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CASE REPORT

Chronic Expanding Hematoma; An Unusual Entity

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ABSTRACT

A hematoma is usually a self-limiting condition, forming after either an injury or surgery. This occurs acutely and is managed either conservatively or by intervention. However, an unusual entity is the chronic expanding hematoma. This hematoma persists for a long time, gradually expanding in size. In this paper, we report a case of such chronic expanding hepatoma and discuss the differential diagnosis and its management.

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INTRODUCTION

A chronic expanding hematoma was first described in 1968.[1] However, it is infrequently reported in the literature. A chronic expanding hematoma is an unusual condition as it suggests the presence of a hematoma, which has not only resolved over time but keeps on increasing in size. In this paper, we report a case of chronic expanding hematoma and discuss the diagnosis.

CASE

A 49-year male presented to the Plastic Surgery OPD with a history of swelling in the left leg for the last 15 years. He reported a trauma to the leg 15 years ago, where an animal hit him, resulting in a blunt injury. There was swelling noted after the injury, which gradually increased in size and stabilized after a few months. He did not have pain over the region and there was no history suggestive of distal neurovascular deficits. He underwent treatment at a secondary referral center 6 years ago. The aspiration was done at that time and blood was drained. The size of the swelling diminished after the procedure but reformed in a few weeks time. On examination, he had an ill-defined swelling in the left leg (Figures 1 and 2). The swelling was approximately 20 cm by 15 cm in size, with the borders not definable. It was a smooth swelling with no thrill, but pulsations were palpable on the swelling. A CT angiography was performed which showed "a well-defined hypodense lobulated uni-locular cystic lesion in the intermuscular plane. It was found to be compressing the posterior tibial artery, but no obvious communication was noted. The patient was operated on under general anesthesia, with a tourniquet control. Via a linear incision on the medial aspect of leg, the swelling was exposed. This was a well-defined encapsulated swelling. The posterior tibial vessels were running through the swelling. The sac contained organized clots as well as serous fluid (Figure 3). This turned into fresh blood on releasing the tourniquet. The swelling was excised en bloc along with a segment of the posterior tibial vessels of about 15 cm in size (Figure 4). This was reconstructed using a reversed, great saphenous vein inter-positional graft, harvested from the opposite thigh. The excised tissue was sent for histopathological examination.

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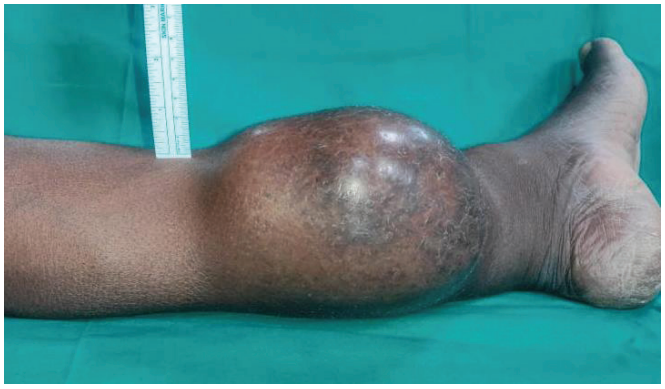
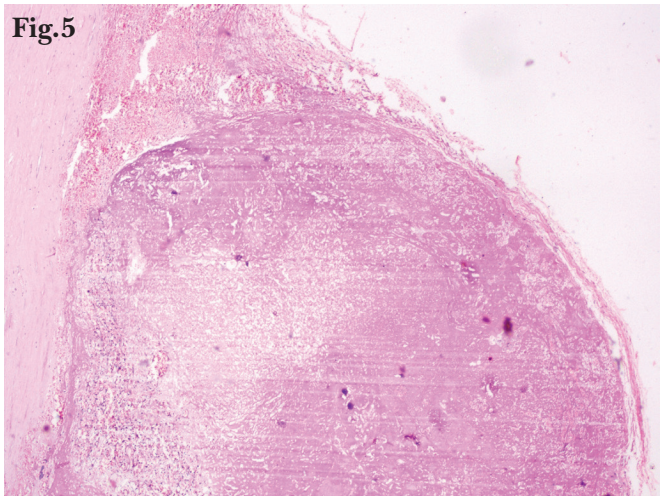


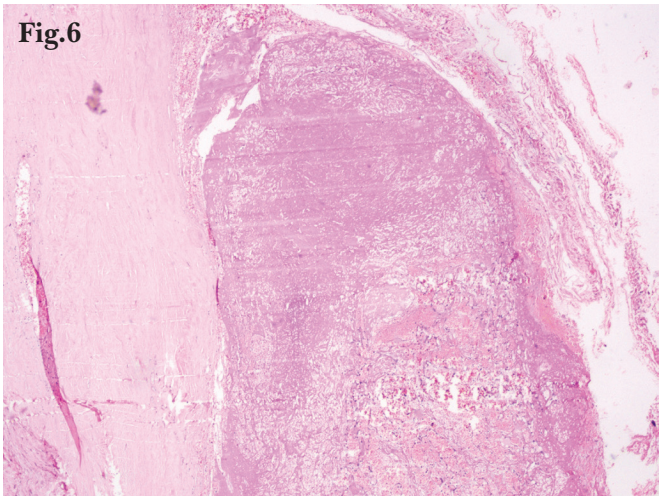
Figure 1: Photograph depicting the swelling in the distal half of leg - Medial view

Figure 2: Photograph depicting the swelling in the distal half of leg - Anterior view

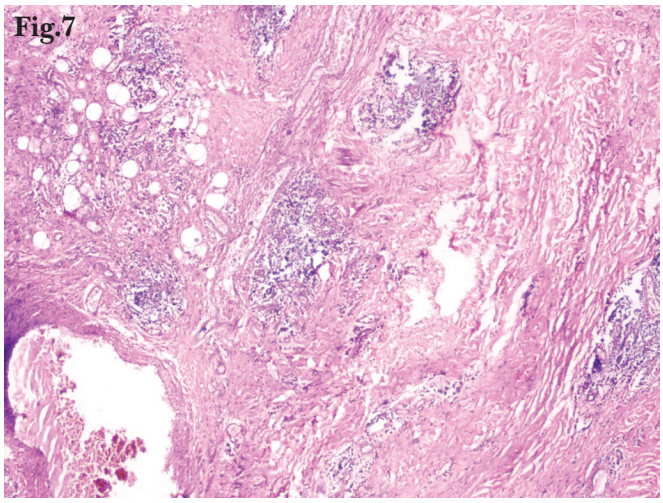
Figure 3: Photograph depicting the serous fluid within the cavity

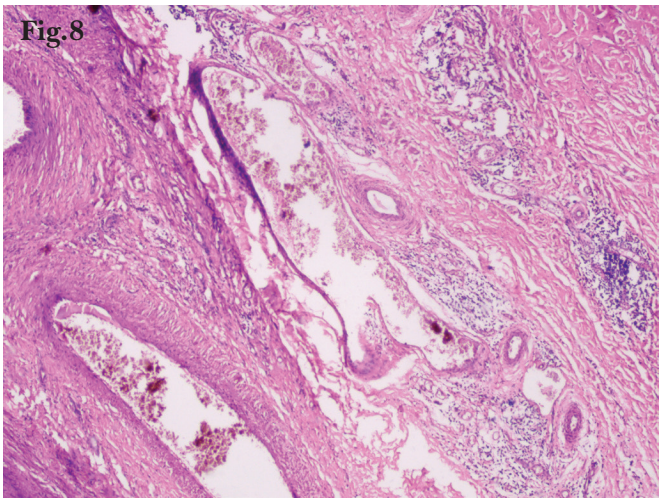
Figure 4: Photograph depicting the excised swelling





Figures 5 and 6: Photomicrograph showing thinning of arterial wall with deposition of fibrin and lined by fibro-collagenous tissue only (hematoxylin and eosin 40x).





Figures 7 and 8: Photomicrograph showing aneurysmal wall composed of fibrin, aggregates of mature lymphocyte and blood clots (hematoxylin and eosin 40x).

DISCUSSION

A hematoma usually is self-limiting and resolves after some time, without any intervention. Rarely, this hematoma does not resolve and gives rise to a chronic expanding hematoma. This is attributed to the repeated cycles of inflammation, occurring in the granulation tissue, which breaks down the capillaries in the granulation. It inevitably is subsequent to a blunt trauma, which may not be remembered by the patient in all cases. A fibrous capsule is always present, within which an organized clot and fluid is present. All these features were present in our case as well.

The most common differential diagnosis is that of soft tissue sarcoma.[2] In fact, frequently these patients present with a working diagnosis of a soft tissue sarcoma and on investigation, a hematoma is found. Magnetic Resonance Imaging shows the presence of capsule and hypo-dense central areas. The findings of chronic expanding hematoma can mimic hemorrhagic soft tissue sarcoma.[3] A thorough search needs to be done by the radiologist to examine the presence of any non-hemorrhagic tissue.[18] F-fluorodeoxyglucose positron emission tomography scan has also been used in the diagnosis to differentiate the two.[4] A histopathological examination confirms the diagnosis of chronic hematoma. This dilemma was not present in our case as a history of aspiration was previously performed at a secondary referral hospital. Another differential

is a pseudo-aneurysm. This however can be ruled out clinically usually due to the presence of a thrill.

This swelling is usually painless, with gradually expanding size, the most frequent reason that patients seek treatment. They may present with mass effect, with neurovascular compression as a feature. The compression of the posterior tibial vessels was noted and the surgery resulted in a loss of a segment of the same. Nerves if running in close association with the swelling may also be lost during surgery and require reconstruction. This needs to be explained to the patient before the procedure. Although long standing they are not associated with complications like rupture. There is a report of angiosarcoma occurring in a chronic expanding hematoma.[5] The definitive management of chronic hematoma is surgical. The swelling is strictly adherent to the adjacent tissues[6] and hence separation is difficult, requiring an en-bloc removal. This may result in the excision of associated structures as well. The posterior tibial vessels were lost in our resection, which had to be reconstructed with an interposition vein graft.

CONCLUSION

Chronic expanding hematoma is a rare entity, which can mimic a soft tissue sarcoma. The surgeon needs to be aware of the entity and its similarity to hemorrhagic soft tissue tumors. The surgical challenge lies in its removal with separation from the tissue difficult, requiring en bloc removal and reconstruction.

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