# Calvarial Capillary Type Hemangioma in an Infant

## Bebekte Kafa Kemiğinin Kapiller Hemanjiomu

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**Abstract**
Intraosseous capillary hemangioma of the skull in infancy is quite exceptional. We describe a case of a 9-month-old male in whom capillary type hemangioma of the parietal bone was present. The lesion was totally excised and diagnosis was made histopathologically. Hence there is no accurate way of making correct diagnosis preoperatively, histopathologic verification of the diagnosis is essential for correct treatment of these patients.

Key words: **Calvarium; Capillaries; Hemangioma.**

**Özet**
Kafa kemiklerinin intraosseoz kapiller hemanjiomu çocukluk döneminde oldukça nadir görülür. Bu yazıda, paryetal kemikte kapiller tip hemajiomu olan 9 aylık bir erkek bebek sunulmaktadır. Lezyon tamamen çıkarıldı ve tanı histopatolojik olarak konuldu. Ameliyat öncesi dönemde kesin tanıyı koyduracak uygun bir yöntem olmadığından, tanının histopatolojik olarak doğrulanması bu hastaların uygun şekilde tedavisi için gereklidir.

Anahtar kelimeler: **Hemanjiyom; Kalvaryum; Kapiller.**

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## Introduction

Hemangiomas are benign tumors of vascular origin that are histopathologically classified as cavernous and capillary. They are rarely seen in the calvarium. Most of the calvarial hemangiomas are cavernous type and a few of them are capillary hemangiomas. They occur in the middle ages of life (1, 2). We report an exceptional case of calvarial capillary hemangioma in an infant and review the pertinent literature.

## Case report

A 9-month-old male infant was admitted to our clinic with a left parietal swelling that had been noted 2 months ago by his mother. The swelling had gradually increased in size. Neurological examination was completely normal. On physical examination, a palpable mass in the left parietal region and concomitant subcutaneous capillary hemangioma in his face were identified. A head computed tomography scan showed an expansile mass measuring 28x13 mm. in the left parietal bone (Figure 1). Surgery was performed with an en bloc resection of the parietal lesion and additional removal of 1 cm with margin of the surrounding uninvolved bone. Cranioplasty was not performed. Histopathological examination revealed a capillary hemangioma consisting of thin-walled blood vessels lined by plump endothelial cells (Figure 2). Postoperative course was uneventful.

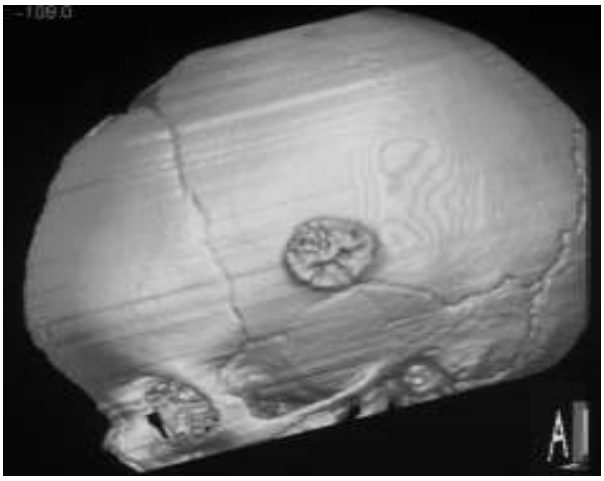

**Figure 1.** 3D computed tomography showing a mass lesion in the left parietal bone.

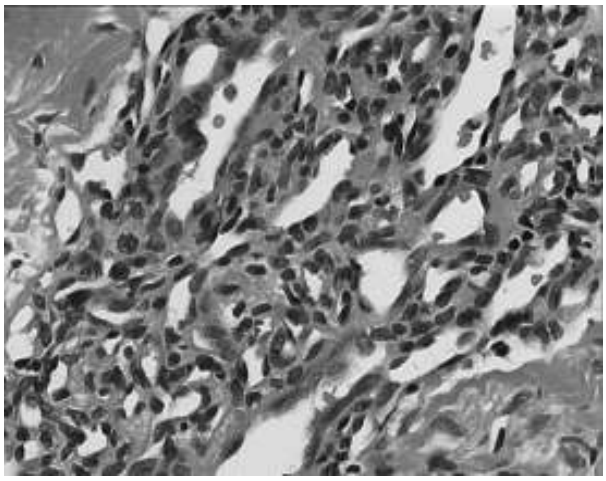

**Figure 2.** Photomicrograph of a section of the lesion showing thin-walled blood vessels are lined by plump endothelial cells (HE 200x).

## Discussion

Despite being the most common soft tissue tumor of infancy and childhood, the osseous form of hemangioma involving the calvarial bones is rarely described in infancy and is frequently cavernous hemangioma (3-5). Capillary type hemangioma of the skull is quite exceptional with the limited cases reported in the literature (1, 2). Previously reported cases are adult. So, our case is the first report of calvarial capillary hemangioma in infancy.

Faulty differentiation of primordial vessels, resulting in an abnormal capillary bed, may induce the development of hemangiomas in the intrauterine period (6). Hemangiomas are classified into capillary and cavernous depending on the predominant type of vascular channel. Capillary hemangiomas have small vascular lumens and lack fibrous septa. Cavernous hemangiomas are large endothelium-lined venous channels separated by fibrous tissue with vessels larger and walls thicker than capillaries. The lack of endothelial proliferation distinguishes cavernous type from capillary type (2, 3, 7).

Hemangiomas may mimic other neoplasms depending on their site, clinical presentation, radiographic appearance and histology. Histopathologic verification is the only method for definitive diagnosis. The differential diagnosis includes osteoma, aneurysmal bone cyst, giant cell tumor, fibrous dysplasia, sarcoma, menengioma, metastatic disease, Paget's disease, dermoid and epidermoid cyst (2, 7).

Surgical resection of the entire tumor is sufficient for treatment as we did in our case. In conclusion, hemangiomas must be considered in the differential diagnosis of calvarial masses in infants. Surgical resection of the affected bone provides cure in these patients.

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