



Supernumerary Nostril in the Twin: Case Report

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Authors' contributions

This work was carried out in collaboration between all authors. Author MA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors AGT and FJ managed the analyses of the study. Author FJ managed the literature searches. All authors read and approved the final manuscript.

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Case Report

ABSTRACT

Supernumerary nostril is a rare congenital nasal deformity that contains additional nostril. We encountered a patient with isolated supernumerary nostril and presented our findings and surgical technique.

Keywords: Supernumerary nostril; nose; congenital deformity.

1. INTRODUCTION

Supernumerary nostril is a rare congenital nasal deformity that contains accessory nostril with or

without additional cartilage [1]. Since 1906 only 35 cases have been reported in the English literatures [2]. Supernumerary Nostril was mostly unilateral and isolated.

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The association between supernumerary nostril and other congenital malformations such as facial clefts and congenital anomalies like congenital auricular hypoplasia, congenital cataracts, esophageal atresia and patent ductus arteriosus (PDA) was reported in the literatures [3,4,5,6].

2. CASE REPORT

A 10-month-old male infant presented to the otolaryngology clinic with nasal deformity (Fig. 1). He was born through a full term monozygotic twin pregnancy of a mother aged 26 years and father aged 29 years.

The family history for such similar deformity or any facial congenital deformity was negative.

His twin had normal appearance without any congenital deformity.

On examination, a supernumerary nostril with approximate dimensions of 2 × 3 cm was located superior to the main nostril in the midline. The supernumerary nostril didn't expand with crying.

The main nostrils had decreased projection and flaring especially in right side. The columella appeared bifid. There were no other congenital malformations and His hearing, visual and intelligence were normal.

Magnetic resonance imaging showed enhancing soft tissue mass without intracranial extension on the nasal bridge (Fig. 2). He was operated on under general anesthesia in November 2016. (Fig. 3).

The infant underwent surgery with external rhinoplasty approach. A soft tissue mass without any affiliation exposed under Supernumerary nostril and send for pathology (Fig. 4).

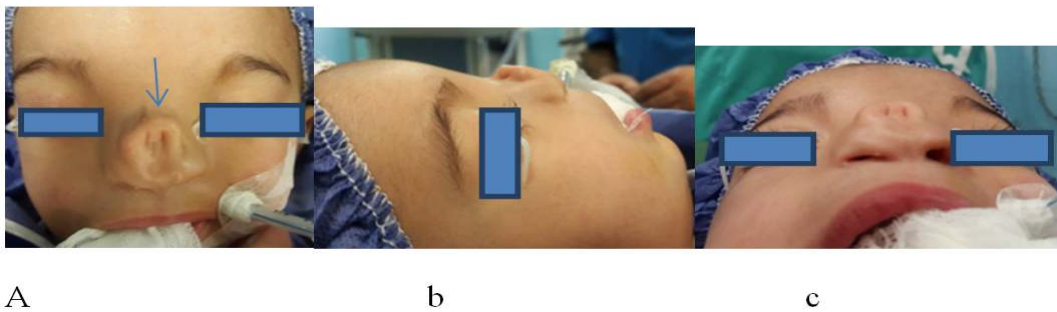


Fig. 1. Preoperative view showing accessory nostril

- a: Frontal view
- b: Lateral view showing decreased nasal projection
- c: Basal view showing bifid columella and right ala flaring

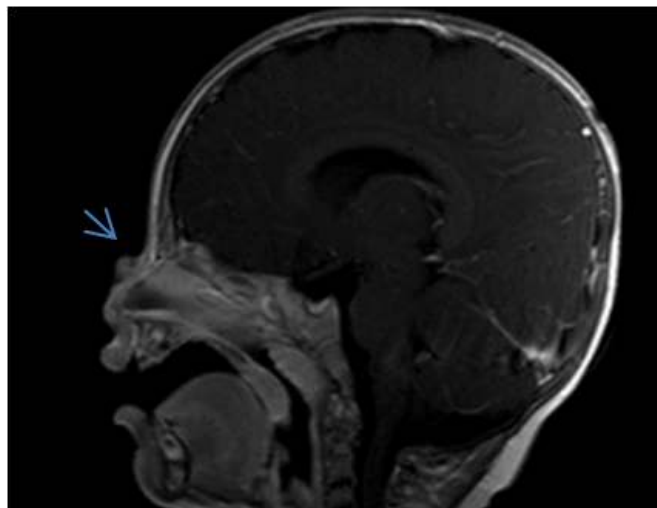


Fig. 2. Magnetic resonance imaging showing an enhancing soft tissue mass without intracranial extension on the nasal bridge (arrow)

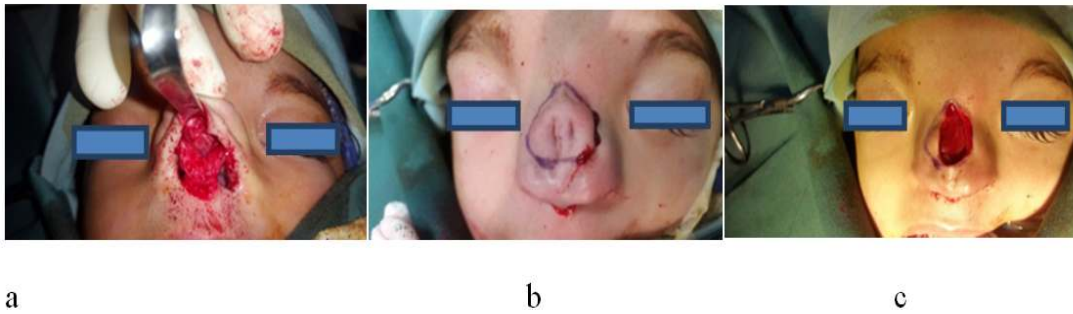


Fig. 3. Intraoperative view

*A: Open rhinoplasty flap elevated to expose soft tissue under the supernumerary nostril
 b. The margin of supernumerary nostril marked
 c. The supernumerary nostril resected*

After ensuring that there was no intracranial connection through external rhinoplasty approach, Incision was marked all along the inner circumference of the supernumerary nostril and the blind ending nasal tract was circumferentially excised.

There was no communication between the supernumerary and main nostril. Subcutaneous tissues sutured and then the skin closure was done with 6-0 nylon, finally the dog ear deformity repaired (Fig. 5).



Fig. 4. Soft tissue mass under the supernumerary nostril resected

The histopathology of the excised tissue showed covering of stratified squamous epithelium with presence of skin appendages in the dermis.

3. DISCUSSION

The nose develops from a frontonasal process in the fourth week of gestation. Nasal placode appears on both sides of the frontonasal process. In the early fifth week, the center of the nasal placode forms a nasal groove. Finally lateral and medial nasal process appear and develop to make the nasal groove deeper and

forms a nasal pit. In the end of the fifth week, the nasal pit gets deeper and becomes nasal sacs that forms nasal cavity and nostrils [7].

Supernumerary nostril is a rare congenital deformity of the nose that contains accessory nostril with or without additional cartilage [1]. Although the exact pathogenesis has not been revealed, the supernumerary nostrils might resulted from abnormal division of lateral nasal process [8].

The first reported case of bilateral supernumerary nostrils was published by Lindsay in 1906 [9].

Since 1906 only 35 cases have been reported so far in the English literatures [2]. Asians patients form more than half the cases [6].

Supernumerary nostril might be isolated or associated with other congenital anomalies such as congenital cataract, esophagus atresia, imperforated anus, patent ductus arteriosus, congenital adrenal hyperplasia, complete unilateral cleft lip and Bilateral congenital choanal atresia [3,4,5,6].

It was reported in the literatures that 45 % of the patients with supernumerary nostril were associated to other congenital anomalies [10].

In the surgery of supernumerary nostril, it is important to remove the accessory nasal and preserve the normal nostril. Excision should be perform at an early age and avoid any serious impact on the nasal cartilages. Reduce aesthetic complications and preservation of adjacent growth centers are the treatment's key points .In most cases fistulectomy and reconstruction with local flaps was performed [11].

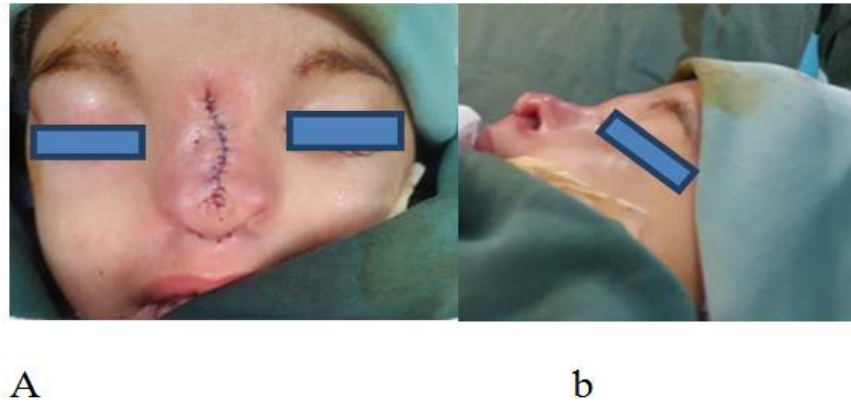


Fig. 5. Rhinoplasty was performed
a: frontal view b: lateral view

In this case, the accessory nostril excised and primary closure was done without any need to forming local flap. Second rhinoplasty may be performed according to re-evaluating the nose after growth age in next stage.

4. CONCLUSION

Supernumerary nostril is a rare congenital nasal anomaly. In the management of Supernumerary nostril it is important to recognize any associate anomaly while remove the accessory nostril and preserve the normal nostril. Early period surgery is important that requires special skills in congenital malformations reconstruction and plastic surgery.

CONSENT

As per international standard or university standard, parent's written consent has been collected and preserved by the authors.

ETHICAL CONSIDERATION

The Local Ethics Committee, Shahid Beheshti University approval was obtained for this study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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