Bilateral Choanal Atresia in a 14-year old male: A Case Report

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The case
• 14-year-old male
• Persistent bilateral nasal discharge and congestion
• Hyponasal voice
• No history of respiratory distress after birth
• Difficulty in feeding during infancy
• Face is long and narrow
• Prognathism
• Open mouth
• Pursed and dry lips

Materials and Methods
• Anterior rhinoscopy was done which showed a bilaterally discharging nostrils with congested turbinates.
• Nasal endoscopy showed medial bowing of both lateral nasal wall, atretic bilateral choana, with thickened posterior septum.
• Radiologic imaging revealed a thin membrane separating the nasal cavity from the nasopharynx at the level of pterygoids and the vomer is thickened, which confirmed the diagnosis.
• Patient underwent Endoscopic Posterior Septectomy.

Results
• Repeat endoscopy was done one year post-op which showed a bilaterally patent choana.
• There was air passage on both nostrils with absence of mucus discharge.
• Patient’s voice was still hyponasal but was described to be improved.

Conclusion
• Bilateral Choanal Atresia in an adolescent is a rare condition.
• It is diagnosed after birth since newborns are obligate nasal breathers.
• Signs and symptoms include increased breathing efforts and chest retractions, followed by cyanosis.
• The initial management in acute cases is endotracheal intubation.
• They would present with adenoid facie, chronically congested nose with thick mucus discharge.
• Nasal endoscopy coupled with CT scan must be done to confirm the diagnosis.
• The definitive treatment is surgery.
• Endoscopic sinus surgery is still the most common and successful method for repair of choanal atresia.

Figure 1. Facial Profile of our patient with bilateral choanal atresia. The patient has everted lip, prognathism and slightly open mouth.

Figure 2. Right and Left Choanae on nasal endoscopy using zero-degree nasopharyngoscope. A) Bilateral choanae are atretic. B) Posterior septum is thickened and there is C) medial bowing of lateral nasal walls.

Figure 3. Axial Cut of Paranasal Sinus CT scan showing bilateral choanal atresia. A) A thin membrane pointed by the arrows are separating the nasal cavity from the nasopharynx at the level of the pterygoids. B) The vomer is thickened.

Figure 4. Endoscopic Posterior Septectomy of Atretic Choanae

Figure 4. Nasal Endoscopy using zero-degree scope one year after surgery. Bilateral Choanae were still patent.