

# Palatine Tonsillar Epidermoid Cyst- Mimicking Cystic Tumor

## Kistik Tümörü Taklit Eden Palatin Tonsilin Epidermoid Kisti

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### Öz

Epidermoid kistler, epidermal elemanların dermal ve daha derin dokulara implantasyonu ile oluşurlar. Baş ve boyun bölgesinde görülme sıklığı %1,6 ile %7 arasında değişmektedir. Tonsil bölgesinde görülmesi son derece nadirdir, yani neredeyse %0.01'den azdır. Fetal dönemde konjenital bir lezyon olarak meydana gelebilirler veya travmaya bağlı ya da cerrahi sonrası implant olarak edinsel şekilde ortaya çıkabilirler. Bu olgu sunumunda, daha önce bilateral tonsillektomi öyküsü olan ve boğaz ağrısı şikayeti ile başvuran 46 yaşındaki erkek hastada teşhis edilen epidermoid kisti sunacağız.

**Anahtar Kelimeler:** Epidermoid kist, palatin tonsil, otalji

### Abstract

Epidermoid cyst refers to the implantation of epidermal elements into the dermal and deeper tissues. In head and neck, incidence ranges from 1.6 to 7%. In the tonsillar area it is extremely rare i.e less than 0.01%. They occur in fetal period as congenital lesion or as an acquired lesion either due to a trauma or as post surgery implant. In this case report, we will discuss the epidermoid cyst, in a 46-year-old male who presented with history of pain in the throat with previous history of bilateral tonsillectomy.

**Key words:** Epidermoid cyst, palatine tonsil, otalgia

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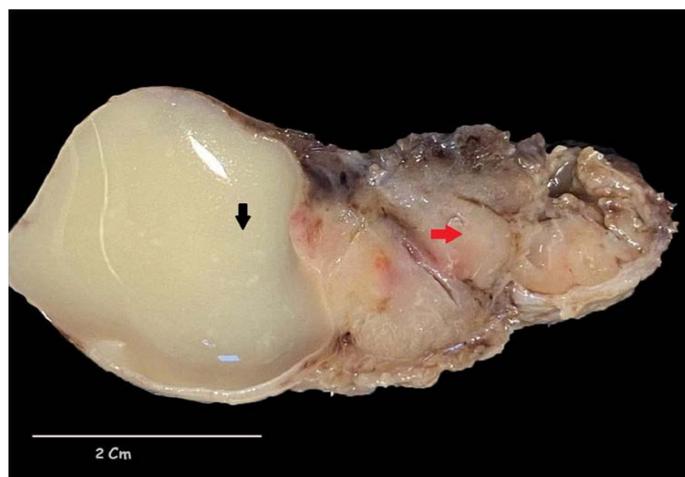
## INTRODUCTION

Palatine tonsil is located on either side of the oropharynx between the palatoglossal and palatopharyngeal arches (1). There are wide variety of cysts that can occur in the tonsils which includes retention cysts, dermoid cysts, lymphoepithelial cysts and hydatid cysts, However retention cysts are most common (2).

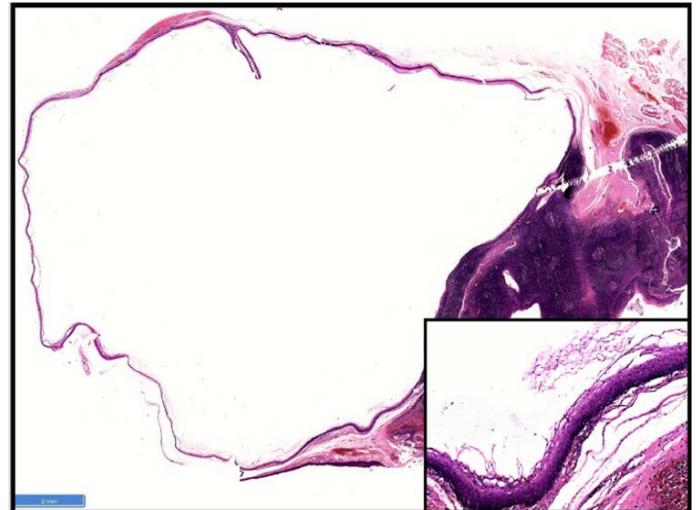
The term epidermoid cyst was defined by Roser (3). These cysts are benign. They can develop either from abnormal epithelial components of ectodermal tissue or implanted epithelium arising after trauma or surgery (4). Epidermal cysts can occur anywhere in the human body, however they are most common in head and neck region. In pharynx the occurrence of these cysts are very rare. The incidence in intraoral region is very low (0.01%). They are most commonly seen in the floor of the mouth and labial, lingual or buccal mucosa (5). Most common presentation is swelling and pain, other less common symptom is referred pain, which might be challenging symptom as it leads to a misdiagnosis. In this case report, we will discuss the epidermoid cyst, in a 46-year-old male who presented with history of pain in the throat with previous history of bilateral tonsillectomy.

## CASE REPORT

A 46-year-old male presented with history of pain in the throat since one month which aggravated in the night. He also had a burning sensation in the



**Figure 1.** Gross image showing remnant tonsil ( red arrow) with cyst filled with pultaceous material( black arrow)



**Figure 2.** Histopathological examination under low power ( H&E X 20) and high power (inset -H&E X 100) showing tonsillar tissue within which are cavity lined by stratified squamous epithelium

throat. Later swelling was noticed by the patient. He gave a history of bilateral tonsillectomy two years back after being diagnosed of chronic tonsillitis. Routine investigations were unremarkable. Ear and nose examination were within normal limits. On throat examination right tonsillar area was enlarged and cystic. Clinical diagnosis of tonsillar cyst was made for which patient underwent excisional biopsy. Histopathological examination was done on the specimen sent. On gross examination the specimen consisted of remnant tonsillar tissue attached with a cyst together measuring 3.5x1.5x0.5 cm. The cyst measured 2x1.5x0.5 cm. External surface - grey brown, homogenous. Cut surface was solid and cystic (Figure 1). Cyst was filled with grey yellow thick pultaceous material. Microscopic examination revealed a cyst which lined by stratified squamous epithelium and was filled with keratin flakes, cyst macrophages and few lymphocytes (Figure 2). Remnant tonsil showed hyperplastic lymphoid follicles with prominent germinal centres suggesting features of chronic tonsillitis. There was no recurrence on 6 months of followup.

## DISCUSSION

The palatine tonsil is required for the antimicrobial defense mechanism of the body. Several diseases

are common in tonsil, among which chronic tonsillitis is the commonest one which clinically presents as tonsillar hypertrophy. Tonsillar tumors, tumors of parapharyngeal space, infectious etiology and inclusion cysts are the various differential diagnosis of tonsillar hypertrophy (2). Pathologically, Cyst is defined as fluid filled cavity. Contents may be solid, semisolid or gaseous. Several cystic lesions can develop in tonsils, which can be broadly classified as infectious and non-infectious (5).

Epidermoid cyst refers to the implantation of epidermal elements into the dermal and deeper tissues. They are benign in nature. Epidermoid cysts are also termed in different names such as epidermal cyst, epidermal inclusion cyst, epithelial cyst, keratin cyst, or sebaceous cyst. These cysts are lined with simple squamous epithelium and its wall does not contain skin appendages unlike dermoid cysts (5). In head and neck region, the incidence of epidermoid cyst varies between 1.6 and 7%. In the tonsillar area incidence is extremely rare i.e less than 0.01%. They can be seen at any age. Majority are in the age between 10-35 years. The male to female ratio in literature is 1:4 (4).

The exact etiopathogenesis of epidermoid cyst is not known. However, the most popular theory is "epithelial implant theory". Epithelial implant is a possibility and can occur due to abnormal inclusion of cells during surgery/trauma. Developmentally it can be due to the epithelia remnants isolation during the closure of first and second branchial arches in the midline (7). Gardner syndrome, basal cell nevus syndrome, and pachyonychia congenital are few of the hereditary syndromes which are associated with these cysts (8). In tonsil, these cysts present as a painless, asymptomatic mass or occasionally throat pain. Sometimes it can also present as referred otalgia which poses a difficult diagnostic challenge. The most common causes of referred otalgia are acute pharyngitis, tonsillitis, peritonsillar abscess, temporomandibular joint syndrome, dental disease and cervical spine arthritis. Therefore, detailed history and careful examination is must to rule out these conditions (5).

In most cases the cyst is not evident on clinical examination but only tonsillar hypertrophy may be prominent (3,6,8). Parapharyngeal space, infectious etiology, lymphoepithelial cyst, dermoid cyst, papilloma and tonsillar carcinoma are considered as differential diagnosis of tonsillar hypertrophy. Histopathological examination is required to differentiate these entities,

hence thorough gross and microscopic examination of every resected tonsillar mass is important. Dermoid cysts shows adnexal structure along with lining epithelium whereas lymphoepithelial cyst shows lymphoid population (6,8). Complications of these cysts includes cyst rupture or infection in the long standing untreated cases. When its infected the cyst wall may also contain lymphocytes, macrophages, neutrophils along with keratin debris. Rarely cyst rupture leads to aspirational pneumonia (5).

Tonsillar cysts can be diagnosed based on imaging and can be aided by fine needle aspiration. However, excision biopsy is the confirmatory test which aids in thorough examination and helps to rule out any underlying malignancy (6). Generally, treatment is not required for asymptomatic patients. Surgical excision of the cyst or tonsillectomy is the treatment of choice for symptomatic patients. Utmost care should be taken while excising cyst as its contents have an irritating effect on the surrounding fibrovascular tissue. The recurrence of the cyst is very rare if the cyst is excised completely (6). Rarely malignancy can be developed within the cysts in chronic long standing cases. Presence of sudden increase in size helps in suspecting malignancy. This risk of malignancy attributes to 7% in adults. Asymmetrical tonsillar enlargements in adults is a high-risk sign to look for malignancy in detail (9). Hence through detailed histopathological examination is needed for cyst excision.

## CONCLUSION

Tonsillitis is a common entity in all age groups, however histopathological examination plays a major role in detecting non neoplastic and neoplastic lesions of the tonsil. Epidermoid cyst is a rare entity in tonsil but should be always evaluated properly for definitive treatment and to avoid complications.

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