

KNOW YOUR FIELD

Intramuscular sinusoidal hemangioma with Masson's lesion

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CASE REPORT

A 20-year-old male patient presented with a chief complaint of swelling below the chin since 5 days. On extraoral examination, the swelling was located in the external submental and submandibular region extending from symphysis up to 1 cm superior to the thyroid cartilage. The swelling was ovoid, soft and compressible with well-defined margins, which moved on deglutition.

The mandibular occlusal radiograph showed a radiopaque mass in relation to submandibular duct indicative of sialolith.

Based on the clinical and radiographic appearance a provisional diagnosis of an obstructive salivary gland pathology was given.

On grossing, the cut-surface of the specimen consisted of blood filled spaces with multiple septae and two calcified masses.

Microscopically, connective tissue stroma with numerous skeletal muscle bundles was seen. In between the skeletal muscle bands, large dilated vascular spaces were seen lined by endothelial cells [Figures 1-4]. Areas of proliferating endothelial cells were seen [Figure 5]. The vascular spaces were sinusoidal and in some areas surrounded by smooth muscle cells. Few areas showed numerous papillary projections in an organizing thrombus within a vessel wall indicative of Masson's lesion [Figures 6 and 7]. Extravasated red blood cells were present in the sinusoidal spaces in few areas. Few arterioles, adipose tissue and numerous normal skeletal muscle bundles (in transverse and longitudinal sections) were seen.

FINAL DIAGNOSIS

Intramuscular sinusoidal hemangioma

Sinusoidal hemangioma (SH) was described by two pathologists, Calonje and Fletcher, in 1991. This uncommon

cutaneous benign vascular lesion with distinctive histologic features was considered a subset of "cavernous hemangiomas". It shows a lobular architecture consisting of dilated interconnecting ("sinusoidal"), thin-walled vascular channels lined by a single layer of endothelium.^[1]

DIFFERENTIAL DIAGNOSIS

Intramuscular lipoma

As intramuscular hemangiomas are associated with variable amounts of fat. Intramuscular lipoma has a more indolent

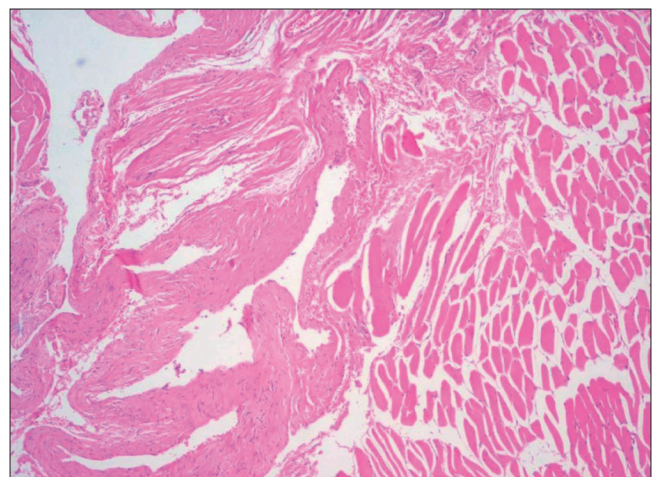


Figure 1: Photomicrograph presenting dilated blood vessels in association with skeletal muscle bundles (H&E stain, x40)

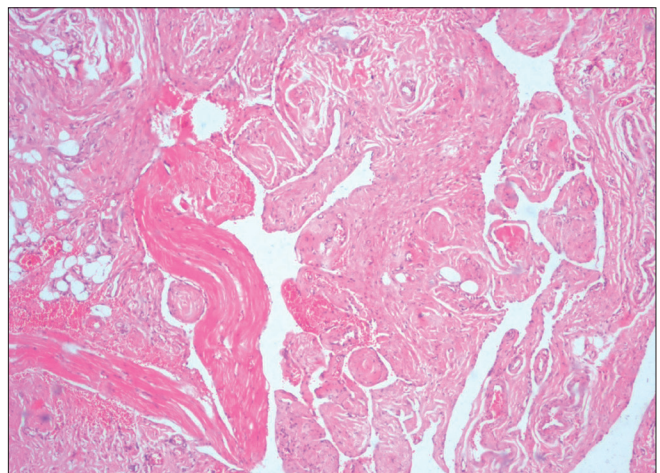


Figure 2: Photomicrograph showing dilated and interconnected vascular spaces in-between the muscle bundles (H&E stain, x40)

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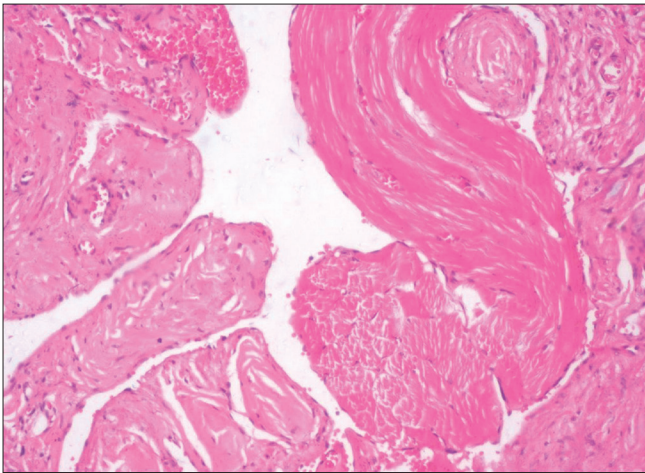


Figure 3: High power view of dilated blood capillaries in between skeletal muscle bundles. (H&E stain, x100)

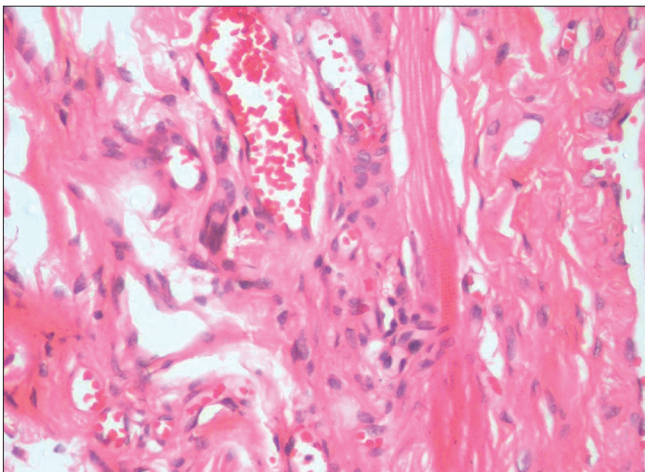


Figure 5: Photomicrograph showing proliferating endothelial cells (H&E stain, x200)

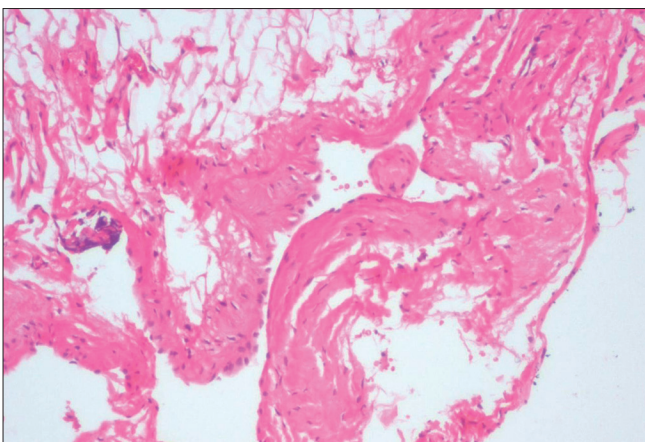


Figure 7: Photomicrograph showing sinusoidal blood vessel with papillary projection into the lumen (H&E stain, x100)

course with fewer tendencies to recur and a prominent vascular component is never found.^[2]

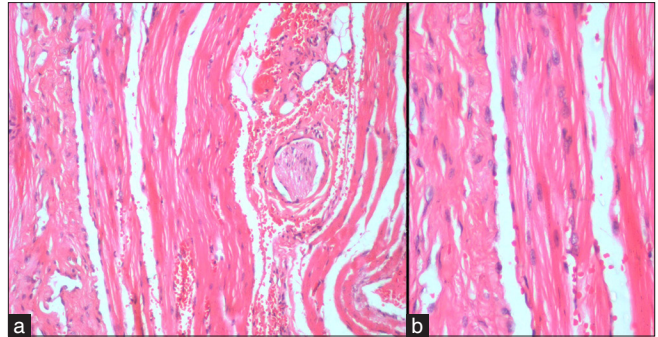


Figure 4: (a) Photomicrograph showing vascular spaces in-between muscle bundles lined by a single layer of endothelium. (H&E stain, x100) (b) High power view of the endothelial lining. (H&E stain, x200)

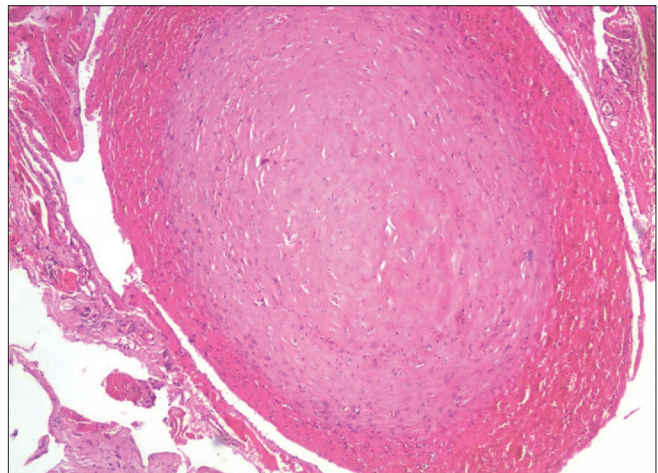


Figure 6: Photomicrograph showing an organizing thrombus within a blood vessel. (H&E stain, x40)

Well-differentiated angiosarcoma

Pure intramuscular capillary hemangioma is occasionally confused with angiosarcoma, but well-differentiated angiosarcoma shows the presence of a lobular architecture and endothelial atypia or multi-layering which makes distinction easy.^[2]

Well-differentiated liposarcoma

Although well-differentiated liposarcomas contain intricate vascular pattern, they seldom have the gaping vessels characteristic of hemangiomas and they contain in addition, stromal cells which are hyperchromatic.^[2,3]

Angiomatosis involving skeletal muscles

It is difficult to histologically distinguish angiomatosis from intramuscular hemangiomas and the distinction is based on clinical parameters. Angiomatosis is usually a congenital or childhood lesion that involves an extensive body area, including muscle, skin and bone. Intramuscular hemangiomas

are benign tumors with a small, but definite risk of local recurrence.^[3,4]

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