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Dermatology Case Reports

Case Reoprt

Case Report: Intravenous Capillary Haemangioma, a Cause of Painless Palpable Mass in the Forearm

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ABSTRACT

We here describe a case of Intravenous Capillary Haemangioma in the right forearm of a 59-year-old woman. She felt a small mass on the right forearm that had been present for one year without an increase in its size. Ultrasound examination showed a well-defined mass of 7 × 4 × 6 mm within the wall of an epifascial side branch vein. We excised the mass in local anesthesia. The histological examination results show a benign capillary haemangioma tumor with the excision in Sano.

Keywords: Vascular tumor; Pyogenic granuloma; Intravenous capillary haemangioma; Intravenous tumor

INTRODUCTION

The capillary haemangioma, also known as pyogenic granuloma, is the most common vascular tumor and occurs in the skin or on the mucosal surface [1]. It can appear after minor trauma or infection [2]. Rarely is the tumor location intravenous, in which case it is called an intravenous lobular capillary haemangioma and is mostly located in the neck or upper extremities with a higher incidence in females [1,3-5]. Sometimes patients can feel an indolent palpable swelling or it can cause a vein outlet syndrome [6]. Most intravenous capillary haemangiomas are asymptomatic and found incidentally [6].

CASE REPORT

A 59-year-old female non-smoking patient was referred to our Department of Vascular Surgery due to a suspected venous tumor in the right forearm. She reported a history of chronic pain over three years in the right forearm, both upper arms and shoulders. Dermatological, neurological and rheumatological examinations were conducted but showed no relevant findings.

A small mass on the right forearm had been present for one year without its size increasing. There was no history of trauma. Physical examination revealed a small, palpable, hard mass on the proximal ulnar side of the right forearm. No skin lesion was observed. The patient reported tenderness on palpation.

Ultrasound examination described a well-defined mass of 7 × 4 × 6 mm within the wall of an epifascial side branch vein. On color Doppler assessment the lesion appeared to be hypoechogenic and highly vascularised with the arterial flow. Previous ultrasound and magnetic resonance examinations were performed in a peripheral hospital. The first ultrasound examination one year ago showed short thrombophlebitis of a superficial vein. Magnetic resonance imaging performed nine months previously had revealed streaky changes around the vein in t1-weighted images and caused a focal inflammation or thrombophlebitis to be suspected. No tumor was reported.

We thus suspected a venous tumor with arteriovenous fistula and discussed the case in our interdisciplinary "arteriovenous malformation board". Excision biopsy was recommended.

Surgical treatment was performed in our day hospital. The epifascial side branch vein was dissected under local anesthesia. The tumor was completely excised and a feeding and draining vessel 2 millimeters in diameter was ligated. The patient made an uneventful recovery.

Histologic examination showed extensive proliferation of capillary and slit-shaped vascular structures and proliferative endothelium without nuclear atypia. The diagnosis of a benign capillary haemangioma tumor was made. The excision was in Sano.

DISCUSSION

The capillary intravenous haemangioma is a rare benign lesion usually situated in the veins of the upper extremities or the neck,

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with a higher incidence in females [3,6]. Cooper and colleagues in 1979 described for the first time a series of 18 intravenous pyogenic granulomas [3]. Mostly, the tumor is found incidentally by ultrasound or computed tomography, because most of the patients are asymptomatic. Some patients describe a palpable mass under the skin, as in our case. As symptoms are mostly absent, the incidence may also be greater than described in the literature [4]. The intraluminal position of the tumor may be associated with a higher risk for thrombosis [1]. For differential diagnosis, thrombosis, papillary endothelial hyperplasia, histiocytoid haemangioma, angiosarcoma, and nerve sheet tumors are considered [6].

The etiology of this tumor is not yet clear. Some authors suggest a reactive proliferation of inflammatory cells due to trauma or infection that can cause a capillary intravenous tumor (Figure 1) [7,8].

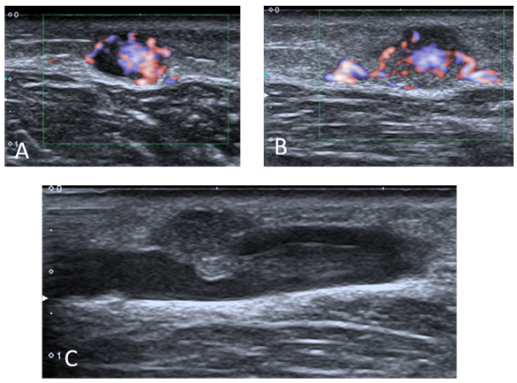

Figure 1: Ultrasound images of the vascular tumor: A) Intravenous tumor with hypervascularity, transverse layer; B) The mass seen longitudinally in the vein; C) Tumor infiltrate in the vein wall.

Duplex ultrasound imaging shows the intravenous capillary haemangioma to have internal nodular lesions attached to the vessel wall as well as a hypoechogenic and an echogenic background and to typically be hypervascular. If the lesion is poorly accessible for duplex ultrasound, magnetic resonance imaging may be useful [1]. In our case, duplex ultrasonography of the tumor was sufficient for us to decide for surgical excision because the tumor was located in the right forearm in an epifascial side branch vein. For the definitive diagnosis, histological examination is essential. In the multidisciplinary, radiologic, surgical, histologic approach it is required to confirm the correct diagnosis.

Surgical excision is the therapy of choice. The tumor should be removed completely with a small portion of the vein, because some tumors may recur [9]. In some cases where the lesion is located in the subclavian vein, the approach may be the most challenging part of the surgery. Vein reconstruction is not strictly recommended, because it depends on the tumor location. In the inferior vena cava flow continuity should always be restored [4].

The intravenous capillary haemangioma has an excellent prognosis [1]. It is a benign tumor without a tendency to spread within the bloodstream [10]. If it is resected in Sano, there is minimal risk for recurrence [1].

CONCLUSION

A capillary haemangioma is a rare disease and requires a multidisciplinary approach to establish the diagnosis. Therapy is resection of the affected vein with or with reconstruction, depending on the position of the tumor. Histological examination is essential to rule out malignancy.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interests.

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