



Case report

Internal jugular vein cavernous hemangioma occurring as lateral neck mass: Case report

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ABSTRACT

Introduction: Cavernous hemangioma is a venous malformation that occurs throughout the entire body but is rarely localized in internal jugular vein, to the best of our knowledge our case is the first case reported in the literature.

Case report: We report a case of internal jugular vein cavernous hemangioma in a 62-year-old woman and review the literature concerning the clinical features, radiological appearance, histopathological findings and treatment options.

Discussion: Internal jugular vein cavernous hemangioma, is a very rare tumor composed of large dilated blood vessels and containing large blood-filled spaces. It can occur as lateral neck mass, in our case neither the scanner nor the ultrasound made the diagnosis. Given the rarity of the condition, therapeutic strategies remain unclear. However, according to the published literature, complete resection is considered the most successful and effective treatment.

1. Introduction

Cavernous hemangioma was initially described in 1990 [1]. The incidence of hemangioma, including cavernous hemangiomas, capillary hemangioma and mixed hemangioma, is 0.5% or less. Internal jugular vein cavernous hemangioma is a very rare to the best of our knowledge our case is the first case reported in the literature [1].

The majority of cavernous hemangiomas occur superficially in the cutaneous and mucosal tissues of the face, mouth, and limbs particularly in children. Patients often do not exhibit obvious clinical symptoms in the early stages. As the tumor grows, patients present with oppressive symptoms that are attributed to the large size, in our case neither the scanner nor the ultrasound made the diagnosis.

Given the rarity of the condition, therapeutic strategies remain unclear. However, according to the published literature, complete resection is considered the most successful and effective treatment [2]. The work has been reported in line with the SCARE 2020 criteria [8].

2. Case summary

A 62 years old woman was seen in our institution for swelling on the

left side of the neck of six years duration, the swelling had increased in size over that period of time. There was no history of trauma, local, systemic infection, or surgical intervention. She had no shortness of breath, no dysphagia, or hoarseness.

The patient reports a slow increase in size over the last few months. A physical examination revealed a firm and tense mass on the lower left of the neck in the subclavicular region and measured approximately 5.0 × 5.0 cm.

There was no abnormal pulsation or bruit. The rest of the clinical exam was normal ultrasound and injected CT scan suggested an appearance compatible with cervical lymphadenopathy (Fig. 1), the lesion was explored under general anesthesia. Besides, the surgical dissection revealed a thrombosed vascular mass of the supraclavicular region originating in the internal jugular vein (Fig. 2), the pedicle of the mass was ligated flush with the internal jugular vein and the swelling was excised completely. As a result, the post-operative period was uneventful and the patient was discharged on the next day.

The histopathological examination of the resected tissue showed fibrofatty tissue containing many thick walled blood vessels some of them were thrombosed and had a thin septae across based on these features a diagnosis of cavernous hemangioma was made (Fig. 3).

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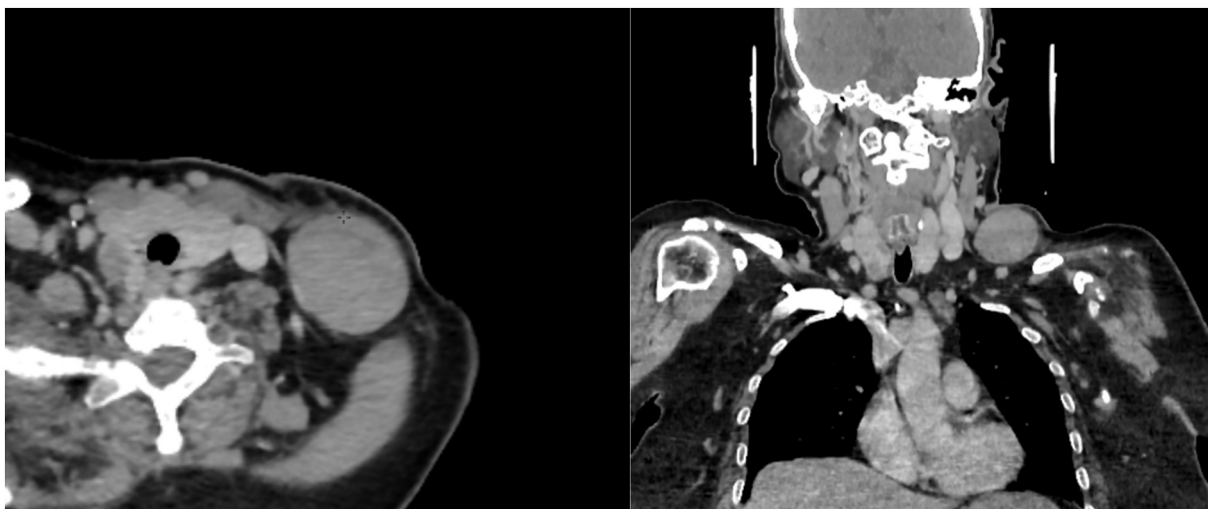


Fig. 1. CT scan showing an appearance compatible with cervical lymphadenopathy.



Fig. 2. Thrombosed vascular mass of the supraclavicular region originating in the internal jugular vein.

After following up for six months in the clinic, it was shown that the wound healed well and there was no recurrence of swelling or any skin changes noted at the site of operation. Written informed consent was obtained from the patient for the publication of the present study.

3. Discussion

Intravascular primitive tumors are very rare diseases and few data concerning these pathologies are described in literature. The data that examines hemangioma which localized on the internal walls of the veins are extremely poor, but this fact almost certainly does not reflect the real incidence of this pathology. In fact, they are very often asymptomatic and incidentally discovered.

Cavernous Hemangioma is a congenital venous malformation that occurs throughout the entire body but it is rarely localized in the internal jugular vein. Histologically, hemangioma originates from residual embryonic vascular cells and is caused by abnormal vascular development at the embryonic stage [2]. So far, to the best of our knowledge, our case

is the first case of internal jugular vein cavernous hemangioma reported in the literature.

Hemangiomas grow by endothelial cell hyperplasia and should be differentiated from vascular malformations, which are not true neoplasms but are localized defects of vascular morphogenesis caused by dysfunction in embryogenesis and vasculogenesis [2].

The improvement of the imaging techniques has later allowed reaching more precise diagnostic pictures. Nevertheless, their confirmation always needs a surgical approach followed by histologic histochemical and immunohistochemical evaluations in our case, neither the ultrasound nor the scanner made the diagnosis; possibly because she was thrombosed.

Hemangiomas are generally characterized by veins that display a single-layer endothelium and abnormal endothelial cell cycle [3]. The peculiar histologic traits of cavernous and vascular hemangiomas in general, allow differentiating them from malignant intravascular tumors [4,5], thus a multidiscipline radiologic surgical histologic approach is essential to reach a correct and detailed diagnosis.

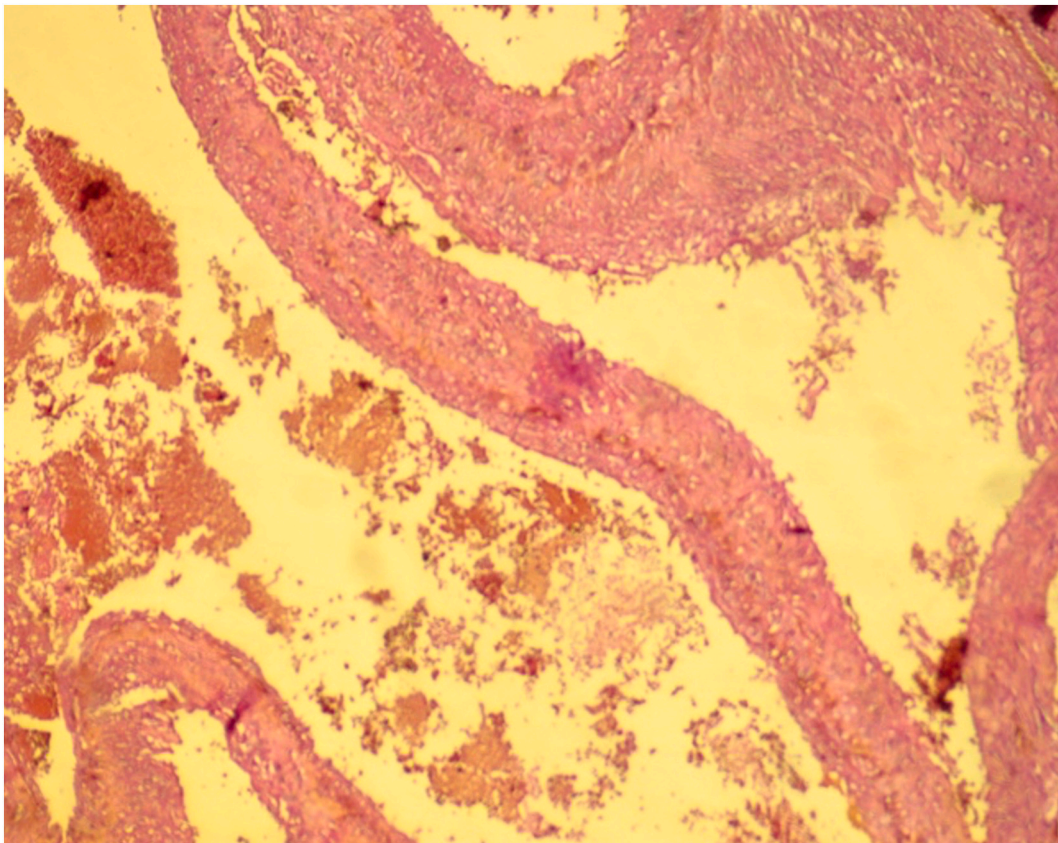


Fig. 3. Histopathological examination of the resected tissue.

The choice of treatment is dependent on the related organ and can include sclerotherapy, embolization, and surgical resection. Reviewing previously reported cases in the literature and complete surgical resection is generally accepted as the definitive and effective treatment of choice for venous cavernous hemangioma, the etiology of these events remains obscure. Some authors were able to describe the existence of congenital venous hemangiomas [6]. After traumas or infectious events trigger vascular hyperproliferation in addition to pressure or hormone shocks or disorders can be related with the incoming of a cavernous hemangioma [7].

4. Conclusion

Literature data concerning hemangioma localized on the internal walls of the veins are extremely poor, but we reported a rare case of internal jugular vein cavernous hemangioma that was definitively diagnosed after surgery occurring as lateral neck mass. Given the rarity of the condition, therapeutic strategies remain unclear, complete resection is considered the most successful and effective treatment.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying image.

Ethical approval

Written informed consent for publication of their clinical details and/or clinical images was obtained from the patient.

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Guarantor

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CRediT authorship contribution statement

Said Anajar: Corresponding author
 Nawal Bouknani: writing the paper writing the paper
 Fouad Benariba: study concept
 Amal Hajjij: correction of the paper.

Declaration of competing interest

All the authors have no personal or financial conflicts of interest regard this case report.

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