REFERENCE:

Immediate Extubation Following Placement of Mandibular Distractors: Feasibility and Safety Profile

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BACKGROUND AND PURPOSE: Mandibular distraction osteogenesis is the preferred treatment at many centers for micrognathic patients with recalcitrant upper airway obstruction. Timing of extubation after placement of mandibular distractors is the subject of ongoing debate. Maintaining intubation allows for the airway size to be increased through gradual mandibular distraction, thus decreasing the impact of airway edema, which may occur after extubation. However, prolonged intubation has risks including subglottic stenosis, ventilator-associated pneumonia, and accidental extubation. In this retrospective chart review, our experience with mandibular distraction followed by immediate extubation is examined.

METHODS: A 4-year retrospective review of patients diagnosed with Pierre Robin Sequence who underwent mandibular distraction within the first 3 months of life was performed. All patients were treated at a tertiary children’s hospital and had failed preoperative positioning and airway adjuncts. Patients who were intubated preoperatively were excluded. Analytic endpoints included patient demographics, comorbidities, preoperative and postoperative respiratory support, rates of immediate extubation, need for reintubation, progression to tracheostomy, correlative polysomnography, direct laryngoscopic grade view, and functional nasoendoscopy.

RESULTS: A total of 52 (29 males, 23 females) patients met inclusion criteria. The mean follow-up interval was 18 months. Six patients (12%) progressed to tracheostomy in long-term follow-up. There was 1 mortality (2%), which was remote from surgical intervention. Seventy-three percent of patients undergoing distraction were extubated immediately in the operating room. In those who remained intubated (27%), the mean intubation interval was 7.2 days (range, 1–14 days). No significant differences were found in associated comorbidities, syndromic status, cleft pathology, preoperative respiratory support, or grade of view on direct laryngoscopy between the extubated and intubated groups. Case duration >120 minutes and the subjective designation of a difficult airway by the anesthesiologist were associated with maintaining intubation (P < 0.05). Twenty-one percent of patients in the extubated group experienced a respiratory event before discharge, and 11% (4 patients) required reintubation. Respiratory events were significantly more likely in patients with other congenital anomalies, a syndromic diagnosis, cardiac anomalies, gastroesophageal reflux disease, and in those who required respiratory support greater than low-flow nasal cannula before distraction (P < 0.05). Secondary airway anomalies and cleft palate were not associated with respiratory events or reintubation.

CONCLUSION: Our data suggest that immediate extubation after placement of mandibular distractors is feasible in patients who are not intubated preoperatively. Extra caution should be exercised in patients who required significant respiratory support before distraction and in those with certain comorbidities, as these patients were more likely to experience respiratory events and reintubation.

Impact of Prior Oncologic Treatment on Complications and Functional Outcomes in 1751 Head and Neck Free Flap Reconstruction Patients: An Institutional Analysis Using American College of Surgeons National Surgical Quality Improvement Program Methodology

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PURPOSE: Patients with head and neck squamous cell carcinoma (HN-SCC) frequently present with locally advanced disease, and many develop locoregional