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Triple nostrils: a case report and review

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Summary—In this paper we present a case of a "third nostril" situated below the left nostril and passing posteriorly into the nasal cavity. In all previously published cases the supernumerary nostril has been situated superior to the normal nostrils.

The congenital deformity of "triple nostrils" is rare and in the available literature we have found only four cases. We present another case which was successfully treated and differs in its appearance from all other previously reported cases.

Case report

A male child, born to parents of a non-consanguineous marriage, presented at one year old. He was the first-born child and the antenatal history was normal. The parents complained of an abnormal opening below the left nostril which was distorted from birth. They also complained that the child suffered from frequent colds and mucus secretions were observed coming out through the abnormal opening.

On physical examination we observed a supernumerary nostril below the left nostril. The left ala nasi was deformed and raised and the tip of the nose was bifid. A fine polythene tube passed through the third nostril entered the left nasal cavity about 1.5 cm posterior to the nostril sill. No other congenital anomalies were observed.

At operation the track of the third nostril was completely excised. The left ala was brought down through a perialar incision and the bifid nose tip was corrected through a mid-columellar incision. Postoperative recovery was uneventful.

Histopathology

The specimen showed normal squamous epithelium with pigmentation in the basal layer; the subepithelial tissue showed skeletal muscle, nerve fibres, mucous glands and cartilage.

Discussion

Lindsay, in 1906, reported a case of bilateral supernumerary nostrils situated above the normal nostrils and each opening into the nasal cavity on the same side. In 1919 Tawse reported a child with a supernumerary nostril which was located about 1 cm above the normal right nostril and opening into a separate nasal cavity on the right which in turn communicated with the right normal nasal cavity. Takuya and Yoshiaki (1972) reported a case of supernumerary nostril situated above the left nostril and opening into the left nasal cavity. Sharma (1975) presented a case of supernumerary nostril which was located in the midline superiorly near the tip of the nose and communicated with the right nasal cavity.

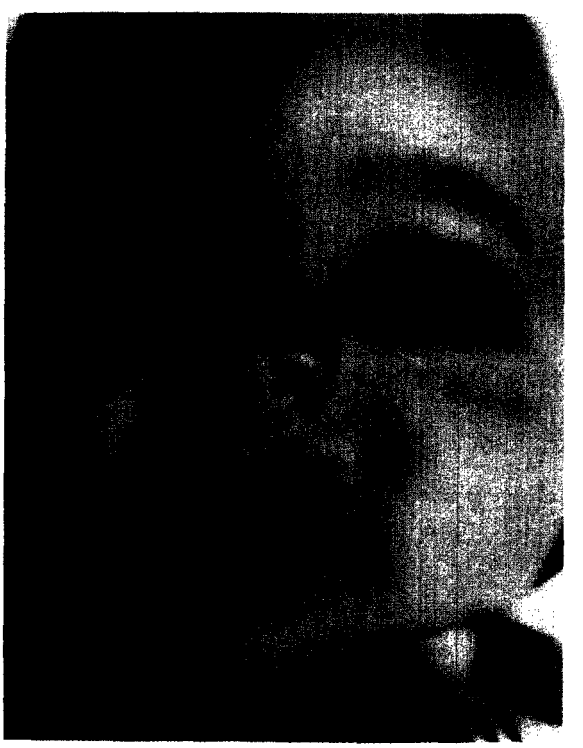

Fig. 1

Figure 1—Preoperative photograph showing the third nostril.

Lindsay (1906) discussed the theories of causation and suggested the theory of dichotomy by atavism. Erich (1962) considered this explanation to be quite reasonable.

Recent electron microscopic studies of the developing embryo and the availability of scanned photographs of the embryo at various stages of development have greatly improved the understanding of the development of the median and lateral nasal processes and of congenital abnormalities affecting the face, particularly the nose and upper lip. This rare deformity of supernumerary nostril presumably develops as a result of an accessory olfactory pit appearing either above or below the normal location of the olfactory placode. Most often it leads to a narrow cavity finally opening into the corresponding nasal cavity. No obvious chromosomal abnormality has been observed and it appears to result from some acquired environmental factor.

Regarding treatment, we feel that it is advisable to operate in early childhood to prevent the deformity of normal nostrils and to excise the supernumerary nostril along with its track, to the end of its opening into the nasal cavity, with minimal trauma to the normal alar cartilages so as to avoid subsequent alar deformity.

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