## Choanal atresia

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• a <u>congenital disorder</u> where the back of the nasal passage (<u>choana</u>) is blocked, usually by abnormal <u>bony</u> or soft tissue (membranous) due to failed hole development of the nasal fossae during <u>prenatal development</u>. It causes persistent <u>rhinorrhea</u>, and with bilateral choanal atresia and obstructed airway that can cause <u>cyanosis</u> and <u>hypoxia</u>.

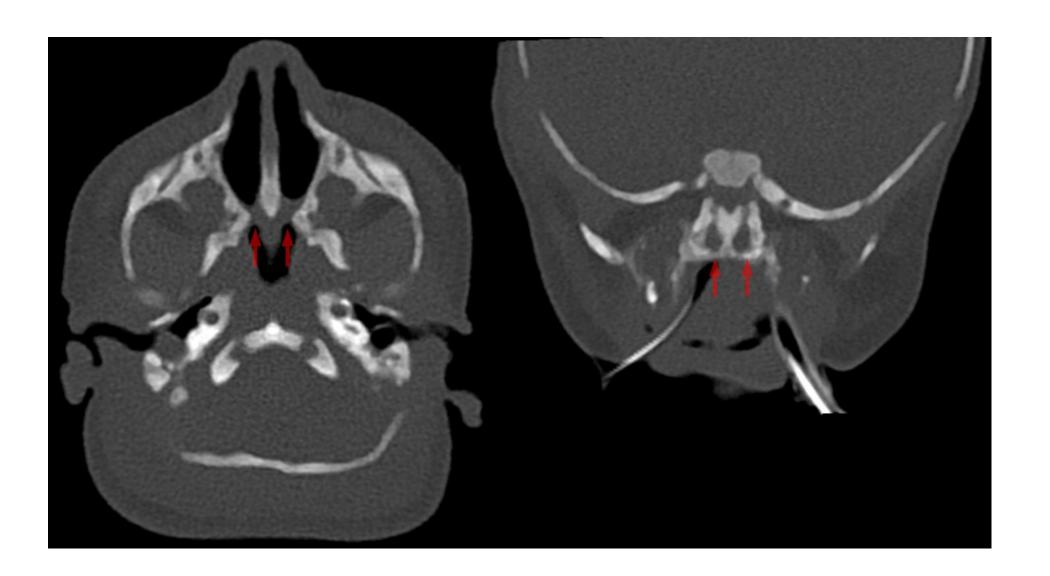
## Presentation

- Choanal atresia can be unilateral or bilateral.
- A unilateral choanal atresia may not be detected until much later in life because the baby manages to get along with only one nostril available for breathing. [1] Symptoms are minor, including persistent <a href="mainto:rhea">rhinorrhea</a> (mainly normal <a href="mainto:mucus">mucus</a>) and chronic <a href="mainto:sinusitis">sinusitis</a>.
- Bilateral choanal atresia is a life-threatening condition because the <u>baby</u> will be unable to breathe directly after <u>birth</u> as babies are <u>obligate nasal breathers</u> (they mainly use their noses to breathe). In some cases, this may present as <u>cyanosis</u> while the baby is feeding, because the oral air passages are blocked by the tongue, further restricting the airway. Cyanosis may improve when the baby cries, as the oral airway is used. These babies may require airway <u>resuscitation</u> soon after birth

## Associated conditions

- Choanal atresia is associated with a higher risk of other airway problems, including:
- tracheomalacia.[1]
- laryngomalacia.[1]
- subglottic stenosis.[1]
- Sometimes, babies born with choanal atresia also have other abnormalities:
- coloboma.[1]
- heart defects and cardiovascular disease.[1]
- <u>intellectual disability</u>.[1]
- growth impairment.[1]
- genital hypoplasia.[1]
- CHARGE syndrome.[1]

 Also any condition that causes significant depression of the nasal bridge or midface retraction can be associated with choanal atresia. Examples include the <u>craniosynostosis</u> syndromes such as <u>Crouzon</u> <u>syndrome</u>, <u>Pfeiffer syndrome</u>, <u>Treacher Collins syndrome</u>, <u>Apert</u> <u>syndrome</u>



 Choanal atresia is diagnosed based on the inability to place a nasal <u>catheter</u>, and <u>radiology</u> results (particularly <u>CT scans</u>). Treatment involves maintaining an open airway, and may involve <u>surgery</u> to reopen the airway, potentially with a <u>stent</u>.

