NASAL OBSTRUCTION: NOT ONLY ADENOID AND TURBINATE HYPERSTROPHY

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INTRODUCTION

In pediatric population, nasal obstruction is mainly caused by adenoid and inferior turbinate hypertrophy. Choanal atresia (CA) is a less frequent cause characterized by a narrowing of the posterior opening of the nasal cavity into the nasopharynx. This condition occurs in 1:5000 to 1:8000 live births and affects females twice as often as males. Unilateral CA is much more common than bilateral CA (65–75% of all cases). Bilateral CA is more related to syndromic cases like CHARGE or CRIOUS. Historically, 90% has been classified as bony and 10% as membranous, but recent studies, using CT techniques, suggest on 30% as purely bony and 70% as mixed bony-membranous. Surgery for CA correction can be approached through transnasal, transseptal or transpalatal routes.

CLINICAL CASE

A female newborn [2010/11/20] with normal pregnancy, studied by a multidisciplinary team because presented at birth:

• Pulmonary Valve Stenosis*
• Heart atrial septal defect (ostium secundum)*
• Low ears implantation*
• Left eyelid ptosis*

The baby was referred to our consultation by her 5th month of life, due to unilateral rhinorrhea and nasal obstruction. ENT study revealed right CA*. The remaining ENT study was normal (study of auditory pathway with otoscopic images, brainstem auditory evoked potentials and magnetic resonance).

CHARGE syndrome (*) was our most likely diagnosis. In ophthalmologic examination coloboma was excluded as well as vision loss. Since CA was unilateral, she was proposed for elective corrective surgery only at 5 years old.

CA CORRECTION (2015/03)

SURGICAL TECHNIQUE

DISCUSSION & CONCLUSION

CA, mainly the unilateral form, can be one of the most common causes of nasal obstruction, being only the bilateral form clinically obvious due to “cyclical cyanosis”. CHARGE syndrome is an autosomal dominant genetic disorder typically caused by mutations in the chromodomain helicase DNA-binding protein 7 (CHD7) gene. No single feature is univerally present or sufficient for the clinical diagnosis. Blake et al. (1998) suggested that a diagnosis of CHARGE requires the presence of at least 4 major features or 3 major feature plus at least 3 minor features. In our clinical case, CHARGE syndrome was hypothesized because the baby had 2 major features: unilateral CA and low ear implantation; and also had 2 minor features: left ptosis and congenital heart defects. The remaining workup study excluded other major features like callosa/ia Ủy on loss and hearing loss, present in CHARGE more than 90%. After 5 years of follow-up, CHARGE was definitively excluded, with the rest of her clinical findings well compensated or untotally ical, with normal intellectual and physical development.

The use of endoscopic techniques for transnasal CA repair was first demonstrated by Stankiewicz (1990). Varus studies have reported primary repair success rates ranging from 67 to 88%. In our clinical case, as we expected by literature, after 5 months of CA endoscopic correction, partial steno sis of the neoschaoa occurred, but still with nasal patency and without any breathing complaint.

REFERENCES

