Original Research Article

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A rare case of cavernous hemangioma of neck mimicking lipoma

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ABSTRACT

Intramuscular hemangiomas of the head and neck are rare congenital vascular tumors and are sparsely reported. Hemangiomas account for approximately 7% of benign tumors and usually present as a mass that suddenly enlarges. Hemangiomas are mostly seen on the trunk and extremities, but can also appear on the head and neck region. A 28 year old female presented in OPD with 5x4 cm mass in Right posterior triangle of neck. CT scan showed 5x4x4 cm swelling in right posterior triangle involving sternocleidomastoid muscle. The mass was totally extracted by surgical intervention and pathological analysis revealed that it was a cavernous hemangioma. The patient's neck movement returned to normal after surgery.

Keywords: Cavernous hemangioma, Cervical mass, Neck lipoma, Posterior triangle swelling

INTRODUCTION

Intramuscular hemangiomas are rare congenital vascular tumors accounting for less than 1% of all hemangiomas. They are frequently seen on the trunk and extremities, but up to 20% of hemangiomas are located in the head and neck region. Intramuscular hemangiomas often present in the second or third decade of life. Hemangiomas are classified into three groups, depending on their vascular structure: capillary, cavernous and mixed type. A case of a cavernous hemangioma involving the muscles on the right side of the neck is reported here. Surgical treatment was used to achieve a successful outcome.

CASE REPORT

A 28-year-old female complaining of swelling on the right side of her neck since 2 years. On examination mass

of approximately 5 cm x4cm located in the right posterior cervical region. There was no restriction of her neck movements due to the mass.



Figure 1: On examination mass of approximately 5 cm x 4 cm located in the right posterior cervical region.

On palpation swelling was soft in consistency with absent trans-illumination and fluctuation. However, classical slip sign was present.

USG scan showed well defined hypoechoic soft tissue mass? Lipoma neck. Not involving any vessel. A CT scan revealed contrast enhanced 5 x 4 x 4cm. Soft tissue mass in right posterior cervical region, involving neighboring muscular tissues and away from major neck vessels? Lymphoid mass.

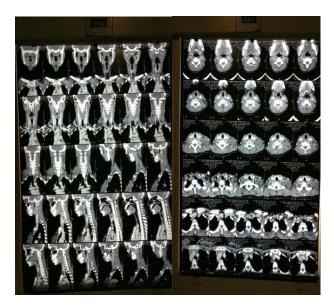


Figure 2: FNAC suggestive of haemorrhagic aspirate with no adipocytes as well as lymphoid cells.



Figure 3: The mass was totally extracted by surgical intervention under general anaesthesia.

Pathological study of the extracted mass indicated the presence of a cavernous hemangioma.

Diagnosis was based on the presence of spontaneously crossing fibers, a wall thickness of approximately 1 cm, serous fluid mixed with blood, and a cystic component. No post-operative complications developed.

DISCUSSION

Hemangiomas are benign vascular tumors that likely occur due to abnormal development of embryonic vascular structures.³ Intramuscular hemangiomas account for less than 1% of all hemangiomas. They are most commonly found on the trunk and extremities. Up to 20% of hemangiomas are found in the head and neck region, where the masseter, trapezoid and sternocleidomastoid muscles are typically involved.2 Intramuscular are characterized by multicentric hemangiomas proliferation of endothelial cells.10 Hemangiomas are classified into three histopathological types according to the vascular structures involved:

- Capillary type: characterized by a capillary structure with proliferative activity and can surround tissues in its vicinity. It may have a short clinical history
- Cavernous type: characterized by mitotic activity, large vascular structures and a long clinical history
- Mixed type: containing both capillary and cavernous hemangiomas and clinically resembling a cavernous type hemangioma.³

Intramuscular hemangiomas are non-metastatic benign congenital tumors that may remain undetected for a long time. These tumors are likely to show spontaneous growth during the second or third decade of life. Almost 50% of cases remain silent until the mass grows and then pain suddenly occurs. In this case 28 year old female presented with puffiness or swelling on her neck for a period of 2 years. The tumor then showed a sudden increase in growth.

Various diagnostic methods, such as ultrasonography, computed tomography, MRI and arteriography, are used in the diagnosis of intramuscular hemangioma. Of these, MRI provides better information on the localization and size of intramuscular tumors. However, we couldn't do MRI in our findings due to financial reasons of the patient. MRI findings for hemangioma include a moderate degree of signal enhancement in T1 weighted images and a strong signal increase in T2-weighted images. However, not all intramuscular hemangiomas exhibit a strong signal increase in T2-weighted images. ¹⁰

Haemangioma should be considered in the differential diagnosis whenever a mass of soft tissue density is encountered in the region of skeletal muscle in a young adult. Haemangioma could be distinguished from other soft tissue lesions by the features of abundant vascularity and high blood flow velocity. Haemangioma with arterial flow can be distinguished from arteriovenous malformations (AVM) by the presence of solid parenchymal tissue.

Lipomas are one of the mesenchymal tumours that must be considered in the differential diagnosis. Lipomas can be seen in all parts of the body but rarely in the cervical area. The clinical presentation is an asymptomatic, painless and slow growing mass.

Lipomas are rarely seen in the first and second decades. The incidence of lipomas increases especially in the fifth and sixth decades with the combination of a sedentary life and low activity that raises the total body fat. It is usually seem in the obese population and its size is related to fast weight gain period. Hemangiomas are usually asymptomatic in the first decade and become symptomatic in the second and third decades with increasing tumour growth.

Lipomas are seen as homogenous and low density masses in the computed tomography (CT). There is no capsule formation. CT images are sufficient for diagnosis of lipomas and there is no need for advanced techniques such as magnetic resonance imaging (MRI). When considering a treatment regime for an intramuscular hemangioma, it is mandatory to consider the size of the mass and cosmetic and functional aspects, as well as the patient's age.⁴

Multiple therapeutic methods are used depending on the state of the tumor. Treatment may involve radiotherapy, systemic steroid administration, intralesional steroid or sclerosant injection, cryotherapy, vascular ligation, embolization and surgical excision. Total surgical excision is usually preferred, since the rates of success with other methods are limited.⁵ However, Wolf et al and Tang et al reported local relapse rates of 18% and 19% after total surgical intervention.9 In another study carried out by Buetow et al, a relapse rate of 18% was identified after incomplete surgery.¹¹ Total surgical excision was used under general anaesthesia in our case. No any relapse occurred during 3-monthly follow-up of the patient. In conclusion, the most suitable treatment method for intramuscular hemangioma is surgical excision. The risk of relapse can be minimized by total surgical excision.

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