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Answer: Choanal atresia

Choanal atresia was first described by Johann Georg Roederer (May 13, 1726 – April 4, 1763), a German physician and obstetrician, in 1755 in a newborn with posterior nasochoanal obstruction. [1]

This congenital anomaly can be defined as a developmental failure of the posterior nasal cavity to communicate with the nasopharynx. The aetiology is not well understood and there has been several theories proposed including persistence of buccopharyngeal membrane from the foregut, persistence of the nasobuccal membrane, and the abnormal persistence of mesoderm with the formation of adhesions within the choana. [1]

The reported incidence of choanal atresia is between 1 in 5,000 to 8,000 births and it occurs more commonly in females than males and are more frequently unilateral than bilateral. [2]

In the newborn, bilateral choanal atresia can present with the immediate onset of respiratory distress. Neonates are obligate nasal breathers and in the presence of bilateral choanal atresia, paradoxical cyanosis may be evident. This is noted when there is relief of airway obstruction with crying and the return of cyanosis with rest.

In contrast, unilateral choanal atresia most commonly presents with unilateral nasal obstruction and associated mucoid rhinorrhoea. Unless specifically sought at birth, it may not be apparent and may remain undiagnosed until childhood or even adulthood.

Choanal atresia may be found as an isolated anomaly, but it has been shown to be associated with syndromes including Apert syndrome, Digeorge syndrome, trisomy 18, Treacher Collins syndrome, and CHARGE (Coloboma, heart defects, atresia of choanae, retarded growth or development of CNS, genitourinary anomalies, and ear anomalies of deafness) association.

The goal of treatment is to create a patent nasal airway. [3] In bilateral cases, it is vital to stabilise airway and initiates nutritional supplements via nasogastric tube feedings. Definitive repair is delayed and dependent upon an infant's ability to adapt to oral breathing and acquire adequate nutrition during the first few weeks of life.

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