CASE REPORT

Acquired Capillary Hemangioma of the Cheek

ABSTRACT

Acquired capillary hemangiomas are a rare group of benign vascular tumors which are not mentioned in the classification of vascular anomalies by International Society for the Study of Vascular Anomalies. We are reporting a cutaneous vascular lesion of the cheek in a 34-year-old male which was surgically excised and confirmed as capillary hemangioma on histopathology.

Key words: Acquired, Capillary, Hemangioma

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INTRODUCTION

Hemangiomas are most common benign vascular tumors. They are most commonly found in head and neck. They are usually found at birth or in infancy. Similar vascular lesions found in adults are vaguely referred as known as adult or acquired capillary hemangiomas and have not been mentioned in the classification of vascular anomalies. We are reporting one such case of a 34-year-old adult with a cutaneous vascular lesion on cheek which was surgically excised and turned out to be a capillary hemangioma on histopathological examination.

CASE REPORT

A 34-year-old man presented with a swelling on the left cheek for 1 month and was associated with bleeding. On examination, a nodular, pedunculated lesion was noted about 0.8 cm x 0.6 cm on the left cheek [Figure 1]. A provisional diagnosis of benign vascular lesion was made. Pre-operative blood investigations were done and coronavirus disease reverse transcription polymerase chain reaction test was done which was negative. The lesion was excised with electrocautery under local anesthesia. Histopathological examination of excised specimen gave a diagnosis of capillary hemangioma [Figure 2].

DISCUSSION

Vascular anomalies have been classified by International Society for the Study of Vascular Anomalies in 1996 based on the classification, proposed by Mulliken and Glowacki.[1,2] Accordingly, vascular anomalies are classified into vascular tumors and malformations.[1,3,4]

Hemangiomas are the most common vascular tumors.[3] Hemangiomas are classified according to the time of presentation as "congenital" or "infantile."[3] Congenital hemangiomas are rare and present at birth.[3] They either rapidly involute in infancy (rapidly involuting congenital hemangioma) or never involute (non-involuting congenital hemangioma).[3] Infantile hemangiomas are the most common tumor in infancy and occur in around 4–10% of the population.[3,4] Based on their depth, hemangiomas can also be classified as superficial, deep, and compound.[1] The superficial hemangioma extends into the superficial dermis and appears red and nodular.[3,5] A deep hemangioma involves the lower dermis or subcutaneous tissue and presents as a protrusion with an overlying bluish hue.[3,5] Compound hemangiomas have both deep and superficial components.

Although this method of classifying vascular anomalies caters to a majority of clinical and histological entities and clearly differentiates between congenital and infantile hemangiomas, there still exists some controversy regarding the nomenclature of similar lesions arising in adults.[6] They are vaguely referred to as adult or acquired capillary hemangiomas by most authors and do not find a place in the current classification system.[6] The clinical and histopathological findings are usually consistent with that of capillary hemangiomas typically seen in infancy.[7] 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.[8,9]

The exact etiology is unknown. Hormonal changes and increased estrogen levels during puberty and pregnancy have been associated with hemangioma.[10,11] Overexpression of angiogenic

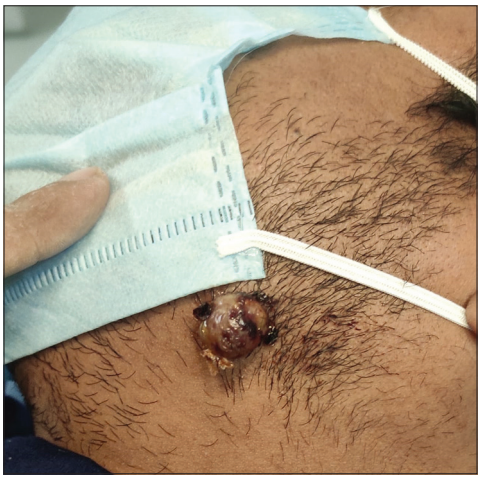

Figure 1: Pre-operative clinical picture

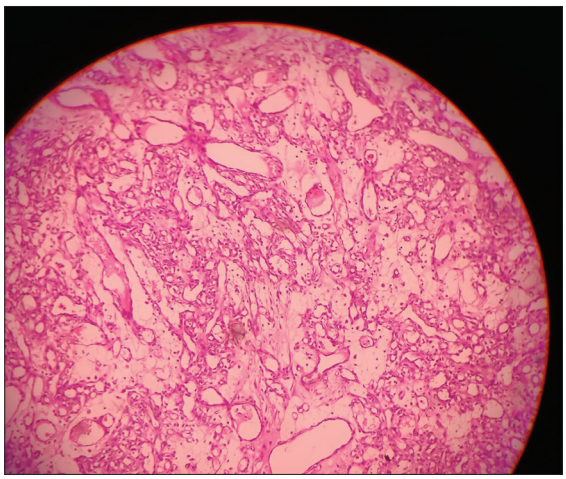

Figure 2: Histopathological picture

growth factors, including vascular endothelial growth factor (VEGF), has been associated with capillary hemangiomas.[12]

The main reasons for seeking treatment are non-regressive nature of the lesion, cosmesis, visual obstruction, and prevention of accidental trauma and bleeding.[12]

Clinical history and physical examination clinch the diagnosis in more than 90% of infantile hemangiomas.[4] Radiologic assessment with ultrasonography, computed tomography (CT), or magnetic resonance (MR) imaging is useful in the pretreatment evaluation of the patient.[4] Ultrasonography scan shows an irregular mass with variable echoes blending into surrounding tissues and is used to rule out orbital involvement and to monitor the size of the lesion.[13] On CT scan, capillary hemangiomas appear as homogeneous soft-tissue masses without destruction of the underlying bone.[13] The use of contrast CT and MR imaging helps in delineating the border and identifying the feeder vessels.[13] 3D CT volume rendering technique can be used to delineate the fine anatomical details which are difficult to evaluate with axial reconstructions alone. Angiography is rarely used to identify the feeder vessels for ligation or embolization in life-threatening hemangiomas unresponsive to other therapies.[13] Tissue biopsy may be rarely needed to differentiate the lesion from neoplastic and aggressive lesions.[13]

Although most of the infantile hemangiomas undergo spontaneous involution, some may require intervention.[13]

Non-surgical interventions include the use of corticosteroids which accelerate the regression of the lesion.[4] Intralesional corticosteroids (triamcinolone) are used for small, well-localized hemangiomas while systemic corticosteroids for large or multiple hemangiomas.[4] Recombinant interferon alfa (2a or 2b), vincristine, cyclophosphamide, imiquimod, and antiangiogenic agents such as bevacizumab are the other drugs found to be effective in life-threatening hemangiomas.[4,13] Their use is limited by their variable responses and toxicities.[4] Systemic propranolol has also been used successfully.[13] The exact mechanism of action is not known, but vasoconstriction, decreased expression of VEGF, and induction of apoptosis of capillary endothelial cells are supposed to cause regression of the lesion.[13]

Surgical resection is recommended in cases where conservative therapy has failed, and where the hemangioma is blocking the airway or vision or is bleeding.[4,13] Low-level radiotherapy can speed the regression of the mass by creating microembolisms in the tumors.[13] Carbon dioxide, argon, neodymium–yttrium aluminum garnet, and flash-lamp pumped dye laser have also been used in the treatment.[13]

CONCLUSION

Lesions such as hemangioma when fail to regress, present with complains of bleeding, and cause cosmetic problems should be surgically excised.

CLINICAL SIGNIFICANCE

While reporting this case of acquired hemangioma and discussing its clinical features and management, we have highlighted the entity of acquired capillary hemangioma which has not been mentioned in the recent International Classification of Vascular Anomalies.

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