CASE REPORT OPEN ACCESS

Accessory Nostril: A Rare Congenital Nasal Anomaly

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ABSTRACT

The accessory nostril is a very rare congenital anomaly with an unknown etiology also known as a supernumerary nostril. An 11-month-old male baby presented with an accessory opening above the right nostril since birth. At 1-year follow-up, the functional and cosmetic outcome was satisfactory. The corrective surgical procedure ought to be executed as quickly as time permits for the patient's psychosocial development.

Key words: Accessory nostril; Rare anomaly; Congenital anomaly

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INTRODUCTION

Supernumerary nostril or accessory nostril is one of the rarest congenital nasal deformities with less than 50 cases reported till date and more than half of the reported cases were from the Asian continent [1]. Supernumerary nostril is mostly unilateral and isolated but it can be related with other congenital malformations. Herein, we report successful management of accessory nostril in an infant.

CASE REPORT

An 11-month-old male infant presented with accessory nostril (Fig 1). Born to a primigravida from a non-consanguineous marriage and delivered at term by vaginal delivery. The prenatal history was unremarkable and the neonatal history was uneventful. On examination, a supernumerary nostril was located above the right nostril. The internal and external diameter of the accessory nostril was 5 and 8 mm. The right ala was depressed and the ipsilateral nostril was a little smaller in diameter than the other side. The apex of the nose is little flattened. There was no flaring effect on crying in the supernumerary nostril. There were no other congenital malformations. Physical examination showed a right accessory nostril which was connected to the normal right nostril. The internal bridge of the accessory opening was measured at about 14 mm. There was no columellar deviation. The nasal cavity structure was normal. Computed tomography study of the paranasal sinus revealed communication of accessory nostril with the right nasal cavity (Figure 1).

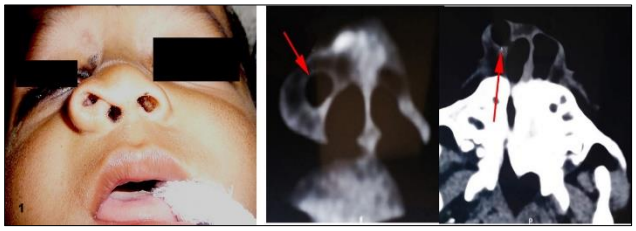

Figure 1: Clinical photo showing three nostrils and CT scan paranasal sinus showing the nasal opening and communication.

He underwent surgery and the communication between the supernumerary and normal nostril was excised. A wedge shaped tissue of the alar side wall and base was removed. The defect was repaired in layers.

The skin margins were sutured with 6-0 ethilon. A full-thickness suture was placed to compress and collapse the dead space in the apex of the nose (Figure 2).

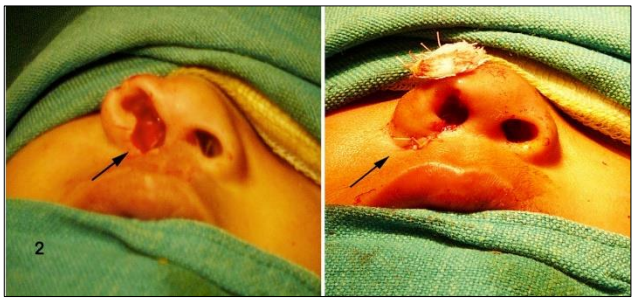

Figure 2: Operative photo showing the excised excess tissue and at completion of operation.

DISCUSSION

The nose develops from a frontonasal process in the early fourth week of gestation. Nasal placode appears on both sides of the frontonasal process. The center of the nasal placode sinks to form a nasal groove and gets deeper and forms a nasal pit in the beginning of the fifth week. The nasal pit subsequently gets deeper and becomes nasal sacs at the end of the fifth week. The nasal sacs migrate towards the midline following the development of maxillary process medially and successively the nasal sacs form the nasal cavity and nostrils [2].

The precise reason and development of the accessory nostril remain unknown. It is thought to be the result of the cleavage in the lateral nasal bud in early embryonic life. In 1906 Lindsay was first to report the bilateral supernumerary nostril hypothesized that “the medial sacs are interposed between the nasal laminae, preventing their fusion into one septum and resulting in a double nose [3]. Nakamura and Onizuka put forward that supernumerary nostrils resulted from fissuring of the lateral nasal process during development. They suggested that the lateral nasal process divides into two segments and each segment develops into each nostril on one side of the nose [4]. In most of the cases, the supernumerary nostril was located on the left side and above the normal nostril but in our case it was in right side. Franco et al. reported that 45 % of the patients were related to other congenital anomaly like hypoplastic nose, cleft lip and nose, nasal-ocular cleft, congenital auricular hypoplasia, congenital cataracts, esophageal atresia, PDA and imperforated anus [5].

With respect to treatment, there is no generally accepted method of surgical repair. Treatment has to be tailored. Though various surgical methods exist, the goal of repair is to create a functioning and normal-appearing nose with minimal deformity essential for normal psycho-social development. It is important to remove the accessory nasal tract entirely and preserve the normal nostril and to restore the shape and grooving of the normal nostril. With regards to the planning of surgical procedure, it is advisable to operate in early childhood to prevent deformity of normal nostrils. It is easier to reach the deep portion of the nasal cavity, avoid deleterious effects to nasal cartilage, and evade deformity around the alanasi [6].

In conclusion, accessory nostril is a rare anomaly and a high incidence in the Asian continent calls for further investigation to identify common factors in this geographical region [6].

Consent:

Authors declared that they have taken informed written consent, for publication of this report along with clinical photographs/material, from the legal guardian of the patient with an understanding that every effort will be made to conceal the identity of the patient however it cannot be guaranteed.

Authors’ Contribution:

The author contributed fully in concept, literature review, and drafting of the manuscript and approved the final version of this manuscript.

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