

P146

Intubation via a Flexible Bronchoscopic Seldinger Technique

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OBJECTIVES: 1. Learn an effective method of endotracheal intubation of a patient with a difficult airway due to the anatomical manifestations of Klippel-Feil syndrome. 2. Understand the relevant anatomical features of Klippel-Feil syndrome.

METHODS: A case report was prepared of an intubation event that took place in August 2005. It describes a single use of a Seldinger technique of flexible bronchoscopic intubation of a child with Klippel-Feil syndrome. The outcome was successful intubation after other attempts using standard techniques had failed.

RESULTS: Under flexible nasotracheal bronchoscopic guidance, an endotracheal tube was successfully passed over a guidewire into the subglottic airway of an eight-year-old child with Klippel-Feil syndrome. The technique is straightforward and uses materials readily available in an operative suite. The case report describes the technique as well as features of the Klippel-Feil syndrome. In addition, the case report includes a review of previously reported intubations of patients with Klippel-Feil syndrome and previous reports of similar Seldinger-type intubation techniques.

CONCLUSIONS: Anatomical features of the upper airway in patients with Klippel-Feil syndrome make endotracheal intubation by standard techniques difficult or even impossible. The technique described may be successful in other patients with Klippel-Feil syndrome or with similar anatomical features.

P147

Down syndrome: Rapid Maxillary Expansion and ENT Evolution

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OBJECTIVES: Down syndrome is the most common aneuploid disorder among live born infants. Phenotypic characteristics include hypotonia, pharyngeal and maxillary hypoplasia with relative macroglossia, and frequently constricted maxillary arch with nasal obstruction. This prospective study assesses the effects of rapid maxillary expansion (RME) on otolaryngologic disorders in children with Down syndrome.

METHODS: Otolaryngologic and speech evaluation were performed in 24 children with Down syndrome aged 5 to 12 years who had been randomly allocated to RME and control

groups. Two assessments were made, one prior to expansion (T0) and the other after approximately one month of maximal expansion plus a five-month period of retention (T1). The data between the study and control groups were compared.

RESULTS: The rate of otolaryngologic infection group (otitis media, tonsillitis and adenoiditis) were significantly reduced from T0 to T1 in the expanded group ($p < 0.01$). The treated children improved significantly with regard to respiratory obstruction symptoms ($p < 0.01$), to tympanometric and audiometric evolution, and to several parameters assessed by speech therapy such as tongue mobility and articulation of speech sounds ($p < 0.01$).

CONCLUSIONS: This study showed that rapid maxillary expansion provides a significant reduction in upper airway obstruction, hearing loss, and improved articulation and tongue mobility in children with Down syndrome compared with the control group.

P148

Septoplasty in Children: Initial and Long-Term Results

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OBJECTIVES: To evaluate the clinical effectiveness of Metzenbaum surgery for nasal deviation in children, associated or not to inferior turbinectomy.

METHODS: Retrospective analysis of 63 pediatric patients subjected to Metzenbaum septoplasty, associated or not to inferior turbinectomy, in Clinics Hospital—Faculty of Medicine of Ribeirão Preto—University of São Paulo.

RESULTS: The main preoperative symptoms were nasal obstruction (63/63 cases), mouth breathing, snoring, itching, and sneezing; 46 patients were subjected to septoplasty and 17 to septoplasty associated to inferior turbinectomy. Of these, 47 patients had significant clinical improvement, while 16 didn't. These patients were evaluated to diagnose the cause of failure in treatment. From the 12 patients subjected only to septoplasty, 6 had posterior septal deviation associated with inferior turbinates hypertrophy; 5 had recurrence of anterior septal deviation; and 1 had anterior synechiae. From the 4 patients submitted to septoplasty and inferior turbinectomy, 2 had posterior septal deviation associated with inferior turbinates hypertrophy, and 2 had only inferior turbinates hypertrophy.

CONCLUSIONS: Metzenbaum septoplasty is safe and efficient for the treatment of nasal obstruction in children. Failures, however, may exist, and they mainly occur due to posterior septal deviation associated with inferior turbinates hypertrophy or to recurrence of anterior septal deviation; parents should, therefore, be well counseled.