



# Nasopharyngeal Dermoid Requiring a Unilateral Tonsillectomy at Day Three of Age

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## Background

Nasopharyngeal dermoids, or hairy polyps, are rare benign congenital malformations of bigeminal origin with both ectodermal and mesodermal elements. It is often seen in the neonatal period and can lead to respiratory distress and/or feeding disorders (3). The clinical presentation depends on the site and the size of the lesion. This presentation is often described as a polypoid mass protruding through the mouth as "a second tongue" (5) (Figure 1). Dermoids are histologically composed of stratified keratinized epithelium with cutaneous structures such as hair and sebaceous glands (3). As of 2012, there were only 170 nasopharyngeal dermoid tumors reported in the literature (6). Tonsillectomy is defined as a surgical procedure that completely removes the tonsil, including its capsule, by dissecting the peritonsillar space between the tonsil capsule and muscular wall; this can be done with or without adenoidectomy (4). Each year, over 500,000 cases are performed in children 15 years of age or younger (2). The two most common indications for tonsillectomy are sleep-disordered breathing, causing respiratory distress, and recurrent tonsillitis. A retrospective study on 190 children younger than 3 years who underwent tonsillectomy showed an average age of 2 years and 4 months at the time of operation (1).

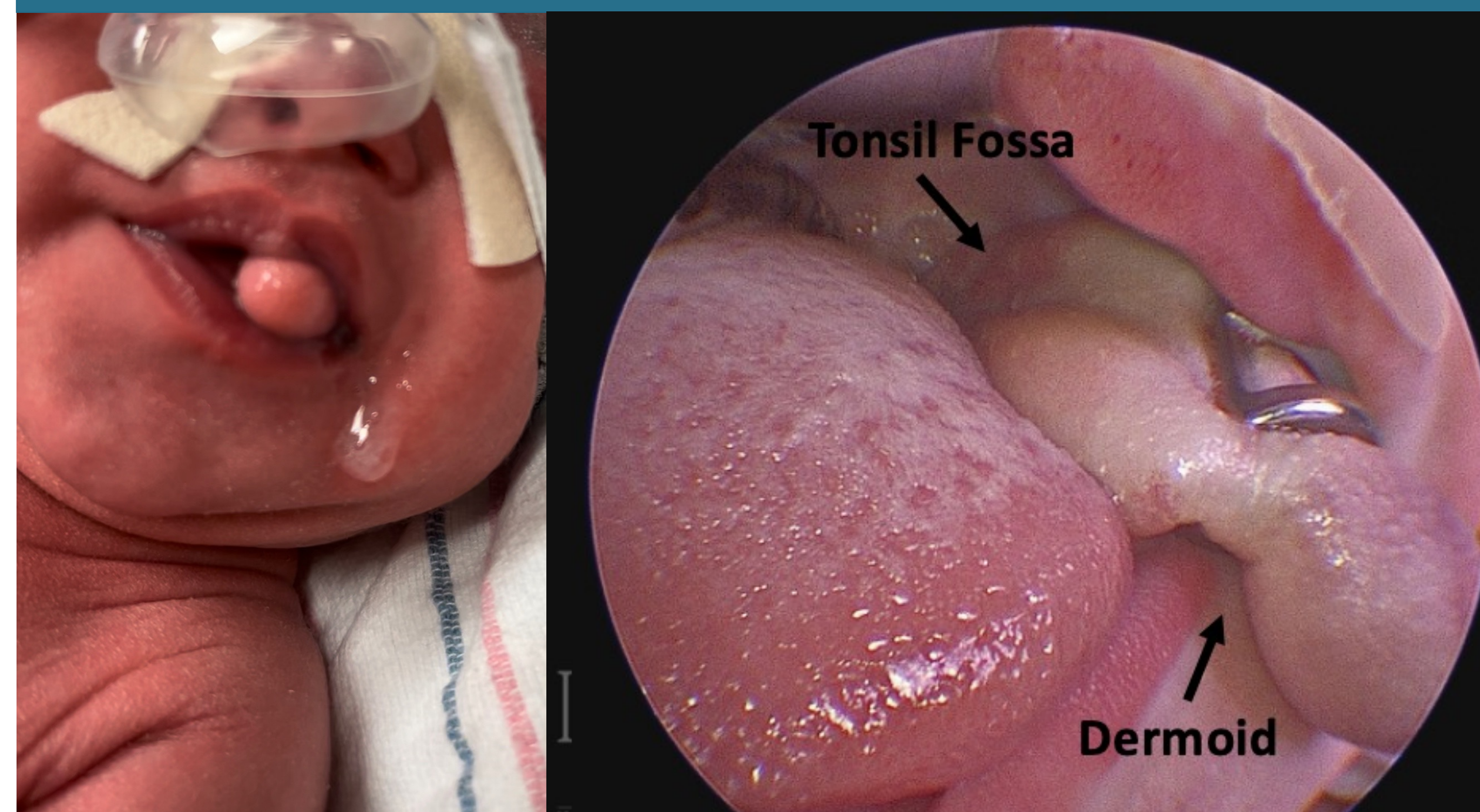
## Introduction

At the end of this presentation, participants will understand a complex and rare case of a benign nasopharyngeal dermoid or hairy polyp mass requiring surgical excision and subsequent tonsillectomy in a three-day-old patient. To our knowledge, this is the youngest patient to have ever undergone a tonsillectomy.

## Case Presentation

A one-day-old female was transferred to Albany Medical Center in respiratory distress. She was born at full term with no gestational complications. She was found to have increased work of breathing with oxygenation below 88%. Her respiratory status improved when she was placed on her side while on continuous positive airway pressure (CPAP). She was subsequently transferred to Albany Medical Center. When examined, the patient was noted to have an oropharyngeal mass which extruded from her oral cavity (Figure 1). She was subsequently taken to the operating room where an endoscopic evaluation was preformed using a rigid Hopkins telescope. A 4 cm mass (Figure 5) with tongue-like tissue appearance was observed to be emanating from the left pharyngeal wall, soft palate and left palatine tonsil (Figure 2, 3). Bovie cautery was utilized to excise the lesion from its attachments. The mass was noted to be adherent to the palatine tonsil and the decision was made to excise the tonsil with the lesion. The patient tolerated the procedure well and did not require any further airway support; there was no blockage of the airway post-op (Figure 4). The mass was found to be a benign nasopharyngeal dermoid tumor.

## Figures 1 and 2: Mass shown pre-op



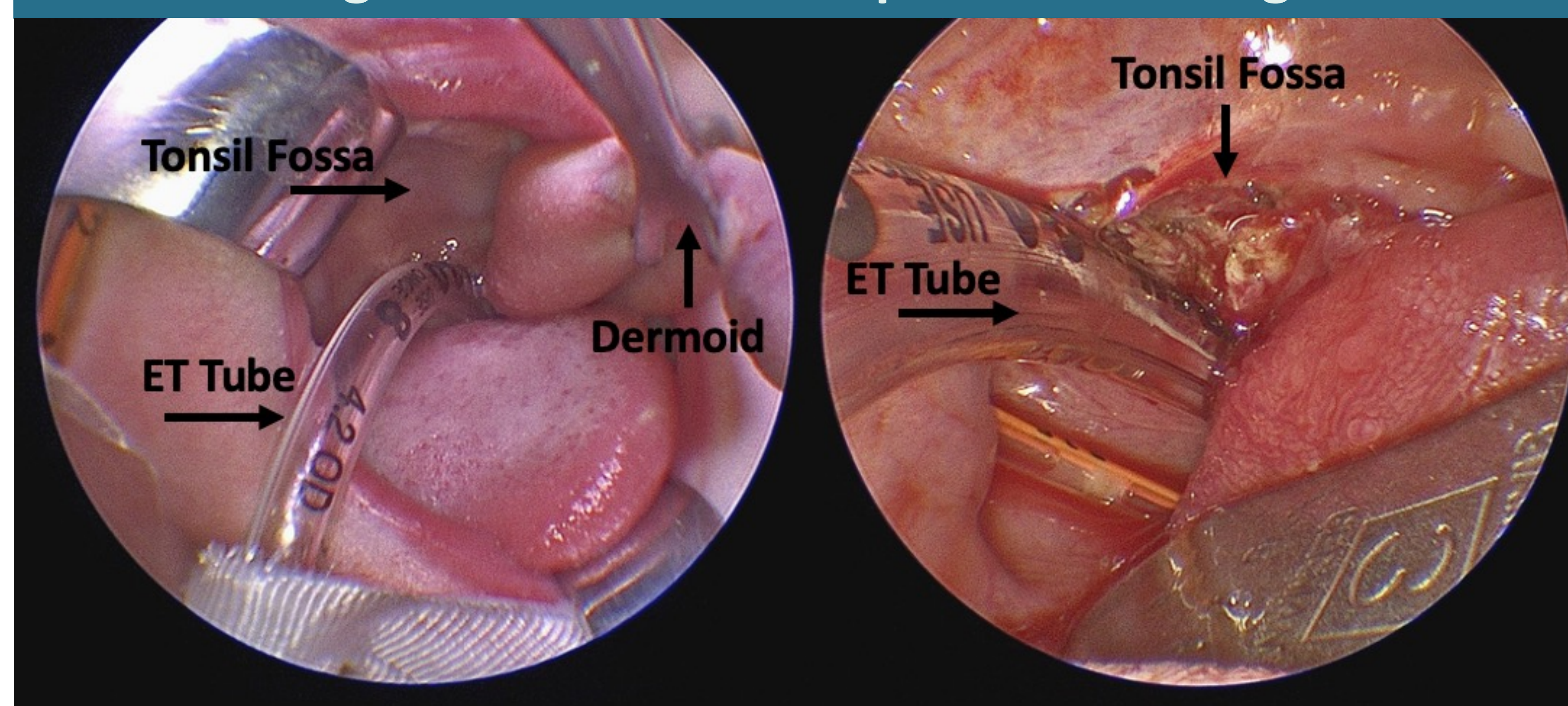
**Figure 1.** The nasopharyngeal dermoid tumor is seen protruding through the mouth from the left oral cavity as a "tongue-like" mass.

**Figure 2.** Intraoperative close-up image of the dermoid.

## Discussion

As of 2012, only 170 cases of nasopharyngeal dermoid tumors had been reported in the literature, according to Yilmaz et al (6). The classic clinical presentation of these tumors are visualization of a pedunculated lesion, in this case to the left tonsil, in the pharynx. This can lead to dramatic respiratory distress (Figure 1), and in this case resulted in tonsillectomy. Dermoids also occur six times more frequently in female patients and are more likely to attach on the left side, as seen in our patient (6). It is important to investigate other congenital malformations if a lesion as such is present, although our case did not present with any associated issues. The differential diagnosis of a neonatal nasopharyngeal mass can include a teratoma, encephalocele, hemangioma, and thyroglossal or lingual cyst (5). The management of a case as such focuses on securing the airway with endotracheal intubation followed by successful surgical excision (Figure 4); the prognosis for dermoid tumors is very good (6).

## Figures 3 and 4: Intraoperative Findings



**Figure 3.** Image of the dermoid pedunculated to the left palatine fossa and NG tube placement.

**Figure 4.** Post-operative image of the tonsil fossa after excision of the dermoid.

## Figure 5: Dermoid Tumor



**Figure 5.** Gross image of 4 cm dermoid post-excision.

## Methods

This presentation is a case report and review of literature reporting on a single case which occurred in November of 2022. We describe a nasopharyngeal dermoid causing airway obstruction in a two-day-old female born at full term. The patient underwent surgical intervention at Albany Medical Center. Intraoperative pictures were utilized to document our findings.

## Conclusions

This report demonstrates a rare case of a nasopharyngeal dermoid pathology arising from the palatine tonsils and other oropharyngeal structures. This can be life-threatening due to airway obstruction and resulted in the need for a unilateral tonsillectomy. To our knowledge, this is the youngest patient to ever undergo tonsillectomy.

## References



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