

# Temporomandibular joint ankylosis in an infant: a rare cause of difficult airway



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## 1. Pre-assessment data of the patient

A 2-year-old boy, weighing 15 kg was admitted with a history of limited mouth opening (inter-incisor distance of 6 mm), hypoplastic and retrognathic mandible (bird face deformity) and facial asymmetry from left temporomandibular joint ankylosis (TMJA). He was born at term, after an uneventful pregnancy, and there was no report of trauma during caesarean section. No other possible aetiologies were identified. He was scheduled for mandibular osteotomy. Preoperative ENT examination revealed adenotonsillar hypertrophy.



## 2. Anaesthetic Plan

A fiberoptic nasal intubation was performed under deep inhalation anaesthesia with sevoflurane, with the patient breathing spontaneously. Midazolam (0.05 mg.kg<sup>-1</sup>) and alfentanil (0.03 mg.kg<sup>-1</sup>) were given and anaesthesia was maintained with O<sub>2</sub>/air and sevoflurane. No neuromuscular blocking agent was administered since the surgical team needed facial nerve monitoring.

## 3. Description of incident

During surgery an accidental extubation occurred and an attempt was made to re-intubate the trachea by direct laryngoscopy.

Although the osteotomy was nearly completed, the vocal cords could not be visualized (Cormack-Lehane grade IV laryngoscopic view).

## 4. Solving the problem

Re-intubation was finally accomplished with the flexible fiberscope and the procedure was concluded without any more incidents.

Extubation was performed 24 hours postoperatively with the patient fully awake. After surgery mouth opening improved to inter-incisor gap of 15 mm.

## 5. Lessons learned and take home message

Two airways issues present in this case can lead to difficult ventilation and intubation: TMJA and adenotonsillar hypertrophy. These difficulties were anticipated and managed accordingly. The accidental extubation brought to our attention the fact that, even after surgical correction, this airway remains challenging. Even with intensive jaw stretching exercises there is a high incidence of re-ankylosis, especially in younger patients. One should bear that in mind when anaesthetizing patients with TMJA.

