Multiple Lipomatous Hemangiopericytomas in the Foot and Ankle

Vivek Pandey¹ · Sandesh Madi¹ · Monish Malhotra¹ · Vidya Monappa²

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Abstract Since its first description, the diagnosis and terminology of hemangiopericytoma have been in controversy. We report perhaps the first case of multiple lipomatous hemangiopericytoma occurring in the foot and ankle region.

Keywords Lipomatous · Hemangiopericytoma · Solitary fibrous tumours · Foot and ankle

Case A 32-year male presented to our foot and ankle clinic with multiple small swellings on his right lower leg and ankle since 3 years. Five distinct nodular swellings were noticed around the right foot and ankle region. They were variable in size with the largest measuring about 4 × 3 cm.

Magnetic resonance imaging of the right foot and ankle showed multiple well-defined solid lesions with multiple internal small cystic areas that were located along the flexor hallucis longus (distal third of posterior aspect of the leg, 2.6 × 1.9 × 3.8 cm), posterior to neurovascular bundle and

flexor hallucis longus tendon (2.2 × 2.3 × 3.1 cm), adjacent to tibialis posterior tendon (10 × 5 mm) in distal third of the leg, in anteromedial aspect of the leg (11 × 7 mm) and in subcutaneous plane of lateral aspect of the foot (7.4 × 5.1 mm). Four of these swellings were predominantly subcutaneous and from multiple small direct incisions, the lesions were excised. A 10 cm curvilinear incision was made over the medial aspect of the ankle and by careful dissection the last deeply seated, the well demarcated swelling was also excised in toto (Fig. 1). Biopsy suggested a hemangiopericytoma and a further immunohistochemistry (IHC) study confirmed it as a lipomatous variant (Fig. 2). No recurrence noted at 2 years of follow-up.

Till date, there have been 52 histologically proven cases of lipomatous hemangiopericytoma or fat forming variant of solitary fibrous tumour (SFT) reported in the literature; however, this is perhaps the first case of multiple lesions occurring in the foot and ankle region [1]. Main differential diagnoses include spindle cell lipoma, angiolipoma, myolipoma, angiomyolipoma, lipoleiomyoma, hamartoma, dedifferentiated liposarcoma and spindle cell liposarcoma [2]. Unlike in all these lesions, IHC in

All authors meet the ICMJE's requirements for authorship.

✉ Sandesh Madi
sandesh.madi@gmail.com

Vivek Pandey
vivekortho@gmail.com

Monish Malhotra
drmonish.malhotra14@gmail.com

Vidya Monappa
vidsdr@yahoo.co.in

¹ Department of Orthopaedics, Kasturba Medical College, Manipal University, Manipal, India

² Department of Pathology, Kasturba Medical College, Manipal University, Manipal, India

Fig. 1 Intraoperative image showing the deeply seated tumour over posteromedial aspect of tibia (inset: five nodular grey-brown tissues of variable sizes were excised in toto)

Fig. 2 Histopathology—a circumscribed tumour, encapsulated, short spindle-shaped cells arranged in whorls, storiform pattern and haphazardly around capillary sized staghorn vessels lined by endothelial cells arranged in pericyte-like fashion. Mature adipocytes among tumour cells also seen. (H & E stain; low power: **a** lipomatous and **b** hemangiopericytoma areas) and (IHC markers: **c** CD 34—most sensitive marker for SFT; **d** Ki-67 < 1% {benign nature})

adipocytic variant of SFT shows strong immuno-reactivity for CD34 and CD99, and a prominent staghorn vascular pattern [2].

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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