Tibialis anterior muscle hernia: a rare differential of a soft tissue tumour

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DESCRIPTION

A 57-year-old man with a history of fall injury presented with swelling in the anterior aspect of his left leg, with occasional pain while walking. On examination, the swelling had a rubbery consistency and was partly reducible. The swelling increased in size on standing and activity. Differentials including superficial varicosity, vascular malformation, muscle hernia and soft tissue tumour were considered and MRI was carried out.

MRI showed protrusion of the tibialis anterior through a focal defect in fascia overlying the muscle ([figure 1](#)). The defect measured 1.5×1.4 cm. There was a subtle T2 and short τ inversion recovery hyperintense signal within the herniated muscle, possibly due to oedema ([figures 2 and 3](#)). A diagnosis of tibialis anterior muscle hernia was confirmed and the patient was managed with compression stockings and activity restriction.

Ihde¹ classified the aetiology of muscle hernias into traumatic and constitutional (generalised weakness of fascia). In the lower limb, the most commonly involved muscle is the tibialis anterior due to its weak and vulnerable fascia. A dynamic ultrasonogram or MRI can confirm the diagnosis.² The treatment of muscle hernias depends on the severity of symptoms. While they can be managed

Figure 2 Axial short τ inversion recovery image showing subtle hyperintensity within the herniated muscle (white arrow), representing oedema.

conservatively with compression stockings and activity restriction, persistently symptomatic muscle hernias need longitudinal fasciotomy.²

Figure 1 Axial T1 image showing protrusion of the tibialis anterior muscle (white arrow) through a focal defect in the overlying fascia (black arrows).

Figure 3 Sagittal short τ inversion recovery image showing protrusion of the subtly hyperintense muscle (white arrow) through the defect.

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Learning points

- ▶ Muscle hernia should be considered in the differential of reducible or compressible soft tissue mass.
- ▶ Muscle hernias increase in size on activity and standing.
- ▶ Dynamic ultrasonogram or MRI can demonstrate the focal fascial defect and the muscle protrusion through it.

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REFERENCES

- 1 Ihde H. On muscular hernia of the leg. *Acta Chir Scand* 1929;65:97–120.
- 2 Nguyen JT, Nguyen JL, Wheatley MJ, *et al*. Muscle hernias of the leg: a case report and comprehensive review of the literature. *Can J Plast Surg* 2013;21:243–7.

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