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Case Report

A congenital accessory skin appendage of the nasal columella: a rare anatomical variation

Benjamin J. Mongi[1]*, John P. Manyahi[1], Tupokigwe E. Brown[2]

[1]Department of Surgery, St. Joseph Mission Hospital, Peramiho, Ruvuma, Tanzania
[2]Department of Anatomical Pathology, St. Joseph Mission Hospital, Peramiho, Ruvuma, Tanzania

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***Correspondence:**
Dr. Benjamin J. Mongi,
E-mail: benjohn19882@gmail.com

ABSTRACT

An accessory skin appendage of the nasal columella is among of the rare congenital malformation of the nose. Still there are few cases reported in the literature. Here, we present a case of a patient with a congenital polypoid mass on the nasal columella. The lesion was unilateral and appeared as a skin- colored tag. The location was upper lateral border of the columella. The location corresponds to the migration route of the medial nasal process during week 4-7 of embryological development. However, there is few proposed pathophysiology or distribution of accessory skin appendages of the nasal columella in the literature. We present a simple, comprehensive pathophysiology based on embryological development. We present a case of a protruding skin appendage of the nasal columella. The lesions were present from birth with no familiar history of similar conditions. The lesions were located on the upper lateral borders of the nasal columella and underwent surgical excision under general anesthesia with no signs of recurrence after 9 months of follow up. Any default occurs during the migration process of embryonic development may result in congenital anomaly. If an obstacle or injury occurs during the medial migration of the medial nasal process, congenital remnant tissue may remain along the migration route, resulting in an accessory skin appendage of the nasal columella.

Keywords: Congenital accessory skin appendage, Nasal columella, Medial nasal process, Lateral nasal process, Embryology, Anomaly

INTRODUCTION

An accessory skin appendage of the nasal columella is among of the rare congenital malformation of the nose. Still there are few cases reported in the literature.[1] Here, we present a case of a patient with a congenital polypoid mass on the nasal columella. The lesion was unilateral and appeared as a skin- colored tag. The location was lower lateral border of the columella. The location corresponds to the migration route of the medial nasal process during week 4-7 of embryological development.[2,3] However, there is no proposed pathophysiology or distribution of accessory skin appendages of the nasal columella in the literature. We present a simple, comprehensive pathophysiology based on embryological development.

CASE REPORT

A 4 month patient attended in our otorhinolaryngology clinic with the complain of a mass protruding from the right nostril since birth.it is accompanied with difficulty in breathing using the affected nostril no history of difficulty in breathing using the other nostril, no history of difficult in breast feeding, no any other congenital malformation seen, no problem reported during antenatal, natal and postnatal clinic and the mother made a total of five visit during entire of her pregnancy and received all

necessary attentions i.e. malaria prophylaxis, tetanus toxoid, antiworm, etc. No familial history of the similar conditions.

Figure 1: Before surgery.

On general examination patient was stable with stable vitals while local examination by using nasal speculum a pedunculated mass attached to the upper lateral border of the nasal columella partially occluding the entrance measured approx. 40×50×20 mm. Lab work up was done and patient was prepared for excision under General anesthesia.

Figure 2: Six weeks post-surgery.

After the excision patient was followed up for nine months without a sign of recurrence. A sample was taken to the histopathology department for analysis and revealed epidermal fibro adipose tissue without a cartilage component.

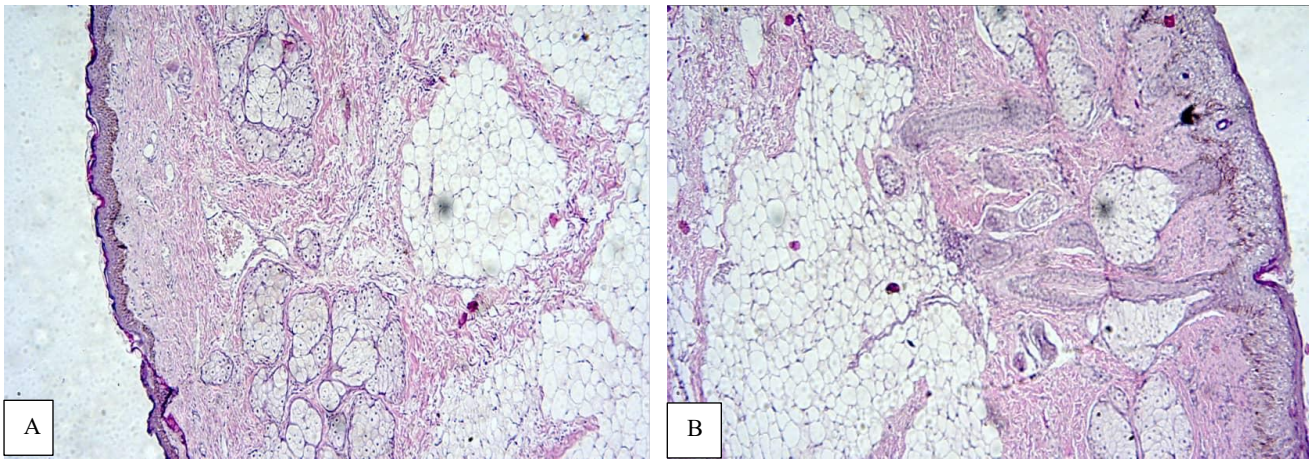

Figure 3 (A and B): Epidermal fibro adipose tissue.

DISCUSSION

During the nasal development of embryological period, at the end of the fourth week, maxillary prominences can be distinguished lateral to the stomodeum, and mandibular prominences can be distinguished caudal to it. During the fifth week, the nasal placodes invaginate to form nasal pits and they create a ridge of tissue that surrounds each pit and thus forms the nasal prominences.[4] Embryology suggests how an error during normal development may results in congenital malformations. The primitive face is formed by migration, fusion, and differentiation of the five facial prominences during the 3rd to 10th weeks of fetal development.[1]

During development on the lateral side of the nasal pit, the hypertrophied mesoderm becomes the lateral nasal process, the medial nasal process also develops on the medial side of the nasal pit.

Consequently, mesenchymal proliferation around the edge of the nasal placodes results in the development of the nasal placodes results in the development of the downward – facing "horseshoe-shaped" nasal process consisting of the medial and lateral nasal process. The medial nasal process of the nasal placode initially expands ventrally and is a part from the opposite medial nasal process. Meanwhile, each maxillary process expands medially to merge first with the lateral nasal process and then the medial nasal process. Medial expansion of the maxillary process led to medial displacement of the medial nasal process and causes a Medline merge of the medial nasal process.[2,5]

Finally, the medial nasal process contributes the medial part of the nasal nostril, which is columella and medial crus of the lower lateral cartilage, including the footplate. If an obstacle or injury occurs during medial migration of the medial nasal process, congenital polypoid remnant tissue may remain along the migration route and may results in an accessory skin appendage of the nasal columella.[1]

In our case, It is believed that, obstacle or injury during migration of the medial nasal process of embryonic development results into formation of the accessory skin appendages of the nasal columella and was located on the anteromedial of the nasal columella. It is also supported with other literature which reported the same pathophysiology.[1,2,4,6,7]

CONCLUSION

Any default occurs during the migration process of embryonic development may result in congenital anomaly. If an obstacle or injury occurs during the medial migration of the medial nasal process, congenital remnant tissue may remain along the migration route, resulting in an accessory skin appendage of the nasal columella.

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