

CONGENITAL MIDLINE SINUSES OF THE DORSUM OF THE NOSE

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Midline nasal dermoid cyst or fistula was first described by Curvehier in 1817. Since then it has been recognised as a disease entity (Littlewood, 1959). Since then many reports have been published regarding their embryogenesis, course and management, but their true features are still controversial. The disease is uncommon. New and Erich (1937) reported the incidence of nasal dermoid to be 1.1% of all congenital dermoid cysts and fistulae. Crawford and Webster (1952) mention it to be only 0.79% of all body dermoids. Nydell and Masson (1959) reported 39 cases of dermoids of the nose in a period of about 41 years from 1915 to 1956 seen at Mayo Clinic. Littlewood (1961) was able to collect only seven cases in a period of 10 years. Since then many solitary case reports have been published in the literature (Maru et al, 1980).

Case Report I

A 2 year-old-female-child presented with a midline sinus over the dorsum of her nose since birth (Fig 1). The dorsal nasal sinus was removed through an elliptical incision. Using a probe as a guide, the tract was dissected, after adding a vertical limb to the incision to extend from the ellipse to the intercartilaginous junction. The tract was subcutaneous, the striking upper border of the septal quadrilateral cartilage and the perpendicular plate of the ethmoid, which showed divergence of what appeared to be its components to allow for the passage of the tract deep to the nasal bones. The right nasal

bone was partially nibbled to expose both the deep part of the tract and its blind end. The tract and cyst were lined by stratified squamous epithelium which frequently displayed tufts of hairs.

Case II

A 20 year-old-male had sinus similar to that of Case I over the dorsum of the nose. A few hairs were sprouting out through the sinus. History revealed that he had undergone 4 operations for his sinus, at district hospital, but it had reappeared. Surgical excision was performed along the lines previously outlined. It was found passing deep towards the sphenoidal sinus. The nasal bones and frontonasal process on each side was fractured outside. The outfractured nasal bones with frontal processes of the maxillae attached were brought together and held in the narrowed position by using a plaster of paris fixation and nasal packing was done. Follow up did not show any sign of recurrence.

Case III

A 2-year-old-male child had a similar sinus overlying the dorsum of the nose. However, it opened towards the tip of the nose, was wider and passed upwards deep to the nasal bone to end blindly in sac like structure, at the level of the floor of the anterior cranial fossa.

Discussion

Congenital midline sinuses of the dorsum of the nose are mostly apparent shortly after

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Fig. 1 : Clinical photograph of a child showing midline sinus at the dorsum of the nose.

birth. In 50% of cases (Bruce and John, 1967), it was noted at birth. In one of their cases, discovery was made as late as 47 years. In our cases, it was present since birth although they came late for treatment.

These sinuses are formed by the inclusion of a portion of epithelium in developing septum, but Gray (1954) mentions that the development of the nose, down to and including the anterior nares, has been attributed to a single midline structure known as the fronto-nasal process, thus denying the presence of a fusion line that could embryologically give rise to such malformations. However, the concept of the nose having an unpaired midline embryo-logical representation has been challenged more than once before.

Handusa (1949) reported several cases of midline congenital malformations of the nose including fissuring of the tip of the nose, bifid nose, dermoid cysts and sinuses. He came to conclusion that these anomalies are very difficult to be explained on the basis of the present conception of embryology and suggested a bilateral origin for the nose, both sides developing symmetrically to fuse in the midline in early embryonic life. Ghosh et al (1971) described a case of double nose and concluded that the condition must have resulted from the formation of a paired fronto-nasal processes. Similarly Khalifa (1978) discussed three cases of midline nasal sinuses suggest a double fronto-nasal process.

It is probably true that two such processes are responsible by their fusion for the development of nose. Failure of fusion may occur at different stages and can easily account for such malformation of double nose, bifid nose, midline sinuses and dermoid cyst. Thus these sinuses are formed by the inclusion within the developing septum of a portion of epithelium, where the primary cartilage has been replaced by bone, epithelial remnants may be left which gradually grow, causing a widening of the nasal septum, or even a double septum to develop in its upper part. There is widening of the septum associated with a widening of the nasal bridge.

The sinus is in the form of a small pit which is usually in the midline but can be displaced one or other side. It is usually about halfway down the nasal bridgeline but can be at the tip of the nose or up at the base of the nose. It may have a few hairs sprouting out of it.

The management of the midline nasal sinuses can be difficult when it had a long course upto the sphenoid or upto the base of skull, otherwise they can be excised by splitting the nose from just distal to the pit to approximately the alabella. The pit is circ-

unsubscribed and the sinus should be traced between the nasal bones.

Summary

Three cases of congenital midline sinuses of the dorsum of the nose are presented. These

were excised surgically without recurrence. Salient features of the lesion along with embryogenesis are discussed in the light of available literature.

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