

## CASE REPORT

# A large extension of epidermoid cyst in maxilla: Case report

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### ABSTRACT

#### A large extension of epidermoid cyst in maxilla: Case report

In this case report, we present a rare epidermoid cyst in the anterior and posterior left maxillary region extends to the maxillary sinus and infratemporal area with its surgical treatment and postoperative follow-up. A 25-year-old male, showing no systemic pathology, referred to otorhinolaryngology clinic with the complaints of nasal obstruction, abscess formation and pus outflow into the mouth due to oroantral fistula. After radiological and histological examinations, epidermoid cyst was diagnosed. Due to the large extensions of the lesion patient was underwent multiply surgical operations by maxillofacial surgeon, neurosurgeon and otorhinolaryngologist. After surgical operations, patient's symptoms were relieved. Differential diagnosis should be made with the other lesions for precise diagnosis of epidermoid cyst before surgery. Multidisciplinary evaluation in such cases is important and surgical operations should be performed simultaneously with multidisciplinary approach.

### KEYWORDS

Epidermoid cyst, infratemporal area, multidisciplinary approach

### ÖZ

#### Maxillada geniş uzantılı epidermoid kist: Olgu sunumu

Bu makalede, ön ve arka sol maksiller bölgeyi kaplayan ve infratemporal alana kadar uzanan epidermoid kistin olgu sunumu yapılmıştır. Sistemik herhangi bir hastalığı olmayan 25 yaşında erkek hasta, burun tıkanıklığı ve oroantral fistül sonucu oral kaviteye iltihap akışı şikayetleriyle kulak burun boğaz kliniğine başvurdu. Radyolojik ve histolojik incelemelerden sonra hastaya epidermoid kist teşhisi konuldu ve operasyona karar verildi. Lezyonun geniş anatomik uzantıları nedeniyle hastaya çene cerrahisi, beyin cerrahisi ve kulak burun boğaz uzmanı tarafından çok sayıda cerrahi operasyon yapıldı. Operasyon sonrası hastanın semptomları hafifledi. Cerrahi öncesi epidermoid kistin kesin tanısı için diğer lezyonlarla ayırıcı tanı yapılmalıdır. Bu gibi durumlarda multidisipliner değerlendirme önemlidir ve multidisipliner yaklaşımla eş zamanlı olarak cerrahi operasyon yapılmalıdır.

### ANAHTAR KELİMELER

Epidermoid kist, infratemporal bölge, multidisipliner yaklaşım

Dermoid, epidermoid and teratoid cysts are types of cystic teratomas and they can be found any area in the body, especially in regions where embryonic components combine together. Histologically all type of cystic teratomas show close proximity with each other.<sup>1,2</sup> Epidermoid cysts are benign soft tissue malformations originated from ectoderm.<sup>3,4</sup> Most of (80%) these cysts are observed in ovaries and sacral region of the body, whereas 7% of them have been informed in head and neck region. Localization of these cysts in oral space is extremely rare with the rate of 1.6% and they generally seen in submental area.<sup>5,6</sup> Tongue, lateral pharyngeal wall and soft palate are other regions where dermoid cysts mostly localized.<sup>7</sup> Clinically, they are slowly-enlarged, painless, well-encircled firm protuberances.<sup>8</sup> In this case report, we would like to present a rare epidermoid cyst in the anterior and posterior left maxillary region and its extension to the maxillary sinus and infratemporal area with its surgical treatment and postoperative follow-up.

## CASE REPORT

A 25-year-old male patient with no systemic disease, referred to otorhinolaryngology clinic with the complaints of nasal obstruction. After radiographic examination, a polypoid mass was detected in the left medial side of the middle turbinate. According to MRI results, a lesion was detected starting from sinonasal cavity extending to the pterygopalatine fossa bilaterally, hard palate and parapharyngeal region inferiorly, middle cranial fossa and temporal lobe superiorly. Excisional biopsy was performed under general anesthesia and the result was compatible with epidermoid cyst. Patient was operated under general anesthesia by neurosurgeon and otorhinolaryngologist, the lesion was removed and the patient was discharged from the hospital.

One year after the surgery, first left upper molar tooth of the patient was extracted in a private clinic.

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Patient came to our department with the complaints of abscess formation and pus outflow into the mouth after the extraction. Oroantral fistula was detected in clinic examination. According to CT results, a radiolucent lesion with irregular borders was monitored starting from maxillary sinus extending to the orbital floor. Patient was consulted to otorhinolaryngology (ORL) clinic for the evaluation of the lesion. Otorhinolaryngologist decided to follow the lesion and sent the patient back to our clinic for oroantral fistula treatment. Oroantral fistula was closed with buccal fat pad under general anesthesia and patient was discharged from our hospital uneventfully. Patient was applied to our clinic again with the same symptoms two weeks after oroantral fistula treatment. In radiographic and clinical examinations it was noticed that the lesion was associated with epidermoid. Therefore, patient was consulted to ORL clinic again. Otorhinolaryngologist planned another surgery and curettaged the lesion. Five months after the surgery, patient was admitted to our clinic with the complaints of pain and mobility in his maxillary anterior teeth (Figure 1). In radiographic and clinical examinations epidermoid cyst was detected including whole premaxilla and maxillary anterior teeth (Figure 2). We plan to remove the lesion by enucleation and curettage under general anesthesia. Patient was anesthetized under general anesthesia. Mucoperiosteal flap was elevated both buccally and palatally after sulcular and vertical releasing incisions between premolars. Lesion was dissected from neighboring structures including premaxilla anteriorly and anterior edge of the soft palate posteriorly. It was noticed that borders of the cyst were extending from the soft palate to the skull base. Flap was sutured with 3.0 silk suture (Ruschmed, Turkey) (Figure 3). Lesion was sent to histopathological examination and the result was compatible with epidermoid cyst. Patient's symptoms were relieved except numbness around his left infraorbital region. Postoperative follow-up visits of the patient are still continuing to maxillofacial and ORL department (Figure 4).



**Figure 1.**

Mucosal perforation and content of the lesion can be seen at affected premaxilla



**Figure 2.**

Poor-defined borders of the lesion destructed the premaxilla and nasal floor can be seen in CT images



**Figure 3.**

Intraoperative photograph of the resected premaxilla



**Figure 4.**

Postoperative panoramic view of the patient

Finally we can conclude that the diagnosis of dermoid and epidermoid cysts should be reached only after ruling out different developmental, neoplastic, infectious and traumatic lesions. Multidisciplinary evaluation in such cases is important and surgical operations should be performed simultaneously with multidisciplinary approach.

## DISCUSSION

Dermoid and epidermoid cysts may be seen at birth and also in elderly patients, whereas vast majority of them are observed between the ages of 15-35 years without sex predilection. They can be congenital or acquired as a result of trauma or after surgery.<sup>1,9</sup> In present case, the patient was 25-year-old male and there was no definite trauma history.

Clinically, slowly expanded mass is characteristic symptom of the lesion unless secondarily infected.<sup>9</sup> They may get larger and interfere with mastication, speech and rarely breathing which may cause life-threatening situation.<sup>1,10</sup> In this case report the patient referred to both ORL and our clinic with symptoms due to infection of the lesion.

Beside the clinical examination, supplementary examination methods are used such as USG, CT, MRI and fine needle aspiration biopsy for the diagnose of the lesion. Differential diagnosis is made with the lesions such as dermoid cyst, lipoma, hemangioma, ranula, neurofibroma, lymphoma and submandibular/sublingual gland infections. Malignant transformation of the epidermal cyst is rare in the literature. In order to exclude such malignant lesions which mimic epidermoid cyst, it is necessary to plan the preoperative diagnosis correctly.<sup>2,9</sup> We used MRI and CT images for the detection of the lesion borders. Incisional biopsy was performed for precise diagnose. We used MRI and CT images for the detection of the lesion borders. Incisional biopsy was performed for precise diagnose. Recurrence is rare after complete surgical excision.

The treatment strategy is to surgical removal of the lesion completely. It is important not to rupture the cyst during surgery because intraluminal substance may damage fibrovascular structures which may lead to postoperative inflammation.<sup>2</sup> Recurrence is rare after complete surgical excision.<sup>3</sup> In our case, lesion was removed surgically.

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