Intramuscular Hemangioma - Presentation of an Unusual Neck Mass

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ABSTRACT

OBJECTIVES:
Intramuscular hemangiomas pose a difficult challenge in the head and neck region due to their deep location. We report the case of an intramuscular hemangioma deep within the origin of the sternocleidomastoid. The objective of the study is to demonstrate the clinical presentation, radiographic and histologic findings, treatment, possible complications, and outcome of the case presented.

METHODS:
This is a 24-year-old male who presented with a slowly growing mass in the supraclavicular region for 2 years duration. The patient had incisional biopsy of this mass at another institution, which showed this to be a hemangioma. The patient was subsequently referred to our institution for definitive treatment. The patient then underwent angiography and embolization of the lesion prior to excision. Once successfully achieved, patient was then taken to the operating theatre for excision of the mass.

RESULTS:
A large mass was felt deep within the origin of the sternocleidomastoid just superior to the clavicular head. The mass was carefully dissected from all surrounding structures while preserving the integrity of the SCM. Pathology revealed the mass to be an intramuscular hemangioma. Ongoing follow up has revealed no recurrence, and there was no morbidity associated with the procedure performed.

CONCLUSIONS:
We report a case of a large intramuscular hemangioma deep within the sternocleidomastoid in the supraclavicular fossa. Intramuscular hemangiomas are exceedingly rare - seen more commonly in the pediatric population deep within the masseter muscle. A multidisciplinary approach aids in successful treatment of these lesions deep within the musculature of the neck. The differential diagnosis for a neck mass may be expansive; radiologic examination is key in this particular case. The treatment of choice is local excision.

INTRODUCTION

A 24-year-old male was referred to our institution from a private otolaryngologist following an attempted excisional biopsy, complicated by intraoperative hemorrhage.

According to our patient, he had been noticing a slowly growing mass on the right side of his neck. It had been present for over a year before he sought treatment options. Interestingly he noted that it was more appreciable when he would strain. He had no other associated symptomatology with the mass. No weight loss, fevers, night sweats or chills.

There was trace tissue obtained on the attempted biopsy which had diagnosis of hemangioma. After being seen by the otolaryngology staff, he was evaluated by interventional radiology for preoperative angiogram and subsequent embolization (figure 1).

Magnetic Resonance Imaging was subsequently obtained (figure 2). After both sets of imaging were studied, the patient was brought in to the operating room.

METHODS

After induction of general endotracheal anesthesia and sterilization of the surgical field, a transverse incision was placed over the sternocleidomastoid extending into the posterior neck. Superficial dissection was then carried through the superior cervical fascia and platysma. Sub-platysmal flaps were raised both superior and inferior to the mass. The prominent mass within the sternocleidomastoid was encountered (figure 3). The mass was then carefully dissected from surrounding structures. Careful and adequate hemostasis was obtained inferiorly and deep, paying careful attention to the medial margin as this was where the vascular pedicle was found during angiogram (figure 1). The mass was then successfully removed. (figure 3).

The platysma and subcutaneous tissue approximated. A 1/4 inch penrose drain was left in place and the wound was then closed with interrupted 5-0 nylon sutures.

The patient was observed in the post anesthesia care unit and admitted for overnight observation. The drain was removed on post operative day 1 and patient was subsequently discharged. There were no neurologic sequelae noted on follow up one week later.

RESULTS

A soft tissue mass was excised from the sternocleidomastoid at its origin from the clavicular head. The mass itself was well embedded within the muscle with poorly defined margins. It measured 7.3 cm x 4.3 cm x 3.8 cm.

Sectioning of the mass demonstrated it to be mostly composed multiple capillary vessels with loose areas of adipose tissue. After sectioning, diagnosis of capillary-type intramuscular hemangioma was given.

On-going follow up has revealed no evidence of recurrence.

FIGURES

Figure 1. Pre-operative angiogram

Figure 2. T1-weighted MRI

Figure 3. Intra-operative findings

DISCUSSION

Hemangiomas, by their very nature, can occur anywhere in the body. However, cutaneous and subglottic hemangiomas are the most frequently discussed within the head and neck literature. The most common location is within the masseter muscle, accounting for 5% of all intramuscular hemangiomas. Second most common location is the trapezius and SCM. Incomplete excision is a common problem encountered; this is mostly due to inaccurate preoperative planning.

Historically, wide surgical resection was the treatment of choice. With the advent of improved embolization technology, an interdisciplinary approach to the treatment protocol has been indispensable. Practitioners are now able to offer surgical approaches that are less invasive, yet provide increased safety and the same results. With these advancements, both radiation therapy and cryotherapy have slowly become less prevalent as a form of treatment.

The differential diagnosis for neck masses is expansive. In this case, benign muscular hypertrophy, angiosarcoma, chondrosarcoma and the more rare hemangiopericytoma must be considered. However, the increasing awareness of intramuscular hemangioma by practitioners is important as adequate diagnostic workup is important to provide appropriate treatment for the patient.

CONCLUSIONS

We report a case of a large intramuscular hemangioma deep within the sternocleidomastoid. Intramuscular hemangiomas are exceedingly rare - seen most commonly in the extremities. When they are present in the head and neck, a multidisciplinary approach aids in successful treatment of these lesions. The differential diagnosis for a neck mass may be expansive; radiologic examination is key in this particular case. The treatment of choice is local excision.

REFERENCES


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