

IMAGES IN CLINICAL RADIOLOGY

# The "Tail Sign" in Intramuscular Schwannoma

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**Teaching point:** This case emphasizes the importance of the "tail sign" to sort the differential diagnosis of soft tissue tumors by highly suggesting schwannoma.

**Keywords:** US; CT; MRI; schwannoma; split-fat; tail

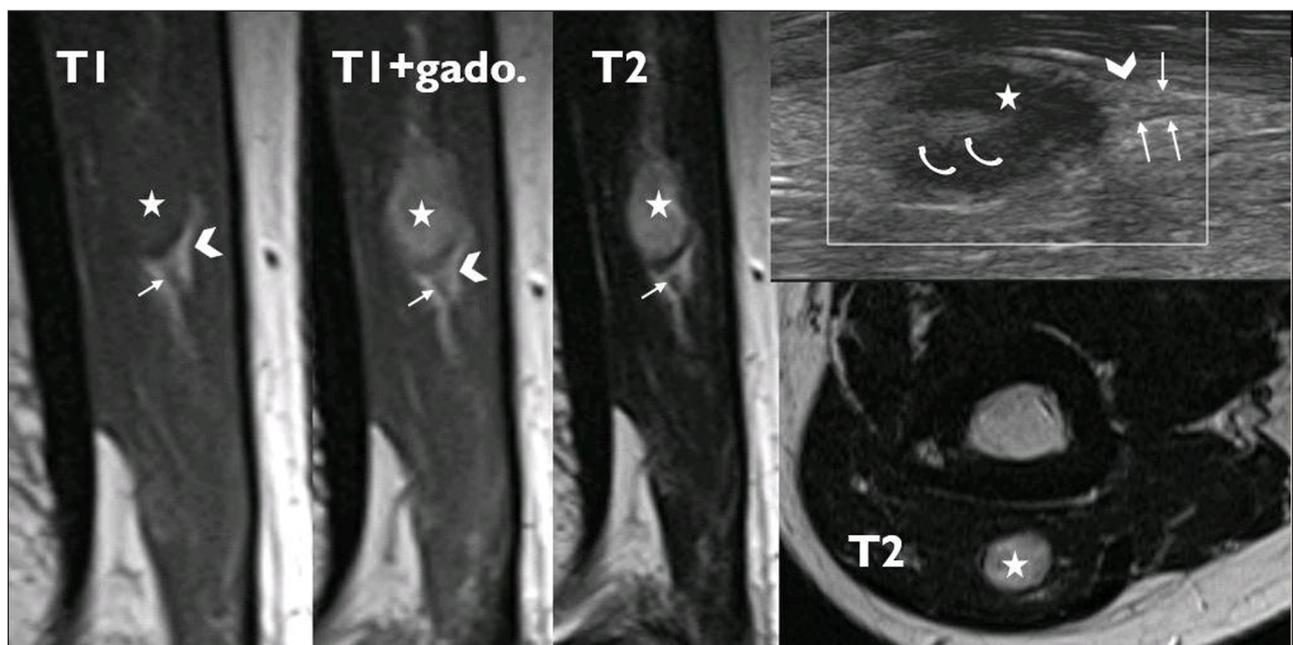
**Case**

A 50-year-old patient presented with a lump in the distal posterior arm, painful upon compression. Ultrasound showed an intramuscular fusiform mass of 9 × 12 mm in the distal triceps muscle. The tumor (star in **Figure 1**) is oval in the muscle long axis, hypoechogenic at the periphery, more echogenic centrally (curved arrow in **Figure 1**). On magnetic resonance (MR), the lesion is isointense on T1-weighted imaging with homogeneous contrast enhancement. It is hyperintense on T2-weighted imaging with a low signal margin. The presence of fat at the poles of the mass is shown (arrowheads in **Figure 1**). Direct and central continuity with a small nerve branch, the so-called "tail sign", can be seen (straight arrows in **Figure 1**) on

both ultrasound (US) and MR imaging. The diagnosis of a small benign schwannoma was confirmed at surgery, which lead to complete resection and uneventful recovery.

**Comment**

Schwannomas most commonly affect patients aged between 20 and 40 years. They constitute about 5% of benign soft-tissue neoplasms, with the intramuscular variety only representing 2% of schwannomas. Due to the low frequency of this tumor type and the lack of specific signs and symptoms, pre-surgical diagnosis is difficult, especially in small lesions. But, when it is possible to depict the relation of a mass with entering and exiting nerve (the tail sign), hypothesis of a neurogenic tumor should be con-



**Figure 1.**

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templated. The “split fat” sign that refers to the presence of fat at the upper and lower poles of a lesion as shown in this case (arrowheads in **Figure 1**) is suggestive of the intramuscular location of the lesion and frequent in benign peripheral nerve sheath tumor, but is not specific [1].

This case emphasizes the usefulness of the “tail sign” on all imaging modalities to sort the differential diagnosis of soft-tissue masses by suggesting peripheral nerve tumor.

### Competing Interests

The authors have no competing interests to declare.

### Reference

1. **Salunke AA, Chen Y, Tan JH**, et al. Intramuscular schwannoma: Clinical and magnetic resonance imaging features. *Singapore Med J.* 2015; 56(10): 555–557. DOI: <https://doi.org/10.11622/smedj.2015151>

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