

Olgu Sunumu**Occipital Bone Osteoma****Nilgün ŞENOL¹, Fatma Nilgün KAPUCUOĞLU², Yavuz Selim AYDIN¹**¹Süleyman Demirel Üniversitesi Tıp Fakültesi, Beyin ve Sinir Cerrahisi Anabilim Dalı, Isparta²Süleyman Demirel Üniversitesi Tıp Fakültesi, Patoloji Anabilim Dalı, Isparta

Osteomas are benign bone-forming tumours. They are mostly seen in the frontoethmoidal region in the head and neck region, and occipital localization is extremely rare. They are often asymptomatic lesions, and can be detected by cosmetic complaint of the patient. In large tumours headache and dizziness can be the symptoms. A 39-year-old female admitted for gradual enlargement of a swelling on the left side of the back of her head, and nonspecific headache. In physical examination a bony hard, immobile, non-tender lesion on left occipital bone was detected. Neurological examination was normal. In brain computed tomography, a bony mass of 3.5 cm in diameter and 1 cm thick was revealed. Magnetic resonance imaging revealed a well-circumscribed hypointense lesion with dimensions of 3x3,5x1 cm which caused a slight compression on the parenchyma of the left occipital region. Lesion was totally excised to relieve cosmetic deformity. Histopathological examination revealed it to be an osteoma. Before surgery differential diagnosis, and extension of the lesion should be carefully explored. We reported this case. Because of rarity of occipital localization.

Key words: Occipital bone, osteoma, bone tumour*J Nervous Sys Surgery 2014; 4(3):134-137***Oksipital Kemik Osteomu**

Osteomlar iyi huylu kemikten gelişen tümörlerdir. Baş ve boyun bölgesinde sıklıkla frontoetmoidal alanda görülürler ve oksipital yerleşim oldukça enderdir. Çoğunlukla asemptomatik lezyonlardır ve hastaların kozmetik yakınmaları sonucunda teşhis edilirler. Büyük olan tümörlerde baş ağrısı ve baş dönmesi gibi yakınmalar olabilir. Otuz dokuz yaşında kadın hasta, başının sol arka tarafında zamanla büyüyen bir şişlik ve baş ağrısı yakınması ile başvurdu. Fizik muayenesinde sol oksipital kemik üzerinde sert, hareketsiz, hassasiyeti olmayan bir lezyon belirlendi. Nörolojik muayenesi normaldi. Beyin tomografisinde, 3,5 cm çapta ve 1 mm kalınlıkta bir kemik kitle görüldü. Manyetik rezonans görüntülemeye 3x3,5x1 cm boyutunda sınırları belli, sol oksipital bölgede hafif parankime bası yapan hipointens bir lezyon saptandı. Lezyon cerrahi ile total çıkarıldı. Histopatolojik değerlendirme sonucu osteom olarak değerlendirildi. Cerrahi öncesi ayırıcı tanı ve lezyonun uzanımı iyi değerlendirilmelidir. Oksipital yerleşimin çok ender olması nedeni ile bu olguyu sunduk.

Anahtar kelimeler: Oksipital kemik, osteom, kemik tümörü*J Nervous Sys Surgery 2014; 4(3):134-137*

Cranial osteomas are slowly progressing, and enlarging benign bone tumours, and although they can be discovered at any age, they are mostly seen during the fourth and fifth decades of life ⁽²⁾. The prevalence of the cal-

varial osteomas is reported as 0.4 %, which are mostly localized on the sutures ⁽¹⁴⁾. Trauma, infection or congenital abnormalities are attributed as etiological causes ⁽²⁾. An anatomical classification for cranial osteomas is proposed according to their locations as intraparenchymal, dural, skull base and skull vault. They are also classified as exostotic and enostotic osteomas ⁽⁴⁾. Calvarial osteomas tend to arise from the outer layer, and mostly grow outward ⁽⁵⁾. Although most

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of the osteomas are asymptomatic and do not need resection, excision can be done for larger symptomatic or for cosmetic reasons ⁽⁴⁾.

Herein, we reported an unusual localization of osteoma on the skull.

CASE REPORT

A 39-year-old female admitted to our clinic for gradually enlarging swelling on the left side of the back of her head, and nonspecific headache. In the history there was no trauma. In physical examination a bony- hard, immobile, non-tender, smooth lesion on left occipital bone was detected. Neurological examination was normal. Plain skull X-rays revealed a dense bony mass. In computed tomography (CT) scan, a bony mass of 3.5 cm in diameter and 1cm thick, originating from the outer layer of the skull was revealed (Figure 1). Magnetic resonance imaging revealed well-circumscribed hypointense lesion measuring 3x3.5x1 cm which caused a slight compression on the parenchyma of the left occipital region (Figure 2). The lesion was excised totally for cosmetic reasons (Figure 3). The histopathology was reported as osteoma. Microscopically, a compact osteoma with regular outer surface composed of mature, and dense lamellar

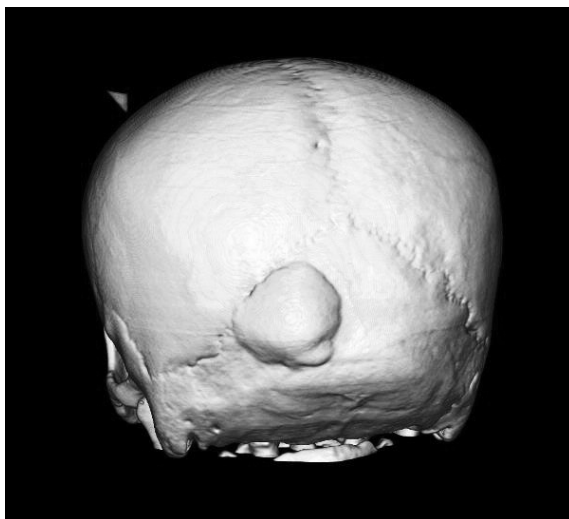


Figure 1. A bony mass of was revealed in 3 dimensional CT.

bone tissue was observed (H&E, x100) (Figure 4). Postoperative period was uneventful.

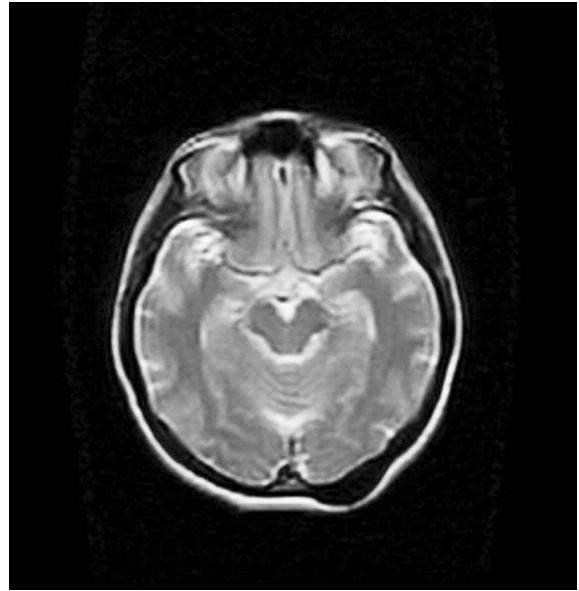


Figure 2. T2-weighted axial MRI revealed a hypointense lesion, on left occipital region.

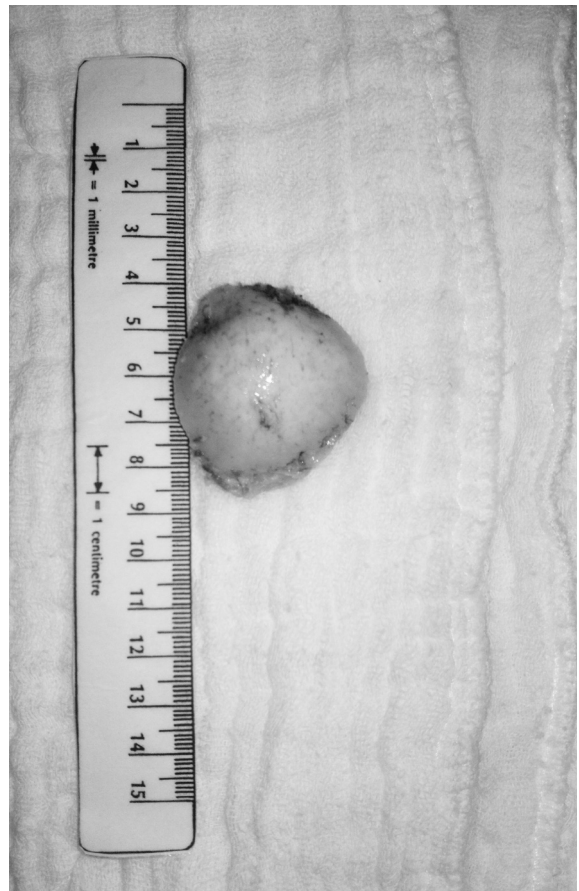


Figure 3. Surgically totally excised lesion.

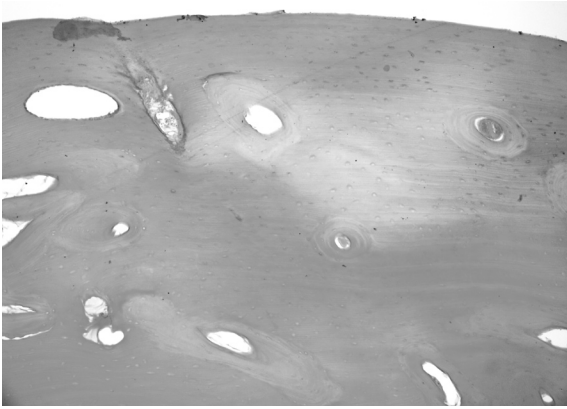


Figure 4. Osteom with regular outer surface composed of mature lamellar bone tissue like dens appearance (H&E, x100).

DISCUSSION

First definition of osteoma as a benign, slow-growing bony tumour was done by Stuart for a mastoid lesion ⁽¹²⁾. They are mostly seen in the frontal, ethmoidal, maxillary sinus region. Occipital squama is a rare localization for osteomas ⁽¹¹⁾. Types of cranial osteomas can be divided as spongy, and compact solid types. The compact solid type which develops from mature bone is seen more commonly. As we consider the anatomical localizations, skull vault osteomas are less common than skull base osteomas, and exostic forms arising from external tabula are more common than enostotic forms ⁽⁴⁾. Enostotic forms can be diagnosed as osseous meningioma ⁽¹⁵⁾.

Many theories for the etiology of osteotoma have been suggested. Some authors suggested the impact of pubertal changes in puberty on the growth of cranial bones, and Friedberg suggested trauma as predisposing factor which reactivates the pathogenetic mechanisms of the lesion ^(3,14). On the other hand, some authors have suggested that this lesion is a true neoplasm or developmental anomaly ⁽⁸⁾. Preosseous connective tissue is also suggested by some authors as a predisposing factor for the occurrence of osteomas ⁽⁶⁾.

Symptoms can be changed according to the size and location of the lesion. Lesions with a diameter of more than 3 cm or weighing more than 110 g are considered as “giant” or “large” osteomas. Headache and cosmetic issues are the most seen symptoms for calvarial osteomas with epidural compression, and enlargement of the outer layer ⁽⁷⁾. Erol et al evaluated 37 cases with neoplastic lesions of scalp and calvarium. Only 3 patients had osteomas on frontal, occipital, parietal regions presenting with hard, and painful swelling ⁽¹⁾. Tucker et al. reported 31 patients with benign skull lesions during a 10 year period. Among these patients 18 cases had osteomas, and only one of them was located on the occiput. localized ⁽¹³⁾. In our case, as the lesion was about 3 cm in diameter, it was a large osteoma, with nonspecific symptoms.

CT scan is the main radiological study to diagnose the lesion and to demonstrate the extent of the tumour. On MRI, osteomas are seen as hyperintense lesions on T2-weighted and hypointense on T1-weighted images with any contrast enhancement.

In differential diagnosis hyperostosis frontalis interna, osteochondroma, ossifying fibroma, eosinophilic granuloma, giant cell tumour, monostotic fibrous dysplasia, solitary multiple osteoma, osteoblastic metastasis should be considered ⁽¹⁰⁾. Besides, for large skull osteomas with polypoid, and soft tissue tumours, Gardner’s syndrome should also be rule out ⁽⁹⁾.

Izci reported retrospective analysis of 13 patients with large cranial osteomas who underwent surgical treatment. In his serial he operated 2 cases with occipital osteoma. One case was managed with craniectomy + cranioplasty using methyl methacrylate, and the other one with drilling the bone, and none of them demonstrated regrowth during one year of follow-up period ⁽⁷⁾.

CONCLUSION

Surgery is the treatment for patients symptomatic or asymptomatic patients with significantly enlarging lesions. For asymptomatic osteomas imaging studies performed at one or two year-intervals to assess the growth should be evaluated. Simple surgical excision is difficult for enostotic forms because of possible adhesions of the tumour to the dura, brain and blood vessels. In exostotic forms surgical interventions as craniectomy and cranioplasty are usually applied for cosmetic reasons.

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