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CASE STUDY

A RARE CASE OF PAINLESS SWELLING OF THE ANKLE

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ABSTRACT: An eighteen-year-old male presented with painless swelling of left lateral malleolus of left ankle for last one year. There was no history of trauma or any significant medical illness. FNAC yielded blood only. Further excision was done and based on histopathological features the diagnosis of synovial hemangioma was rendered. Synovial hemangioma is a rare entity with very few cases reported so far. It is characterized by the presence of normal or abnormal blood vessels, arising from the synovial lining of the tendon sheath or joint space. The clinical presentation is not so specific. Histopathology of the synovectomy specimen plays a very important role in rendering a correct diagnosis. Based on characteristic morphological findings and absence of reactive vessels surrounded by perivascular myxoid change is important in differentiating it from pigmented villonodular synovitis, which has chances of recurrence. The anatomical distributions of these lesions are important in management of these lesions.

Keywords: Synovial hemangioma, histopathology, left lateral malleolus

INTRODUCTION:

Synovial hemangioma is a rare lesion which mostly presents with nonspecific symptoms like swelling or pain in the joint. It has been reported most frequently around the knee. Other than knee, it has also been seen in elbow, wrist, ankle, temporomandibular joint and tendon sheaths. [1,2] Its differentiation from other synovial lesions is important for providing proper patient management.

Based on characteristic morphological findings and absence of reactive vessels surrounded by perivascular myxoid change is important in differentiating it from pigmented villonodular synovitis, which has chances of recurrence. The anatomical distributions of these lesions are important in management of these lesions. Here we present such an uncommon case of synovial hemangioma in an 18-year male.

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CASE REPORT:

An eighteen-year-old male presented with complaints of swelling in left ankle at the region of lateral malleolus for last one year. The lump was progressively increasing in size. However, it was not associated with pain. No previous history of trauma was given by the patient. There was no history of diabetes or any other associated significant illness. The past medical history was insignificant. On physical examination, he had normal vital signs with no fever. On examination of lump, it was 4x3 cm, soft and non-tender lump over lateral malleolus. FNAC was performed and it yielded 12ml of blood mixed aspirate. FNAC smears showed blood and blood elements. No cytologically atypical cell or any inflammatory components were seen. Further radiological correlation was advised. Ultrasound of the lump was done and it showed 5.9x3.1x1.2 cm collection seen at lateral aspect of left ankle, subcutaneous plane with internal fluid with single septa without associated vascularity and no deep connection. The patient was operated and the specimen was excised. The specimen was sent for histopathological examination. Grossly, three soft tissue pieces, each measuring 3x2.5 cm with wall thickness varying from 1 to 2mm were received. Microscopic examination shows synovial membrane with underlying hyalinized fibrous tissue with variable sized blood vessels and capillaries, mostly arranged in lobular pattern (Figure 1,2,3). Based on these histopathological findings, the final diagnosis of synovial hemangioma, lobular capillary type was made. However, the patient was lost to follow-up.

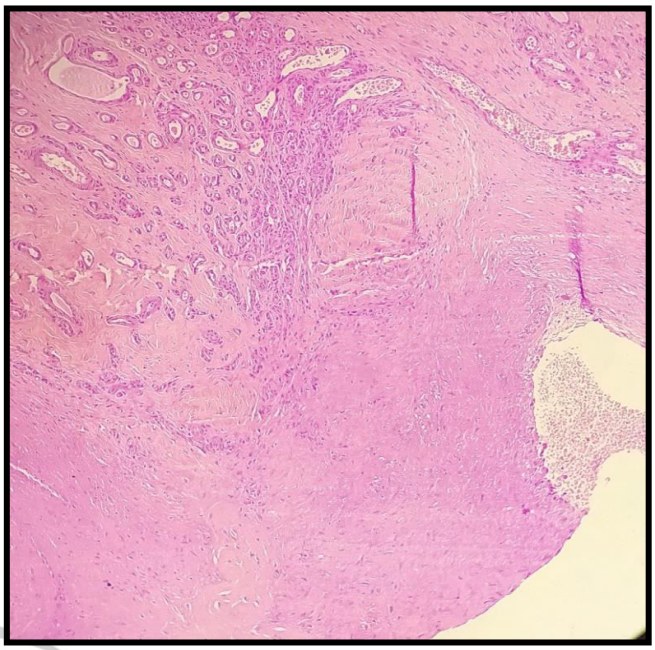

Figure 1: Microphotograph showing synovial membrane with hyalinized fibrous tissue and variable sized blood vessels and capillaries [H&E, 4x]

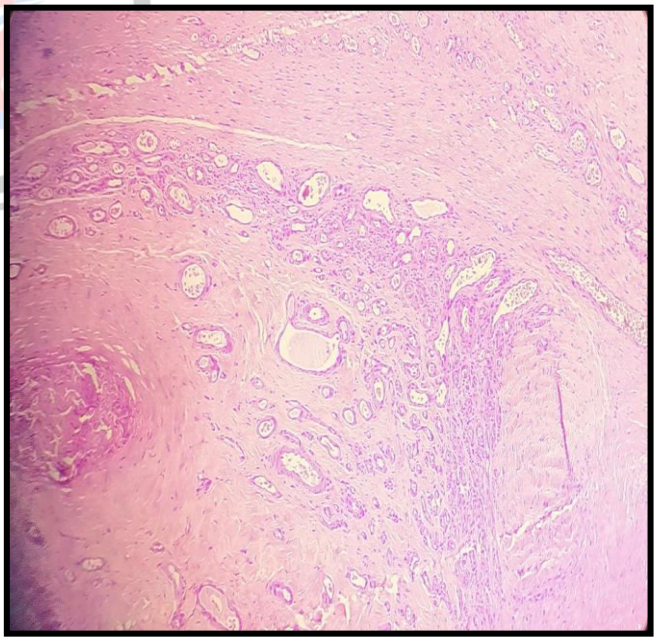

Figure 2: Microphotograph showing hyalinized fibrous tissue with variable sized blood vessels and capillaries [H&E, 10x].

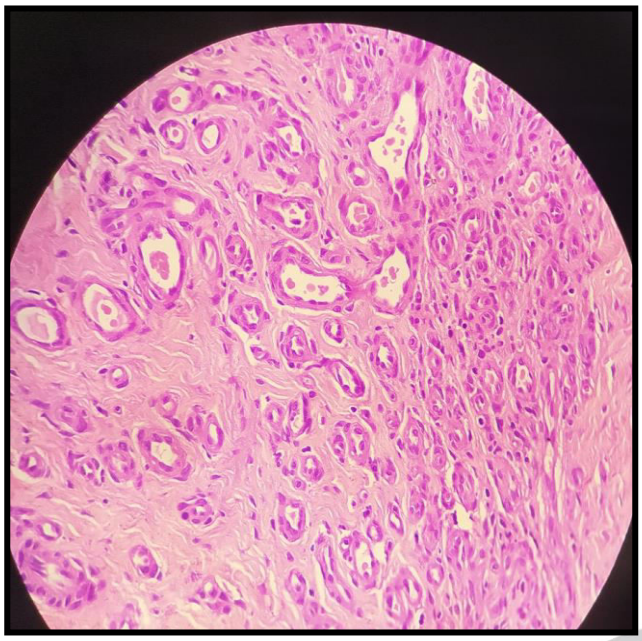

Figure 3: Microphotograph showing variable sized blood vessels and capillaries [H&E, 40x].

DISCUSSION:

Synovial hemangioma is a rare lesion, first reported by Bouchet in 1856.[3] This benign vascular lesion has been seen to be arising from the synovial lining of the tendon sheath or the joint space. The hemangiomas of the joint space are lined by synovial membrane; hence they are considered as true synovial hemangioma. [4] However, those lesions which are arising in the tendon sheath may not always be confined to the synovium, hence considering them as true hemangioma is still a point of controversy among some authors.

The usual age of presentation is early adolescence. The usual clinical presentation is joint pain and swelling. Recurrent joint effusion with or without limitation in range of motion has also been observed. [1-2, 4] The swelling is compressible and spongy on clinical examination. Radiological findings are non-specific. Computed tomography (CT) can confirm a soft tissue mass, however the characterization of the mass cannot be done. MRI can identify the extent of lesion and its relationship to surrounding structures. The use of these radiologic investigations hence helps in surgical management of these cases. Incomplete excision may lead to recurrence. However, in the present case, CT or MRI was not done which limited the clinico-radiological correlation.

Intra-articular variety is the most characteristic form in which the tumor consists of a more or less discrete mass lined by a synovial membrane. Histologically, the tumors are mostly cavernous hemangiomas in which the vessels are separated by an edematous, myxoid, or focally hyalinized matrix occasionally containing inflammatory cells and siderophages. The synovium overlying the tumor is sometimes thrown into villous projections, and its cells contain moderate to marked amounts of hemosiderin pigment. Few cases of lobular capillary hemangioma have also been reported in the synovium. [2,5,6] The histopathological examination hence plays an important role in differentiating this rare entity from its differentials. The differential diagnosis includes nonspecific synovitis/bursitis, pigmented villonodular synovitis (PVNS), synovial chondromatosis and osteochondomatosis. Rheumatoid arthritis, tuberculous arthritis, lipoma arborescens and haemophilic arthropathy are other differentials. [1,4]

The pathogenesis of these lesions is still not clear. It has been propsed that hemangiomas may result from uncontrolled angiogenesis by the clonal proliferation of vascular endothelial cells.[7] Treatment usually includes simple extirpation in cases of local or pedunculated tumors. Sclerotherapy is the treatment of choice in diffuse forms of this tumor where surgical excision does not give a prompt result. [4]

Hence, it can be concluded that synovial hemangioma should be considered as one of the differentials in cases of hemorrhagic joint effusion, with or without a history of trauma. Early diagnosis of this rare entity is very important to prevent joint damage and hence reduce patient morbidity.

REFERENCES:

[1]. Silva RT, De Souza Laurino CF, Moraes VY. Intraarticular synovial hemangioma of the knee: an unusual cause of chronic pain in a sportsman. Clin J Sport Med. 2007; 17: 504-06.
[2]. Kenneth D, Vinh TN, Sweet DE. Synovial hemangioma: A report of 20 cases with differential diagnostic considerations. Hum Pathol. 1993; 24:737-45.
[3]. Bouchet E. Tumeur erectile de I'articulation du genou. Gaz Hop Paris. 1856; 29:379.
[4]. Enzinger FM, Weiss SW. Benign tumors and tumor-like lesions of blood vessels. In: Soft Tissue Tumors. St Louis: MO, Mosby; 1988. P. 489-53.
[5]. Oumakhir S, Ghfir M, El Ktaibi A, Albouzidi A, Sedrati O. Synovial hemangioma of the ankle. Foot (Edinb). 2010; 20:42-3.
[6]. Saxena P, Agarwal R, Nain G, Khurana N, Lal P, Tudu SK. Synovial hemangiomas of wrist and ankle joint: a report of two rare cases. Indian J Pathol Microbiol. 2018; 461:604-06.
[7]. Tang R, Xian D, Xu J, Peng H, Pan S, Zhong J. Proanthocyanidins as a Potential Novel Way for the Treatment of Hemangioma. Biomed Res Int. 2021; 2021:5695378.

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