

Research Article

Nasolabial Swellings as a Rare Challenging Diagnosis.



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Abstract

Background: One of the most common anatomical sites for swellings (cysts, inflammatory lesions, and tumors) is the maxillofacial region. Nasolabial area is considered a part of the maxillofacial region. **Aim:** To evaluate the type of nasolabial swelling in El Minia University Hospital and try to create a classification of swellings in the Nasolabial region. **Patients and methods:** A retrospective study of the nasolabial swellings of the patients attending ENT clinics at El Minia University Hospital from the period 2018–2020 ethical approval was taken. **Results:** 11 cases of nasolabial swelling were admitted to the ear nose, and throat department. 10 cases are Nasolabial cysts and one case is Peripheral giant cell granuloma. **Conclusions:** Nasolabial cysts are considered the most common swellings in the Nasolabial region. Consistency and surgical findings help in the differential diagnosis of swellings in the Nasolabial region, and the histopathological examination is the tool to differentiate between different pathologies, especially mass.

Keywords: Nasolabial, Peripheral giant cell granuloma, Schwannoma, Pleomorphic adenoma, cyst.

Introduction

One of the most common anatomical sites for swellings (cysts, inflammatory lesions, and tumors) is the maxillofacial area. ⁽¹⁾

Nasolabial cysts are rare, with an incidence of 0.7% out of all maxillofacial cysts. ⁽²⁾

Nasolabial cyst is extraosseous lesion so considered non odontogenic lesion. ⁽³⁾

There is another pathologies which is involved in the nasolabial region and considered non odontogenic. nasolabial region is considered a part of maxillofacial region.

Aim

To evaluate the type of nasolabial swelling in El Minia University Hospital and try to create a classification of swellings in the Nasolabial region.

Patients and methods

A retrospective study of the nasolabial swellings of the patients attending ENT clinics at El-Minia University Hospital from the period 2018–2020.

Ethical approval was taken. (Approval number 847; 8; 2023).

All data are collected (history, examination, CT, surgical techniques, histopathological examination, and follow-up).

Exclusion criteria: any missing data from the above.

Surgical Technique:

Transoral sublabial approach is used. An incision through labial mucosa was done and the lesion was dissected from labial mucosa, maxillary alveolus, overlying skin and nasal mucosa then wound was closed.

All statistics were done with the SPSS version 22.

Results

Eleven cases of nasolabial swelling were admitted to the ear, nose, and throat departments of El Minia University Hospital in the period from April 2018 to May 2022.

The mean age is 20 ± 3.5 years, ranging from 15 years to 23 years.

Nine were female and 2 were male. Nasolabial swelling occurred on the left side in 7 cases and in 4 cases on the right side.

All patients complained of facial swelling (in the nasolabial area). 2 patients complain of pain-related to swelling. Five patients complained of unilateral nasal obstruction on the same side of swelling. By examination, there is swelling in the nasolabial region, which was not tender except in 2 patients, soft in consistency in 10 patients and firm in consistency in one patient, and there is no change in the skin over the swelling. The oral examination of the upper gingivolabial sulcus was free except in one case, which showed filling (obliteration of the sulcus). 5 patients

have swelling that obliterates one nostril (on the side of the swelling). CT was done for all cases showing soft tissue density swelling in the inferior nasal alar region with a well-defined smooth outline, except one case showing a large expansile mass with a well-defined irregular mass and erosion of the medial wall of the maxilla.

An oral sublabial approach was taken in all cases. In ten cases, cystic swelling was discovered and treated with aspiration of fluid followed by cyst enucleation. (**Figure1**)

In one case, there is a mass which is completely removed. (**Figure 2**)

A cyst or mass was sent to histopathological examination, which reveals:-

- 1- Cyst: - with ciliated pseudostratified ciliated columnar epithelium with goblet cells.
- 2- Mass: - lobular mass of fibroblasts with numerous often clustered osteoclast-like giant cells associated with inflammatory cells, hemorrhage, and hemosiderin. Peripheral giant cell granuloma (repetitive granuloma)



Figure 1: Nasolabial cyst

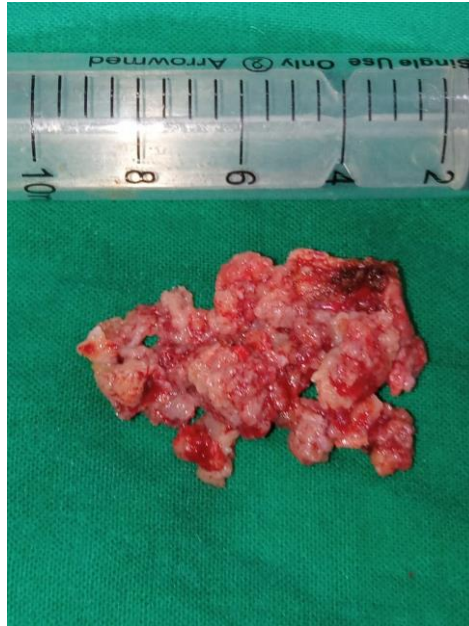


Figure 2: Peripheral giant cell granuloma

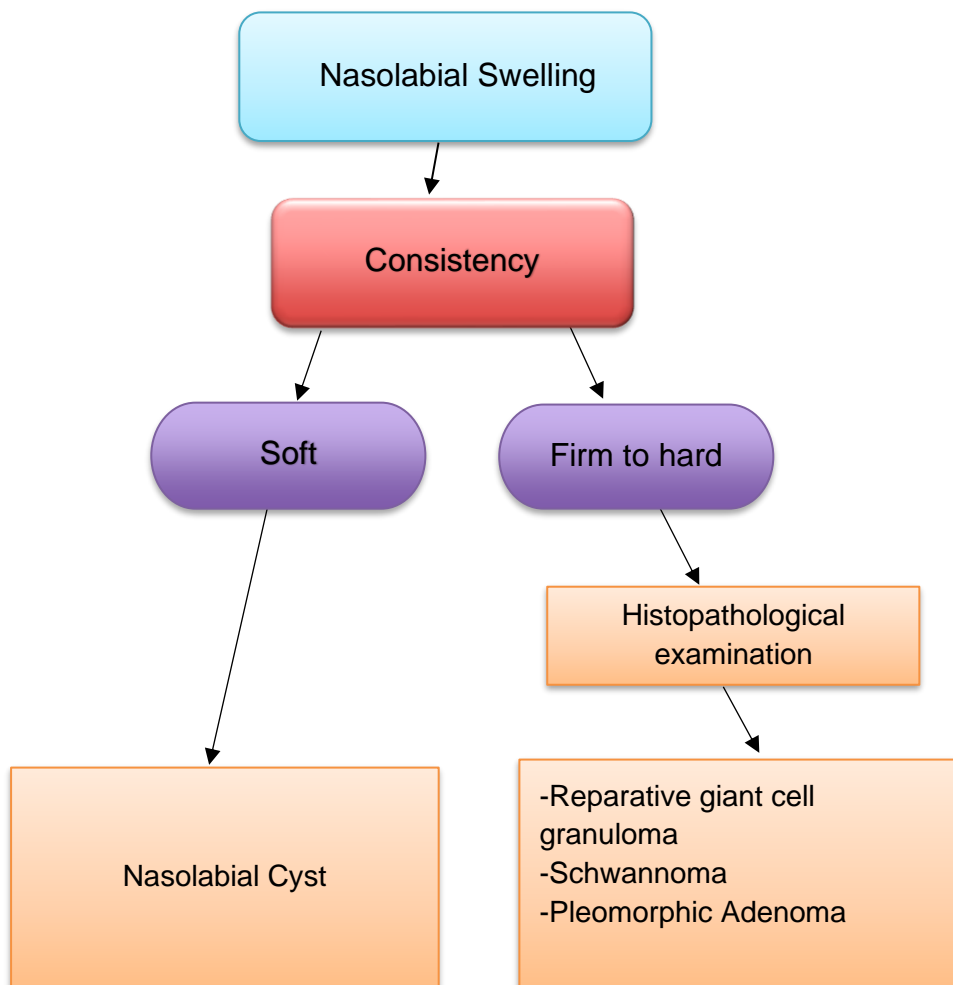


Figure3: Algorithm for classification of Nasolabial swellings

Discussion

The maxillofacial region is divided anatomically into 13 regions, including the nasal region and lip region. Nasolabial region as a term not involved in this classification in spite of its location related to the nasal and lip regions.⁽⁴⁾

There is no definite definition for the boundaries of the Nasolabial area in the literature. The authors of the current study suggest the boundaries of the Nasolabial region which situated behind the ala of nose as follow, anteriorly by the labio-gingival sulcus and posteriorly by the anterior wall of the maxilla inferior nasal meatus.

So any swelling in this area is considered nonodontogenic.

In the current study, clinical examinations of 11 cases of nasolabial swellings are the same except in consistency, which is soft in 10 cases (nasolabial cysts) and firm in one case (granuloma). Two patients complained of pain due to infection.

The extension of the Cysts can be in three directions: to the nasolabial

Fold, the mouth vestibule and the nasal vestibule.⁽⁵⁾

This explains why only 4 cases of Nasolabial cyst complain unilateral nasal obstruction due to extension of cyst to nasal vestibule. In the case of peripheral giant cell granuloma, the mass extend to nasal and mouth vestibule, so there is obliteration of gingivo-labial sulcus and unilateral nasal obstruction.

In the current study, there is difference in CT between nasolabial cyst and peripheral cell granuloma as, Cyst has a well-defined, smooth outline; however, granuloma has an irregular outline with erosion of the medial wall of the maxilla.

In literature, there is absence of osteolysis in case of Nasolabial cyst but sometimes associated with a concave appearance of the Outer cortex of the maxilla.⁽⁶⁾

transnasal endoscopic marsupialization and oral sublabial incision are used as an approaches to Nasolabial region.⁽⁷⁾

In the current study, an oral sublabial approach was used, which reveals cystic swelling in 10

cases and a mass in only one case, and histopathology reveals this mass is a peripheral giant cell granuloma.

Pleomorphic adenoma (PA), the most common benign tumor of Salivary gland, which consists of epithelial and stromal components; according to the components of the stroma, the consistency of the tumor varies from soft to hard.⁽⁸⁾

Only one case mentioned in the literature for a female patient, 21 years old, with a hard painless swelling in the right nasolabial area, skin over normal, a sublabial incision was done with the excision of a well-capsulated gray-white mass, and histopathological examination was done on it, which revealed PA.⁽⁹⁾

Schwannoma is an uncommon benign tumor that arises from the Schwann cells of the nerve sheath.⁽¹⁰⁾

25–45% of extracranial schwannoma occurs in the head and neck. Schwannoma is considered to have a very rare presentation in the Nasolabial area.⁽¹¹⁾

It mimics the Nasolabial cyst, but in schwannoma, patients may complain of paraesthesia over the lateral nasal region, or labial region (may be as result of compression of schwannoma over the infra-orbital nerve), Schwannoma is firm in consistency and during excision, there is a mass, not a cyst. The histopathological examination is conclusive.⁽¹²⁾

Reparative giant cell granuloma is a locally aggressive lesion, but it is not a true tumor. It is a hyperplastic reactive lesion.⁽¹³⁾

It is a nonodontogenic lesion. It usually arises in the maxilla and mandible.⁽¹⁴⁾

Clinically, it has variable clinical pictures (nodular or polypoid lesion, smooth or lobulated surface). It is of unknown origin or etiology; it may be due to local trauma or inflammation.⁽¹⁵⁾

In the current study a female 15 years old, presented with nasolabial swelling that extended to the gingivolabial sulcus. It has a short history (6 months). Clinically it mimics the Nasolabial cyst except for the consistency of the swelling, which is firm in the case of granuloma. But radiologically, it differs from the Nasolabial cyst.

The patient underwent a sublabial incision with the excision of a firm lobulated mass. Authors consider a classification for Nasolabial swellings according to consistency, surgical findings, and histopathological examination into cystic swellings and a mass as shown in the algorithm in **figure (3)**. The histopathological examination is the tool that differentiate between different pathological types of the mass.

Many lesions may mimic the swellings in the nasolabial region, such as the radicular cyst and periapical abscess (related usually to non-vital or diseased teeth), the nasopalatine duct cyst and dentigerous cyst (both intraosseous lesions), and the dermoid cyst (which usually appear in childhood and are lateral to the ala of the nose or in the midline).⁽¹⁶⁾

Conclusions

Nasolabial cysts are considered the most common swellings in the Nasolabial region. Consistency and surgical findings help in the differential diagnosis of swellings in the Nasolabial region, and the histopathological examination is the tool to differentiate between different pathologies, especially mass.

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