

# Chapter 57

## A Nodular Scalp Lesion



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A 61-year-old man presented with an asymptomatic lesion on the scalp since two years.

A physical examination revealed a well-defined erythematous multilobulated nodule with oozing, ulceration and crustation on the right temporal area (Fig. 57.1).

On dermoscopy, well-demarcated, round to oval, varied in size, reddish areas were observed (Fig. 57.2).

Based on the case description, clinical and dermoscopic photographs, what is your diagnosis?

### Differential Diagnoses

1. Basal cell carcinoma.
2. Pyogenic granuloma.
3. Acquired capillary hemangioma.
4. Kaposi's sarcoma.

### Diagnosis

Acquired capillary hemangioma.

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**Fig. 57.1** A single erythematous nodule on right temporal area



**Fig. 57.2** Dermoscopy shows well-demarcated, round to oval, varied in size, reddish areas (lacunae). No vascular structures are seen inside the lacunae

## Discussion

Vascular anomalies pose a diagnostic challenge due to inconsistent classification systems, poor understanding of natural history, and overlapping clinical and histological features [1]. The currently used classification, proposed by Mulliken and Glowacki, was adopted by the International Society for the Study of Vascular Anomalies in 1996 [1]. Accordingly, vascular anomalies are classified into vascular tumors (lesions characterized by endothelial hyperplasia) and malformations (lesions characterized by dysmorphogenesis and normal endothelial turnover) [1–3].

Hemangiomas are the most common vascular tumors [2]. They rarely present at birth, show a rapid growth during the first six months of life, and spontaneously involute with time [2]. Vascular malformations, on the other hand, are present at birth, show proportionate growth throughout the life of the individual, and are infiltrative in nature [2, 4]. The hemangioma feels firm and rubbery and is difficult to compress as compared to a malformation which is readily compressible [5].

Hemangiomas are further classified according to the time of presentation as “congenital” or “infantile” [2]. Congenital hemangiomas are rare and present at birth [2]. They either rapidly involute in infancy (rapidly involuting congenital hemangioma) or never involute (noninvoluting congenital hemangioma) [2]. Infantile hemangiomas are the most common tumor in infancy and occur in around 4–10% of the population [2]. Hemangiomas can also be classified depending on their depth as superficial, deep, and compound [1]. The superficial hemangioma extends into the superficial dermis and appears red and nodular [2, 5]. A deep hemangioma involves the lower dermis or subcutaneous tissue and presents as a protrusion with an overlying bluish hue [2, 5]. Compound hemangiomas have both deep and superficial components [2].

Acquired capillary hemangiomas appear to be true capillary neoplasms and need to be carefully differentiated from neoplastic conditions such as Kaposi’s sarcoma, angiosarcoma, acquired tufted angioma, and intravascular papillary endothelial hyperplasia [6, 7]. A close differential is pyogenic granuloma, a common cutaneous vascular tumor, which grows rapidly and is commonly confused with a hemangioma [3]. It occurs at any age with a slight female predilection, affecting 1% of pregnant women. These lesions, however, are of smaller size (average diameter 6.5 mm) often associated with crusting of the surface epithelium followed by sloughing of the distal tissue [3]. Repeated and copious bleeding episodes are the rule [3]. Histologically, it is a perithelial, rather than an endothelial, tumor and consists of loose and vascular granulation tissue with an ulcerated or eroded surface epithelium and inflammatory cells [4, 8].

Acquired capillary hemangioma of the eyelid, periocular region and scalp are a very rare phenomenon [7]. The exact etiology is unknown. It has been associated with hormonal changes and increased estrogen levels during puberty and pregnancy [9, 10]. Overexpression of angiogenic growth factors, including vascular endothelial growth factor (VEGF), has been associated with capillary hemangiomas [11]. Adult or acquired “hemangiomas” do not involute like their infantile counterparts [12]. No

regressive nature of the lesion, cosmesis, visual obstruction, and prevention of accidental trauma and bleeding are the main reasons for seeking treatment [11].

There is, however, no standard treatment modality for the management of adult capillary hemangiomas, though many treatment options have been tried successfully. These lesions have been managed using intralesional corticosteroids and cutting diathermy without any evidence of recurrence.

### Key Points

- Hemangiomas are the most common vascular tumors. They rarely present at birth, show a rapid growth during the first six months of life, and spontaneously involute with time.
- Overexpression of angiogenic growth factors, including vascular endothelial growth factor (VEGF), has been associated with capillary hemangiomas.
- Adult or acquired “hemangiomas” do not involute like their infantile counterparts.

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