

# A Rare Neonatal Presentation of Bilateral Dacryoceles and Choanal Atresia: A Case Report

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## Introduction

- Congenital nasolacrimal duct cysts are a rare presentation. These cysts may form secondary to outflow obstruction of tears from the nasolacrimal duct into the nasal cavity. The resulting backflow and build up of tears can result in lacrimal sac dilation and present as a dacryoceles.

- Choanal atresia is a life threatening congenital abnormality in neonates, who are obligate nasal breathers. Embryologically, a thin membrane is present between the nasal cavity and the nasopharynx, which normally regresses. Choanal atresia observes the failure of its regression (1).

## Case Description

- Following a routine pregnancy, a newly delivered baby boy, born at term was found to have increased work of breathing, stridor and a left medial canthal swelling.

- The baby required 100% oxygen via face mask to maintain oxygen saturations. The neonatal team was unable to pass an NG tube through either nostril.

## Investigations

- CT scan revealed bilateral membranous choanal atresia with enlargement of both lacrimal sacs.

- The baby was taken to theatre by ENT and Oculoplastics, and nasal endoscopy was performed. This confirmed the presence of bilateral choanal atresia and bilateral intranasal cysts beneath the inferior turbinate were also observed.



**Figure 1:**

Intranasal cyst beneath the inferior turbinate, observed during nasal endoscopy of the baby



**Figure 2:**

Membranous choanal atresia observed during nasal endoscopy (probe puncturing membrane)



**Figures 3 & 4:** Bilateral membranous puncture under ENT and marsupialization of intranasal cysts under Oculoplastics

## Discussion

- Concomitant congenital intranasal cysts and choanal atresia is a rare presentation.
- Suspect dacryoceles in neonates with medial canthal swelling below the medial canthal tendon.
- Treatment of dacryoceles is marsupialization of the intranasal cyst. Parents should be advised to massage the lacrimal sac as this may cause spontaneous rupture of the intranasal cyst secondary to the hydrostatic pressures.
- In neonates with suspected dacryoceles and increased respiratory effort, urgent nasal endoscopy should be performed to look for intranasal cysts and/or choanal atresia.
- Liaise with ENT colleagues early to investigate for choanal atresia, particularly in cases of suspected unilateral intranasal cyst and respiratory distress.

## References