

Iatrogenic Multiloculated Epidermoid Parotid Cyst Following Middle Ear Surgery

Orta Kulak Cerrahisi Sonrası İyatrojenik Multilokule Epidermoid Parotis Kisti

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ABSTRACT

Parotid gland cysts are rare lesions having several histologic variations. The physical, radiologic, and pathologic examinations can be ambiguous, and the differential diagnosis includes other benign lesions and malignancies. The most common symptom is unilateral painless swelling in the area of the parotid without any fixation to the overlying skin. Detailed medical history and a careful examination of prior skin incisions are essential for the diagnosis of an epidermal cyst. These cysts must be totally excised, and patients should be followed up for a long time. In this report, an iatrogenic multiloculated parotid cyst developing after a middle ear surgery that was performed 20 years ago is described and its radiologic and pathologic features with its treatment are discussed. In preoperative examination, two masses were observed in preauricular and infraauricular areas. Ultrasonography revealed a multiloculated cystic mass and adjacent lymph node. In intraoperative examination, cyst was multiloculated with finger-like projections and there was an adjacent lymph node by the cyst. Therefore a mass lesion and lymph node were assumed as a malignancy and its lymph node metastasis. The patient's parotid cyst was totally excised, and there were no signs of recurrence for two years follow of up.

Keywords

Parotid gland, parotid diseases, epidermoid cyst

ÖZET

Parotis bezi kistleri değişik histolojik varyasyonları olan nadir lezyonlardır. Fizik muayene bulguları, radyolojik ve patolojik incelemeler kafa karıştırıcı olabilir ve ayırıcı tanı diğer benign lezyonları ve maligniteleri içerir. En sık rastlanan semptom, lezyonun üzerini örten ciltte hiç bir fiksasyon olmadan parotis bezi alanında tek taraflı ağrısız şişliktir. Detaylı bir tıbbi özgeçmiş ve mevcut olan daha önceki cilt insizyonları için dikkatli bir araştırma, epidermal bir kistin tanısı için zorunludur. Bu kistler total olarak çıkarılmalıdır ve hastalar uzun bir süre için takip altına alınmalıdır. Bu yazıda, 20 yıl önce yapılmış bir orta kulak cerrahisi sonrası gelişen iyatrojenik multilokule bir parotis kisti tanımlanmış, radyolojik ve patolojik bulguları tedavisi ile birlikte tartışılmıştır. Preoperatif olarak hastada preauriküler ve infraauriküler iki ayrı kitle izlenirken, ultrasonografik değerlendirmede septalı kistik bir kitle ile komşu lenf nodu izlenmekteydi. İntraoperatif gözlemlerde kistin parmaklı uzanımlar gösteriş şekilde multilokule olduğu, bu kistik kitleye yapışık bir lenf nodu bulunduğu gözlemlendi. Bu nedenle olgu bir malignite ve onun lenf noduna olan metastazına benziyordu. Hastanın parotis bezi kisti total olarak çıkarıldı ve iki yıllık takip süresinde rekürrense ait herhangi bir bulgu yoktu.

Anahtar Sözcükler

Parotis bezi, parotis hastalıkları, epidermoid kist

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INTRODUCTION

Cysts of the parotid gland are very rare lesions that include different types of benign salivary gland cysts. They can occur in any part of the parotid gland and can show considerable histological variations. These are subdivided into congenital cysts including branchial cysts, cystic teratomas, polycystic disease of parotid gland and congenital ductal ectasia; and acquired cysts including retention cysts and lymphoid cystic hyperplasia.¹ The clinical and radiological characteristics of these benign cystic lesions can be ambiguous for physicians, and achieving a conclusive preoperative diagnosis may be difficult. Unilateral painless swelling in the area of the parotid without any fixation to the overlying skin is the most common symptom. The final diagnosis is established histopathologically. After a skin trauma, iatrogenic implantation of squamous epithelium may result in formation of an epidermoid cyst that requires surgical intervention.²

In this article, a patient with an epidermal cyst in the left parotid region is described.

CASE REPORT

A 32-year-old man presented with a painless swelling in the left parotid gland for ten years. The medical history of the patient was significant for bilateral ear operations due to chronic otitis media 20 years ago. On physical examination, two painless, regular and mobile masses measuring 2 x 2 cm and 4 x 3 cm were

found in the infraauricular and preauricular areas, respectively. The otorhinolaryngologic examination revealed no other abnormalities. The parotid ultrasonography revealed a 40 x 19 mm in diameter, regular, homogeneous mass in the left inferior parotid area, and there was a lymph node which was 28 x 14 mm in size, adjacent to the first mass. The neck MRI revealed a 5 x 3 cm in diameter septated cystic mass with indistinct walls. It was involving the deep and superficial parotid lobes (Figure 1) and did not uptake any contrast.

The fine needle aspiration cytology of the lesion revealed cytologic atypia of uncertain malignant potential. Therefore, complete excision of the cystic mass was planned and performed. During surgery, beige colored, finger-like multiloculated cystic, nonadhesive mass lesion with an adjacent lymphadenopathy was excised (Figure 2 and Figure 3). Histopathologic examination showed an epidermal cyst and the lymphadenopathy was reactive. In two years of follow up, the patient had no complaints, and there were no signs of recurrence. The informed consent of the patient is obtained.

DISCUSSION

Cystic lesions of the parotid gland are not common in the otolaryngology practice. A literature review revealed 23 cystic lesions in a series consisting of 708 parotidectomies; 16 of these were branchial cysts, 5 were retention cysts, and 2 were epidermal inclusion cysts.³ Pieterse and Seymour⁴ found 16 cystic lesions in 183 surgically excised parotid glands over an 8 year period. In 9 of these cysts, a parotid neoplasm developed.

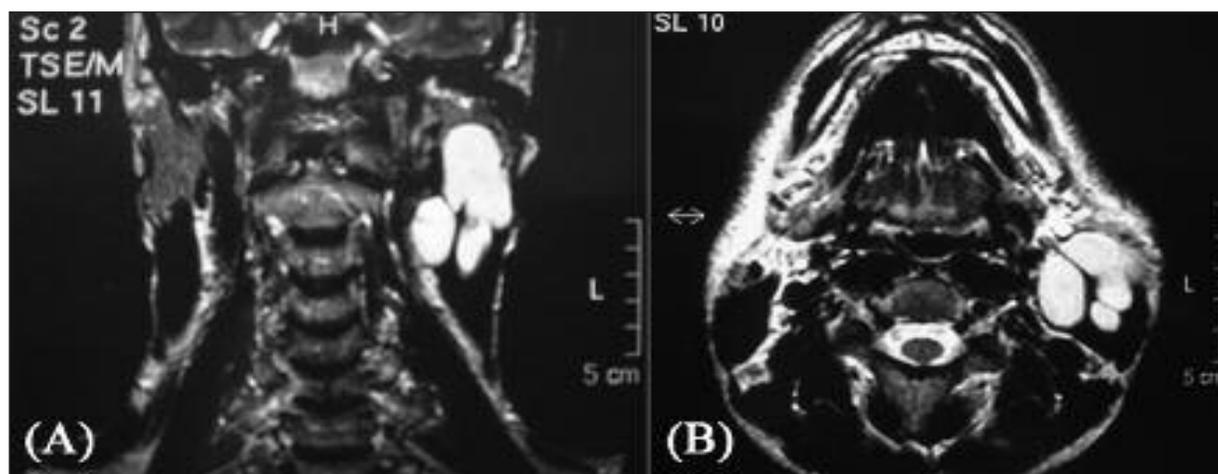


Figure 1. The neck MRI revealed a 5 x 3 cm in diameter septal cystic mass with indistinct walls; (A) coronal, (B) axial.



Şekil 2. Beige colored, finger-like multiloculated cystic, nonadhesive mass lesion.



Şekil 3. The excised cyst and adjacent lymphadenopathy.

The remaining 7 were not associated with a neoplasm.⁴ Stewart et al.⁵ reported 34 cystic materials during fine-needle aspiration of 341 salivary glands. Of these, 8 were diagnosed as lymphoepithelial cyst. The others were pleomorphic adenoma in 2 specimens, one Warthin's tumor, and one low-grade mucoepidermoid carcinoma. In addition, 3 aspiration cytologies were false-negative.⁵ Daniel et al.⁶ reported a series of 15 patients with nonmalignant masses of the parotid gland region in children who underwent surgical excision. Five of these patients were diagnosed as lymphoepithelial cysts or first branchial cleft cysts, 3 were parotid abscesses, 3 were lymphangiomas, 2 were chronic inflammations, one was an epidermoid cyst.⁶

Iatrogenic epidermoid cysts have been described in various sites in the head and neck region following surgical procedures.² Thompson and Bradley² reported a case of iatrogenic epidermal cyst in the parotid region following repeated myringoplasties. Legent et al.⁷ also described four cases of epidermic cysts which appeared several years after a middle ear operation. Three of these cysts were in the temporal region and one case was in the parotid region.⁷ Walshe et al.⁸ reported three patients presenting with parotid masses with a history of previous ipsilateral middle ear surgery. They highlighted the fact that previous incisions in the skin around the ear, increases the risk of epidermal cyst development in the parotid gland. These cysts can occur many years after the initial surgery. Infection of these cysts can cause facial palsy without involving the nerve.⁹ Epidermoid cysts in the head and neck region tend to be associated with relapsing inflammation. These cysts are usually well encapsulated and dissection from the surrounding

tissue is relatively simple. Complete excision of the cyst is the key to prevent recurrence.

Differential diagnosis of parotid benign lymphoepithelial cysts includes numerous pathologies such as; mucous retention cyst, polycystic disease of parotid, Warthin tumor, pleomorphic adenoma, mucoepidermoid carcinoma, cystadenocarcinoma, hydatid cyst, and pneumoparotitis.¹⁰ It is difficult to make a definitive diagnosis of parotid cysts due to similar clinical symptoms, physical examination and radiologic findings of cysts, pseudocysts and cystic tumors of parotid gland like cystadenolymphoma and cystic mucoepidermoid carcinoma. Fine needle aspiration biopsy can be helpful for choosing an appropriate surgical approach. Pathological evaluation of a parotid cyst is necessary to distinguish between neoplastic and non-neoplastic cysts. Because of the difficulty of preoperative diagnosis, the usual therapy for these cysts is superficial parotidectomy. After the surgery, histopathologic examination provides the definitive diagnosis.

Our patient's cyst was multiloculated with finger-like projections and this characteristic was not reported in the former cases. Radiological appearance of the cyst demonstrated a septal cystic mass with indistinct walls that did not uptake any contrast and it involved the deep and superficial parotid lobes. Fine needle aspiration cytology revealed cytologic atypia of uncertain malignant potential. There were a mass lesion and an adjacent lymph node that could suggest a malignancy and its lymph node metastasis. The interesting point of the patient's medical history was the middle ear operation performed 20 years ago, and an epidermoid cyst simulating malignancy was developed after so many years.

Detailed medical history and a careful examination for the presence of prior skin incisions are essential for the diagnosis of an epidermal cyst. This is an important point to select the appropriate treatment method and to avoid overtreatment. Like in this patient, the cyst can

develop after a long period, and findings can resemble a malignancy. The cysts must be totally excised to avoid recurrence. These patients should be followed up for a long time because of the risk of recurrence and the possible development of a malignancy.

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