Case Report

Supernumerary nostril – A rare case report

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Abstract

Background: Supernumerary nostril is one of the rarest congenital nasal deformities with severe cosmetic ramifications. Its incidence around the world is less than 1 in 100,000 births. An extensive search of literature revealed that only 41 cases were reported till May, 2018, more than half of them in Asia. India reported 7 afflicted children. The present case is the 42nd in the world since its discovery in 1906 and 8th case in India.
Keywords: Supernumerary nostril, Congenital anomalies, Nose.

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INTRODUCTION

Supernumerary nostril is a rare congenital anomaly that contains additional nostril with or without accessory cartilage. The incidence of this anomaly in India is 30.44% of the overall incidence in the world[4]. It is also associated with other congenital malformations like cleft lip/palate, congenital auricular hypoplasia, congenital cataracts, oesophageal atresia, patent ductus arteriosus etc in 45% of reported cases[4]. Here we are reporting a rare case of supernumerary nostril, managed in our hospital.

CASE REPORT

A 9-year-old girl, came to our Department of Otorhinolaryngology and Head and Neck Surgery at Narketpally, Nalgonda Dist., Telangana, India with complaints of persistent nasal discharge from right nasal cavity since birth along with nasal obstruction on right side. She also had an additional opening below right nostril since birth(Fig 1,2). There was no history of discharge from left nasal cavity. She did not have any history of trauma/epistaxis, hyposmia or anosmia, dyspnoea or stridor. She did not have any other complaints. She was born to a then 20-year-old mother. The prenatal history was unremarkable with no history of exposure to alcohol, teratogenic drugs or radiation exposure. There was no history of consanguineous marriage or family history of birth defects. She attained milestones appropriate for her age. There was no history of congenital anomalies in parents or in next of kin. Patient had visited various hospitals for her complaints and was advised surgery. On examination of nose, an opening of around 5mm diameter found at right border of columella below right nostril. Columella was wide, tip was broad and right nostril was at an upper level than left. On palpation, cartilage was felt around the accessory opening. Nasal endoscopy on right side showed mucoid discharge and the nasal cavity ended as a cul-de-sac. Inferior turbinate has developed in anterior 2cm only and middle turbinate was rudimentary. Middle meatus was wide with opening of maxillary antrum. Ethmoidal bulla was open with a single cavity. Endoscope was passed through the abnormal opening and it revealed skin lining in the anterior 1cm, with hair follicles, followed by mucosa lined tubular structure communicating with nasopharynx. Right lateral wall of abnormal opening was attached to the mid part of right middle turbinate. Nasopharynx was normal. Left nasal cavity showed normal turbinates, meatii, bulla ethmoidalis, hiatus semilunaris with normal communication with

nasopharynx. Non contrast Computed Tomography scans of Nose and Paranasal sinuses showed that the accessory nostril is in communication with nasopharynx and not connected to right cavity which had ended as a blind sac (Fig 3,4). The patient was admitted with a clinical diagnosis of right unilateral supernumerary nostril. Plan of surgery was, excision of accessory opening and creating a single right nasal cavity COMMUNICATING with nasopharynx resulting in a functional nose. Under general anesthesia, an incision was made around the accessory opening and about 1cm of fistulous tract was excised along the cartilage, taking care to not to injure th nasolacrimal duct opening (Fig 5,6). The membranous partition separating the right cavity and accessory tract was divided to make a single right nasal cavity. Bulla ethmoidalis was removed and maxillary sinus ostium was widened for adequate drainage. At the end of surgery, she had two functional nasal cavities communicating with nasopharynx The post-operative period was uneventful and she was discharged after 3 days with mild post-operative swelling. She was advised regular follow-ups, and counselled regarding the need for a second surgery, probably a tip plasty at or after age of 18.

DISCUSSION

These abnormalities might have existed for several years but were first reported in 1906. The first reported case was published in 1906 by Lindsay, who described a patient with bilateral supernumerary nostrils[1]. In 1920, Tawse reported a patient with a unilateral supernumerary nostril that communicated with the nasal cavity[2]. In 1987, Reddy and Rao reported a case of a supernumerary nostril situated below the left nostril[3]. In 2009, Kashyap and Khan reported a case of supernumerary nostril on the left side with an accessory alar cartilage. The accessory cavity was not connected with ipsilateral nasal cavity.[9] The present case is a unilateral supernumerary nostril that is not communicating with corresponding nasal cavity, situated below right nostril. She had a discharging right nostril, with a cartilage supported rim at the opening. The crucial point of difference is that in all cases that were previously reported, the accessory nostril opened into one of the nasal cavities and not into the nasopharynx as was the scenario in our case. Franco *et al.* reported that 45% of patients were related to other congenital anomaly.[10] The present case however was not associated with any other congenital abnormalities, which was confirmed by an ultrasound abdomen, chest X-ray and a thorough physical exam and detailed history. Aslanabadi *et al.* 2014 have reviewed the 31 cases in the literature and reported that 12 of the accessory nostril cases (40%) were left-sided, 10 of them (33.3%) were right-sided and five cases (16.7%) bilateral, two cases were columellar origin[5]. Few theories have been espoused in the past regarding the origin of accessory nostril. Lindsay proposed the theory of dichotomy by atavism or parallel evolution[1]. Reddy and Rao hypothesized that the extra nostril arose as a result of an accessory placode or pit. An accessory nasal placode may be present either above or below the normal nasal placode[3]. Nakamura and Onizuka advanced a new theory when they reported a case of supernumerary nostril in 1987[6]. They suggested that "the supernumerary nostrils resulted from a localized abnormality of the lateral nasal process, with a fissure appearing accidentally and dividing the lateral nasal process in two, resulting in two nostrils on one side of the nose[6].

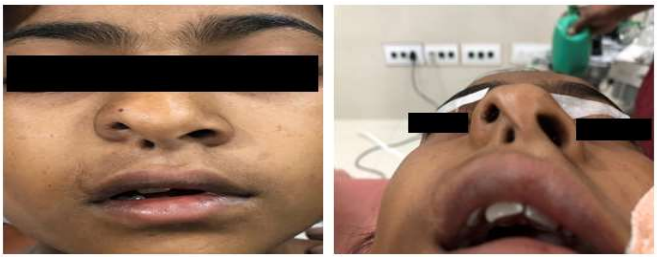

Figure 1,2: Supernumerary nostril located below right nostril

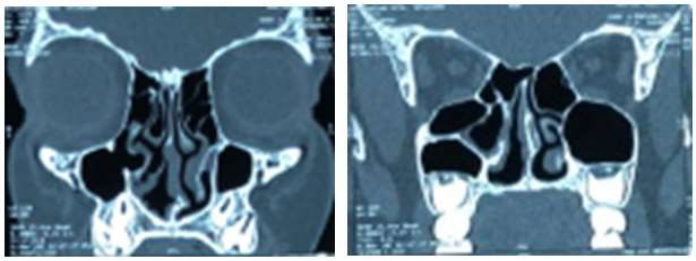

Figure 3,4: CT scan of Nose and PNS

Figure 5,6: Excision of accessory nostril tract

Figure 7: Post operative day 7

Fig 8,9: At 6 months follow up

CONCLUSION

Accessory nostril is a rare congenital anomaly causing functional, cosmetic, and psychological issues. The presentation is varied and surgery is tailor made to the need of the patient. Nasal endoscopy and CT scan helps in customising the procedure for the patient. These patients belonging to pediatric age group will require cosmetic surgery at a later date. The final aim of restoring normal airway function must be fulfilled.

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