

A rare cause of ankle pain: concomitant intravenous lobular capillary haemangioma and arteriovenous fistula

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Abstract. – Intravenous lobular capillary haemangioma (ILCH), also called intravenous pyogenic granuloma, is a rare benign lesion. These lesions are frequently showed themselves in the veins of the neck and upper extremities of young women. Clinical features are not specific. Ultrasonography can be used for diagnosis and showing additional pathologies such as arteriovenous fistula. The treatment is surgical excision. Correct pathologic diagnosis is required for differential diagnosis. We report an ILCH case presented to the Emergency Department with the complaints of pain and swelling in the ankle, originated from an arteriovenous fistula in vena saphena magna.

Key Words:

Intravenous lobular capillary hemangioma, Intravenous pyogenic granuloma, Ultrasonography, Vena saphena magna.

Introduction

Intravenous lobular capillary haemangioma (ILCH), also called intravenous pyogenic granuloma, is a rare benign lesion, characterized with lobular proliferation of the capillaries in fibromyxoid stroma, extending from fibrovascular stalk within the lumen of a vein, polypoid and appearing as a mass with rubber consistency as gross^{1,2}. ILCH was firstly defined in 1979³. These lesions are frequently showed themselves in the veins of the neck and upper extremities of young women^{1,3,4}. We report an ILCH case presented to the Emergency Department with the complaints of pain and swelling in the ankle, originated from an arteriovenous fistula in vena saphena magna (VSM).

Case Report

A thirty four year old male presented to the Emergency Department with the complaints of pain and swelling in the right ankle. He reported that he had a small induration in the medial of right ankle for two years, and for the last 3-4 months it started to grow and ache. We learned from the medical history that the pain increased especially after training. In the examination, a sensitive mass about 1 cm was palpable in the medial malleol anterior of the right ankle.

Apart from that, physical examination, the blood tests and direct graft were normal. In the doppler ultrasonography test, a space occupying lesion about 1×0.8 cm with moderate echogenicity and hypervascularity in VSM was monitored. In the anterior of the lesion, arterial structure fistulised into a space occupying lesion in the vein and VSM were significant (Figure 1). Afterwards the patient was taken into the operation. Oval mass lesion of 1 cm adhered to vein endothelium and originating from arterial venous fistula was reached through incision parallel to VSM (Figure 2). The mass was excised from endothelium. Two arterial venous fistula were sutured both from inside and outside of the vein. Also, the fistulas were cut from outside of the vein. The mass lesion obtained was sent to the pathology laboratory. The dimension of the tissue was macroscopically 1 × 0.8 × 0.4 cm and the cross section was tattle tale gray and had solid feature. In the microscopic analysis of stained slides of hematoxylin-eosin (H-E), a lobule lesion rich in small vessels was observed. In light myxoid stroma, there were capillary proliferations and some vessels were dilated (Figure 3). There was not atypia and mitosis. Minimally chronic inflammation was observed in stroma. As a result of pathological examination, it was diagnosed as ILCH.

Discussion

ILCH, also known as intravenous pyogenic granuloma, was first defined as a rare form of lobular capillary haemangioma in 1979^{1,3}. These lesions occur slightly dominant in women with the average age of 38 in the veins of the neck and upper extremities^{1,3,4}. Our patient was a 34 year old male whose lesion was detected in VSM of right malleol anterior.

Clinical and radiological features are not specific⁵. Most of them have a clinical span of 2 months or shorter³. Most patients are asymptomatic, but they may have symptoms as edema or painless mass^{1,6}. The clinical features of ILCH in our patient were a mass lesion for two years and it was growing and painful for the last 3-4 months.

Pyogenic granuloma may show itself in microscopic arteriovenous anastomoses regions⁷. In the literature, the formation of intravenous pyogenic granuloma in a pre-existing arteriovenous malformation, supporting the hypothesis was reported⁸. The mass lesion in VSM of our patient arose from arterial venous fistula: concomitant ILCH and arteriovenous fistula were present.

Ultrasonography findings of ILCH have been known^{1,5,9}. It can be used for excluding the pathologies such as aneurysms and neural lesions¹. The findings of Doppler ultrasonography of our patient were interpreted as intravascular neoplasm and arterio-venous fistula.

The treatment is surgical excision and there is no tendency for recurrence^{3,5}. However, segmental excision of the involved vein to avoid recurrence is also suggested¹⁰. The intravascular mass lesion of our patient was repaired by just surgical excision. The fistulas between artery and vein were tied.

A correct pathologic diagnosis is required for differential diagnosis of ILCH from intravascular

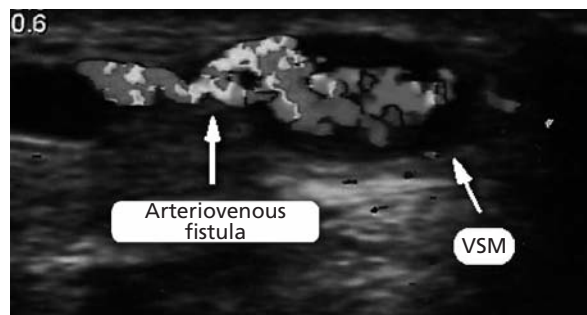


Figure 1. The space occupying lesion within Vena Saphena Magna (VSM) and the arterial structure fistulised into the lesion.

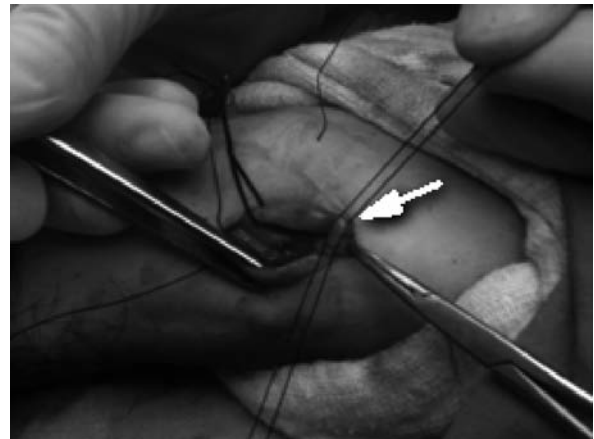


Figure 2. Arteriovenous fistula.

lesions such as angiosarcoma, intravascular papillary endothelial hyperplasia, intravenous atypical vascular proliferation, intravascular fasciitis and organized thrombus⁵. In our patient the confirmation of the diagnosis was done through pathological examination.

Conclusions

ILCH, a rare intravenous mass, should be considered for the patients presented to the Emergency Department with the complaints of pain and swelling in the ankle. Doppler ultrasonography takes an important part for establishing diagnosis and showing additional pathologies such as arteriovenous fistula.

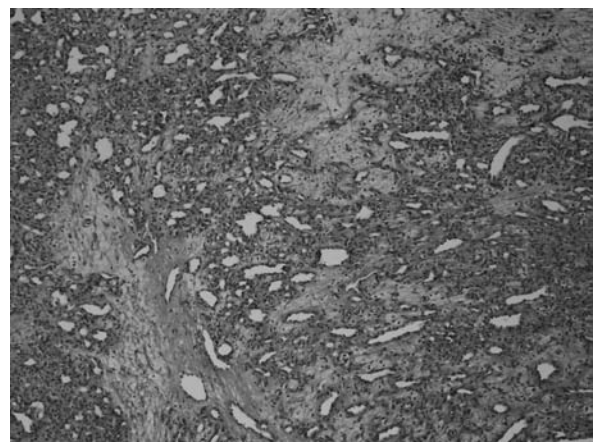


Figure 3. Capillary proliferation with some dilated vessels, H-E \times 100.

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