EPIGLOTTIC REPOSITIONING TO ADDRESS SEVERE OSA – OUR TECHNIQUE

Authors: Mr Ivor Kwame, Ms Jessica Bewick, Ms Sonia Kumar, Mr David Albert
Department: Great Ormond Street Hospital, London, UK

Background
In this article we describe a novel approach to addressing infantile epiglottic collapse.

Objectives
We outline the case of a six-month-old patient admitted to a central London tertiary referral unit with failure to thrive (0.9% weight on growth chart) associated with severe OSA (nadir 40% when supine).
We describe our experience with managing this unusual case alongside the clinical outcomes.

Methods
A diagnostic microlaryngoscopy with bronchoscopy (MLB) featuring spontaneous ventilation showed significant tongue-base fullness and severe epiglottic collapse (figure 1).

Figure 1 Showing epiglottic collapse obstructing larynx

Results
The child maintained an entirely normal swallow post-operatively and was successfully discharged home with nasogastric (NGT) feeding after a much-improved sleep study.
Outpatient follow-up after 4 weeks showed the patient growth rate had already improved.

Technique
A further MLB was done during which a potassium-titanyl-phosphate (KTP) laser was used to produce a controlled reduction in tongue base volume, especially directly anterior to the lingual surface of the epiglottis to accommodate the epiglottis further and encourage cicatrisation of the opposing mucosal surfaces.

Epiglottis repositioning was further secured by suturing its mid-portion to the remnant tongue base (figure 2).

Figure 2. Showing epiglottis sutured to tongue base, after KTP LASER reduction of midline tongue base

Conclusions
We share our experience of managing a complex patient with severe obstructive sleep apnoea (OSA) and failure to thrive.
We demonstrate our use of tongue base surgery with epiglottic suturing to:
- Reposition a prolapsed epiglottis whilst
- Maintaining a safe swallow.

For additional information, please contact:
Kwame – ENT Specialist Registrar
Department of ENT
Great Ormond Street Hospital
E-mail: ivork1@hotmail.co.uk