Published online: 2019-08-26

Muscle hernia involving the extensor carpi ulnaris muscle

Sir,

Muscle hernia (myofascial herniation) is an uncommon condition, in which focal protrusion of muscle occurs due to overlying fascia defect. Causes include congenital, trauma, chronic compartment syndrome and prior fasciotomy.[1,2] Although tibialis anterior is the most common muscle to herniate, other upper and lower limb muscles including extensor digitorum longus, peroneus longus and brevis, gastrocnemius and the forearm flexors may also herniate.[2,3] Overall, there have been about twenty cases of forearm muscle herniation in the literature,[4] with most of them involving the volar aspect.[5] Here, we present the first case of muscle hernia involving the extensor carpi ulnaris.

A 35-year-old male presented with a history of painless swelling in the dorsal aspect of the proximal forearm for 3 weeks. There was no difficulty or restriction of movements. The patient gave a history of lifting heavy loads of leather, for the last 3 months, but there was no acute injury/pain. There was a scar in the volar aspect of the proximal forearm, due to old cut injury. On clinical examination, the swelling was ovoid and

Figure 1: (a and b) Clinical photograph of the swelling of the dorsal aspect of the proximal forearm. (c) The plain radiograph of the forearm showing a subtle soft tissue swelling in the dorsal forearm on the lateral view

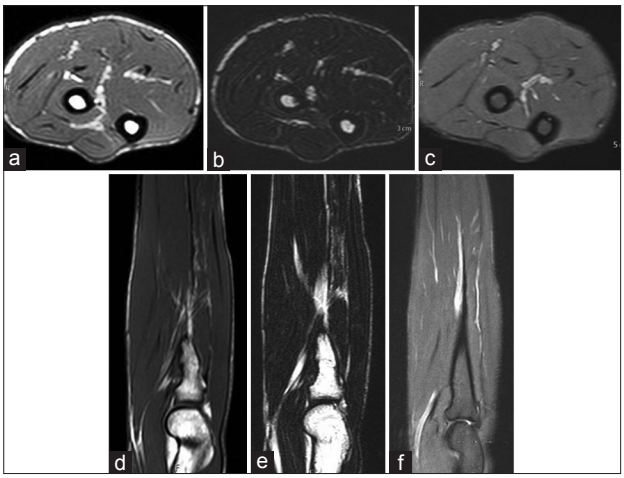

Figure 2: (a-c) The dorsally herniating extensor carpi ulnaris muscle on axial T1, T2 and fat-saturated proton density weighted images, respectively. (d-f) The dorsally herniating extensor carpi ulnaris muscle on sagittal T1, T2 and fat-saturated proton density weighted images, respectively

well defined with normal overlying skin [Figure 1a and b]. The lesion was best seen with the elbow in flexion and wrist in dorsiflexion. Plain radiograph showed a soft tissue swelling in the dorsal aspect of the forearm [Figure 1c]. A 1.5 Tesla magnetic resonance imaging (MRI) showed normal extensor carpi ulnaris muscle at the site of clinical swelling with posterior bulging of the muscle (it was more pronounced with dorsiflexed wrist) [Figure 2a-f]. As the patient had no symptoms except for the cosmetic deformity, he was reassured that it was only muscle hernia, and surgery was deferred presently.

Muscle hernias present as painless soft or firm swelling that may become visible/accentuated when the involved muscle is contracted. The swelling may sometimes become painful during exercise or strenuous activity because of entrapment and ischemia.[2] Primary reason for imaging is to rule out soft tissue neoplasm. Ultrasound and MRI have a role in imaging of myofascial herniations. Dynamic ultrasound examination performed during rest and stress may demonstrate focal thinning, elevation or disruption of the fascia covering the muscle with adjacent focal protrusion of muscle fibres in real time.[1] Conventional MRI may reveal the fascial defect sometimes only, as most patients are imaged at rest and the fascial covering is thin.[2] Asymptomatic patients can be managed only with reassurance. Surgical management usually needed for patients with pain includes fascial repair, fasciotomy or anatomical repair of fascial defect using autologous fascia/mesh.[3-5]

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

Venkatraman Indiran

Department of Radiodiagnosis,
Sree Balaji Medical College and Hospital,
Chennai, Tamil Nadu, India

Address for correspondence:
Dr. Venkatraman Indiran,
Department of Radiodiagnosis,
Sree Balaji Medical College and Hospital,
No. 7, Works Road, Chromepet, Chennai - 600 044,
Tamil Nadu, India.
E-mail: ivraman31@gmail.com

REFERENCES

1. Beggs I. Sonography of muscle hernias. AJR Am J Roentgenol 2003;180:395-9.
2. Yochim SE, Jose J, Clifford PD. Muscle herniation of the extremity. Am J Orthop (Belle Mead NJ) 2010;39:95-6.
3. Kramer DE, Pace JL, Jarrett DY, Zurakowski D, Kocher MS, Micheli LJ. Diagnosis and management of symptomatic muscle herniation of the extremities: A retrospective review. Am J Sports Med 2013;41:2174-80.
4. Omar CY, Truter R, Suleman F, Andronikou S. Imaging diagnosis of muscle herniation of the forearm. S Afr Orthop J 2014;13:39-42. [Last cited on 2014 Dec 24]. http://repository.up.ac.za/bitstream/handle/2263/45182/Carrim_Imaging_2014.pdf;sequence=1
5. Khalid KA, Mah ET. Treatment of a symptomatic forearm muscle herniation with a wrap-around fascia lata graft. J Hand Microsurg 2009;1:54-9.

Access this article online

Quick Response Code:

Website: www.ijps.org

DOI: 10.4103/0970-0358.197243

How to cite this article: Indiran V. Muscle hernia involving the extensor carpi ulnaris muscle. Indian J Plast Surg 2016;49:427-9.