

Intradiploic Epidermoid Cyst in a Patient with Breast Cancer History

Fatih BAYRAKLI ¹, Selçuk PEKER ²

¹ Acıbadem Maslak Hastanesi Nöroşirürji Bölümü, İstanbul

² Acıbadem Üniversitesi Tıp Fakültesi, Nöroşirürji Anabilim Dalı, İstanbul

✓ Cranial vault lesion in a patient with breast cancer history is reported. A 44-year-old woman presented with dizziness, fatigue, and protrusion in the right parietal region of the head. Leading diagnosis was metastasis of breast cancer to the cranium. Neuroradiological evaluation showed possible cystic lesion. Surgical resection was performed, and histopathological examination showed an epidermoid cyst.

Key words: Cranial vault lesions, epidermoid cyst, metastasis

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Meme Kanseri Öyküsü Olan Hastada İntradiploik Epidermoid Kist

✓ Meme kanseri öyküsü olan hastada kafa kemiğindeki bir lezyon bildirilmiştir. Kırk dört yaşında kadın hasta sıkıntı, baş dönmesi ve kafanın sağ parietal bölgesinde şişlik nedeniyle başvurdu. Öncelikli teşhis meme kanserinin metastazı olarak düşünüldü. Nöroradyolojik değerlendirme kistik lezyon olasılığını ortaya koydu. Lezyon cerrahi olarak çıkarıldı ve histopatolojik tetkik sonucu epidermoid kist olarak bildirildi.

Anahtar kelimeler: Epidermoid kist, metastaz, kranial lezyonlar

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The causes of epidermoid cyst (EC) include the failure of the surface ectoderm to separate from the underlying structures and the sequestration or implantation of the surface ectoderm. Intracranial epidermoids have been classified as intradural and extradural. Extradural epidermoids account for about 25 % of all intracranial epidermoids and are located on the scalp, cranial vault or skull base. Cranial ECs are relatively uncommon, representing between 0.2 and 1 % of all intracranial tumors. Epidermoid neoplasms are usually benign, but rare malignant changes have been reported ⁽³⁾.

In this report we present a case of intradiploic right parietal EC in a patient with breast cancer history.

CASE REPORT

A 44-year-old woman presented with dizziness, fatigue, and protrusion in the right parietal region of the head. It had been gradually increasing in size during past 1 year. She had never suffered from head trauma. Medical history of the patient revealed breast cancer operation, chemotherapy, and radiotherapy 5 years ago. Presumptive diagnosis was metastasis of breast cancer to the cranium.

Plain skull radiography showed an osteolytic lesion without sclerotic margins at the right parietal bone (Figure 1). There were no sign of calcification or periosteal reaction. On magnetic resonance imaging (MRI), the mass showed heterogeneous signal intensity on T1-weighted image (Figure 2A), minimal rim-like enhancement



Figure 1. Lateral skull radiograph shows a well marginated osteolytic lesion without a sclerotic rim on the parietal region.

around the lesion on contrast enhanced T1-weighted image (Figure 2B), and markedly high signal intensity on T2-weighted image (Figure 2C).

The lesion was surgically removed. At the operation, there was a capsule around the mass. The soft, membranous, tissue-encapsulated lesion was excised.

The histopathological examination revealed a cystic mass lined by squamous and containing keratinized material, suggestive of an epider-

moid cyst. Postoperative course of the patient was unremarkable without of recurrence after 1 year of follow-up period.

DISCUSSION

The most common presentation of the calvarial intradiploic epidermoid is a long-standing, asymptomatic lump on the head. Headache and focal tenderness may be present. Rarely, large lesions may be associated with focal neurological signs. Superinfection or bleeding has been described. Malignant transformation, intracranial hypertension, seizures and focal neurologic signs have been described in patients with large cysts (3,7,8).

There is a wide variety of calvarial lesions that are identified as palpable masses or as incidental findings in radiographic studies. The radiological differential diagnosis of these lesions includes congenital, traumatic, inflammatory and neoplastic lesions (1). Their true etiology may be challenging especially when the medical history of the patient has different systemic diseases.

Intradiploic epidermoid cysts usually appear as osteolytic lesions with sclerotic margins on plain skull radiographs (2,4,6,8). The differential diagno-

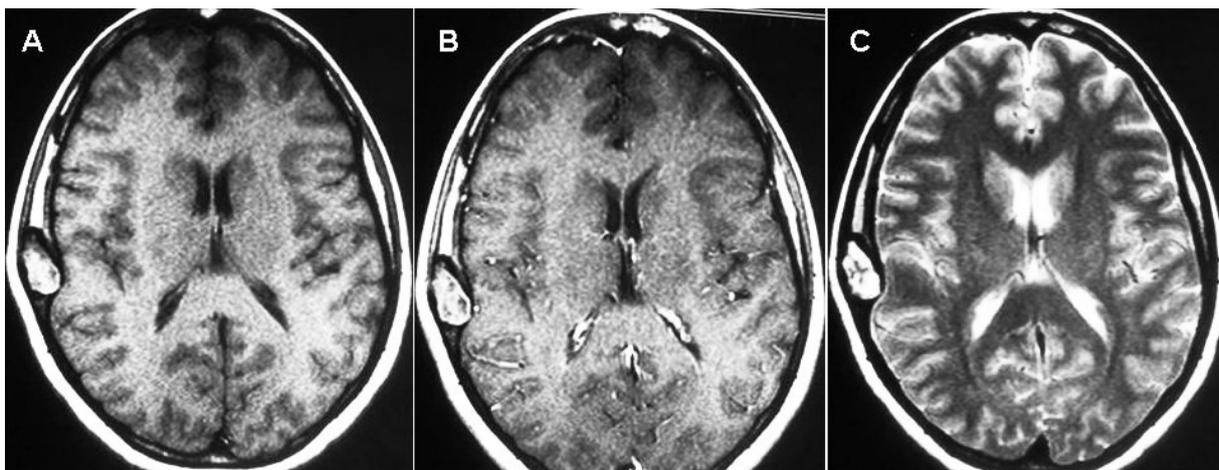


Figure 2. A. T1-weighted axial image shows low to iso signal intensity when compared to brain parenchyma. The lesion is confined to intradiploic space without intracranial extension, B. Gadolinium enhanced T1-weighted image reveals minimal enhancement around the lesion especially next to brain, and C. T2-weighted image reveals markedly high signal intensity.

sis usually includes plasmacytoma, metastases and fibrous dysplasia. Fibrous dysplasia is often associated with a ground glass appearance and there is thinning of the inner table, which characteristically does not protrude inward ⁽²⁾. Metastases are usually osteolytic, with ragged margins or permeative destruction. Exceptions to this are metastases from prostate and breast tumors, which can be osteoblastic. Plasmacytoma causes well-defined lytic lesion without any reactive sclerosis ⁽²⁾.

On MR imaging, they demonstrate low, intermediate, or high signal intensity on T1-weighted images and markedly high signal intensity on T2-weighted images ^(2,8). Occasional high signal intensity on T1-weighted images is considered to be due to intracystic hemorrhage or a high content of mixed triglycerides with unsaturated fatty acid residues ^(2,5). Epidermoid cysts usually do not enhance or enhance only peripherally after injection of contrast material on CT or MR imaging ⁽²⁾. Dermoid cyst (DC) which is located at sutures must be thought in differential diagnosis of epidermoid cyst ^(1,2,7). Since DCs can contain fatty tissue, their attenuation and signal intensity may be equivalent to those of fat, accounting for low density on CT and high signal intensity on T1-weighted images ⁽¹⁾.

Metastatic lesions shows focal areas of low intensity on T1-weighted images in MRI, that are easily distinguished from the hyperintensity of normal bone marrow. Such lesions may be obscured in a post-gadolinium sequence, thus it is essential to perform a previous non-contrasted sequence ^(1,9).

Epidermoid cysts should be excised with great care. Once completely removed, the epithelial

lining of these cysts does not recur. However, in cases with deep intraparenchymal extension, total tumor removal could be difficult and may carry high risks of permanent neurologic deficit ^(3,7).

In conclusion, we present the first case of an intradiploic EC in patient with breast cancer history. Radiological differential diagnosis can be done reliably preoperatively. However surgical excision and histopathological examination is mandatory for definite diagnosis and treatment.

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