SurgTech Choanal Atresia Correction
Narrative etc

Unilateral Choanal Atresia Correction by Posterior Septectomy

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An instructional video on the surgical technique of a posterior septectomy, performed to establish a bilateral nasal airway in cases of unilateral channel atresia (complete or incomplete, mixed or bony). This procedure is based on the technique of Al 'Full House' FESS (a combination of a full uncinectomy, middle metal antrostomy, full ethmoidectomy, sphenoidotomy and frontal pathway clearance - in this case a Draf 1 dissection). The use of preoperative imaging and intra-operative image guidance are demonstrated.

Narrative Transcript
This 9 year old girl with long standing concerns of nasal obstruction, snoring and somewhat unilateral rhinorrhea was taken for an EUA +/- Adenoidectomy. Noting an asymmetric soft palate and involuted adenoid tissues, a rigid nasendoscopy was performed, demonstrating a right sided, complete choanal atresia. CT confirmed a mixed soft tissue and bone atresia.

Here we will demonstrate a correction by posterior septectomy - based on the technique of Aldo Stamm.

The right sided may be atretic, but the left is widely patent.

The nose has been prepared with Moffats solution applied on patties. The septum is preinfiltrated, as are the areas of the sphenopalatine foramina and the inferior turbinates.

Trimming the inferior turbinates gives good exposure and may improve the nasal airways, but should be avoided in dry climates. In this case, we also resected the left middle turbinate for access to elevate our septal flap.

The sphenoid ostium is found, showing us the upper margin for our flap pedicle.

Monopolar diathermy is used to define the flap edges and a contralateral mucoperichondrial flap is raised.

The flap is placed low in the nasopharynx, and the sphenoid rostrum exposed.

The remaining posterior septum and the mucosa is resected.

A small inferiorly based flap is preserved to cover the exposed bone.

In this case, the sphenoid cavities were widely opened and combined.

At this point both sphenoid sinus cavities are clearly visualised, divided by the sphenoid intersinus septum and we continue to drill back the front face of the right sphenoid.

Image guidance is advisable as the anatomy is deranged and we are drilling towards the sphenoid side wall.
The sphenoid floor is preserved to convey the flap to the atretic side, but the sphenoid rostrum is flattened and the remainder of the posterior septum and any membranous atresia is removed.

Any membranous atresia is divided.

Aligning the flap to the available mucosal edges, it is clearly excessive, but easily reduced with a debrider.

The flap is secured with Surgicel.

The end-operative result is inspected.

Here are the appearances 5 months after surgery.

**Corrections**
1. Peer Review is pending
   None so far…

**Points of Contention**
1. Peer Review is pending
   None so far…

**References**
Pending…
If you have references that you think we should add, or any other recommendations for this page, just let us know!