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Respiratory distress in neonate due to congenital nasal pyriform aperture stenosis

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DESCRIPTION

A full-term male neonate was born by vaginal delivery developed respiratory distress, noisy breathing and central cyanosis shortly after birth. He required intubation with a low setting of conventional ventilation, and his respiratory status dramatically improved. A 5 French catheter was passed nasally with difficulty bilaterally. CT scans of the nasal cavity revealed a marked narrowing of the anterior nasal passage, which was compatible with congenital nasal pyriform aperture stenosis (CNPAS) (figure 1). At 24 h later, he was extubated and placed on an artificial oral airway, and his respiratory status normalised without the need for oxygen treatment. Thyroid function tests, cortisol level and cranial ultrasonography were within normal limits. He initially started on orogastric (OG) tube feeding with infant formula.

On a follow-up at 2 months of age, an artificial oral airway was removed without consequently abnormal respiratory status. He had successfully transitioned from OG-tube feeding to exclusive breast feeding.

CNPAS is a rare anatomic cause of neonatal nasal obstruction and can lead to respiratory distress, noisy breathing, apnea, as well as poor feeding.^{1–3} CNPAS results from a bony overgrowth of the medial process of the maxillary sinus, and it could be associated with congenital anomalies such as holoprosencephaly, endocrine defects or a single maxillary central incisor.² The management of CNPAS is dependent on the severity of the nasal obstruction. A mild case, who can take a 5 French catheter through the nasal passage, should initially be treated conservatively with local saline, steroid or stenting into nasal canals, and airway difficulties may spontaneously resolve within the first several

Figure 1 The CT of nasal cavity shows a marked narrowing of anterior nasal passage with an overgrowth of the medial nasal process of maxilla.

months of life^{1–3} Hui *et al*² suggested that the failure to pass a 5 French catheter through the nasal airway is a severe case and is an indication for surgical treatment. In addition, feeding problems are common in infants with CNPAS; therefore, supplemental feeding may be needed before and after the management of airway difficulties.³ In conclusion, this case report should remind general paediatricians and neonatologists to consider CNPAS as a possible cause of nasal obstruction in neonates.

Competing interests None.

Patient consent Obtained.

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