

Swelling of the maxilla - A clinical enigma

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Swelling in the maxillary region, especially unilateral, is a surgical enigma. The condition is very rare but misleading as a variety of conditions can mimic it. A young female came to our outpatient department with swelling in the left nasolabial - maxillary region for the past 9 months. The swelling was firm with eggshell crackling sensation, tender, not resonant with normal skin. Clinical examination revealed mild elevation of the left nasal cavity floor with facial asymmetry. Intraorally, the swelling in the alveolus obliterated the gingivobuccal sulcus. CT showed evidence of a cystic lesion arising from the apices of the upper right medial incisor to the upper left first premolar. Oral and maxillofacial surgery opinion was sought, who claimed that there was an Ellis fracture of the upper left lateral incisor and also that the swelling was hard, extending up to the upper left second premolar. Orthopantomogram was ordered which revealed periapical radiolucency extending from right upper medial incisor to the second upper left premolar. This gave the impression of periapical pathology. Routine blood investigations were done and anesthetic fitness was obtained. The patient was taken up for cyst excision under general anesthesia. The cyst was enucleated completely and sent for histopathological examination. The pathology report came back as a dentigerous cyst. Thus a swelling in the maxillary region remains a diagnostic dilemma. Early diagnosis and appropriate radiological investigations are vital. Despite being uncommon in routine practice, it is vital for otolaryngologists to have adequate awareness, knowledge, and skills to deal with such conditions.

Keywords: Maxillary region, Surgical enigma, Swelling

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Introduction

Swelling in the maxillary region, especially unilateral, is a surgical enigma. The condition is very rare but misleading as a variety of conditions can mimic it. They may be anything from an ossifying fibroma to a developmental odontogenic cyst. These developmental cysts are generally found by chance after a routine X-ray, unless big enough to cause symptoms, and are rarely related to supernumerary teeth [1,2]. They are most commonly identified associated with mandibular third molars and maxillary canines. These cysts normally appear in young adults, between 20 and 30 years of age [3]. Hence unilateral maxillary swellings warrant a detailed history and appropriate investigations to narrow down to a diagnosis and then further management must be done according to the type of lesion.

Case Report

A 27-year-old female came to our outpatient department with swelling in the left nasolabial - maxillary region for the past 9 months. The swelling was initially like a peanut and gradually increased in size. It was initially associated with pain, which was compressive in nature, aggravated by brushing/chewing, which gradually diminished and stopped. There was a history of assault by the husband to the left side of the face 2 years back.

Clinical examination revealed a mild elevation of the floor of the left nasal cavity along with facial asymmetry caused by swelling of the left maxillary region. The swelling was firm with eggshell crackling sensation, tender, not resonant, covered with normal skin, extending from the left nasolabial fold, abutting the floor of the left nasal cavity, to the zygoma laterally, the inferior orbital ridge of the orbit superiorly and pyriform aperture inferiorly. Intraoral examination revealed a hard swelling in the alveolus obliterating the gingivobuccal sulcus extending from the right upper central incisor to the upper left second premolar. There were no loose teeth. A provisional diagnosis of a nasolabial cyst was made.

Computed Tomography (CT) of the face was taken, which showed evidence of a cystic lesion of size approximately 3x3x2.6 cm arising from the apices of upper right medial incisor to upper left first premolar extending till inferior orbital ridge superiorly, nasal bone and inferior turbinate

Medially, with associated bony erosion of nasal bone and maxillary antrum and till the maxillary buttress laterally. There was also coexisting damage to the dentoalveolar process of the first 5 teeth of the upper left quadrant. This made us think that the lesion may be either an odontogenic keratocyst of ossifying fibroma of the left maxilla with dental involvement. Hence Oro-maxillo-facial (OMFS) opinion was sought, who claimed that there was an Ellis fracture (class 2) of the upper left



Fig-1: Arrow mark showing the cystic lesion involving the maxilla and upper jaw left side.

Lateral incisor and also that there was a hard intra-oral swelling extending from the right upper medial incisor to the upper left second premolar. An orthopantomogram was ordered for further confirmation, which revealed periapical radiolucency extending from the right upper medial incisor to the second upper left premolar. This investigation gave the impression of periapical pathology. But CT showed evidence of a cystic lesion. Hence the diagnosis was made as odontogenic keratocyst.



Fig-2: Cursor showing radiolucency in left upper jaw extending from right upper medial incisor to second upper left premolar.

After obtaining pre-anesthetic clearance, the patient was taken up for cyst excision under general anesthesia. The buccal vestibular incision was made in the upper jaw with two vertical releasing incisions and mucoperiosteal flap elevated. The cyst was enucleated completely and sent for histopathological examination (HPE).

Extraction of the left upper lateral incisor along with apicectomy of the right upper medial incisor till the left upper first premolar was performed. Caldwell – Luc procedure was done as the cyst involved nasal floor. The repair of the left nasal cavity floor was done with 5-0 vicryl. Platelet-rich- Fibrin (PRF) was placed on the enucleated socket to accelerate the healing of soft and hard tissues. The flap was closed with 3-0 vicryl. The patient recovered well postoperatively. HPE came back as a dentigerous cyst.

Discussion

The differential diagnosis for a maxillary swelling should be achieved based on the anatomical structures present in that location. Some of these structures may be developmental in origin or due to trauma or infection. As the most common type of developmental odontogenic cyst, the dentigerous cyst is defined as an odontogenic cyst derived from reduced enamel epithelium surrounding the crown of an unerupted tooth [4]. It is commonly associated with unerupted mandibular or maxillary third molars or maxillary cuspids. It occurs at any age but has a peak incidence in patients from the 10-30 years age group [5,6]. Whereas it was associated with premolars in our case which was an abnormal presentation.

Dentigerous cysts are the second most common odontogenic cysts appearing in the jaws, after radicular cysts [7,8]. When the maxillary sinus/bone is invaded, symptoms usually occur late in the process; the cyst usually remains asymptomatic but may produce painless bony expansion or facial asymmetry if it becomes large [9,10]. The patient presented to us without any major complaints suggesting that there was no underlying active inflammation or infection. Since a number of conditions can present with facial swelling the following differential diagnosis was thought of - fibrous dysplasia, odontogenic keratocyst, nasolabial cyst, and even periapical cyst.

The above conditions were ruled out based on socio-demographic and clinic radiological data.

Dentigerous cysts usually occur as well-circumscribed, unilocular radiolucencies surrounding the crown of a tooth and corticated border. In the present case, the same was seen. CT scan also showed evidence of cystic lesion which backed up the radiological findings.

Despite causing damage to the surrounding structures cyst evacuation is the treatment of choice in case of an odontogenic cyst especially dentigerous cyst. The Caldwell-Luc approach was reported to be the most common treatment when dentigerous cysts are associated with an impacted /damaged tooth within the maxillary sinus [11,12]. Marsupialization is another advisable treatment to preserve the cyst-associated tooth but the major disadvantage is the recurrence or persistence of the lesion [2].

Conclusion

Thus a swelling in the maxillary region remains a diagnostic dilemma because of the various conditions which can present there. Early diagnosis and appropriate radiological investigations are vital. Rare and uncommon conditions must be ruled systematically. Despite being uncommon in routine practice, it is essential for otolaryngologists to have adequate awareness, knowledge, and skills to deal with such conditions.

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