclusion, surgical repair and cleft closure may result in desaturation following extubation in patients with clefts. Artificial oral airway use in the postoperative period can help with recovery from the desaturation. Preoperative assessment of the three above-mentioned airways in patients with cleft lip is important for anticipating being ready for postoperative respiratory complications.

### Conflicts of interest

The authors declare no conflicts of interest.

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Mehmet Yenidunya<sup>a</sup>, Menekse Oksar<sup>b,\*</sup>

<sup>a</sup> *Department of Plastic and Reconstructive Surgery, Uludag University Medical Faculty, Bursa, Turkey*

<sup>b</sup> *Department of Anaesthesiology and Reanimation, Mustafa Kemal University Medical Faculty, Hatay, Turkey*

\*Corresponding author.

E-mail: [menekseoksar@gmail.com](mailto:menekseoksar@gmail.com) (M. Oksar).

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