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Case Report

# Giant cell tumor of the tendon seath of the tendinous insertion in pes anserinus

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ABSTRACT

A 56-year-old woman with a palpable lump in the medial surface of her left knee was referred for diagnostic workup with magnetic resonance imaging. The lesion was pathogically confirmed to be a giant cell tumor of the tendon seath. The MR features of the lesion are presented.



## Case report

A 56-year-old woman with a palpable lump in the medial surface of her left knee was referred for diagnostic workup with magnetic resonance imaging (MRI). Scanning comprised T1WI, T2WI, and T1WI with and without fat suppression, post-IV gadolinium administration, in the axial, coronal, and sagittal planes. MRI revealed a 3.5 × 2.7 × 1.8 cm mass at the level of the pes anserinus. The lesion was located between the sartorius and gracilis tendons, abutting both. On T1WI and T2WI, the lesion was isointense to muscle. After IV gadolinium administration, there was intense heterogeneous enhancement, confirming the solid nature of the lesion. (Figs. 1–4). The lesion was surgically removed, and the diagnosis of giant cell tumor of the tendon seath (GCTTS) was histopathologically confirmed.

## Discussion

GCTTS or tenosynovial giant cell tumor is considered to be the localized, extraarticular, form of pigmented villonodular synovitis (PVNS) [1]. It is also believed to result from the same pathologic process as fibroma, both representing the two end points of a pathologic continuum, because both lesions are similar in size, location, and gross morphologic features [2].

GCTTS may occur at any age but is more often in the third to fifth decades, with predilection to females [3].

The etiology of these tumors is not certain although a history of trauma has been suggested [4]. GCTTS affects digits more often than large joints [4].

These tumors are more often found in the hand, followed by the ankle-foot complex. In children, however, GCTTS may have an equal predilection for the upper and lower extremities [5].

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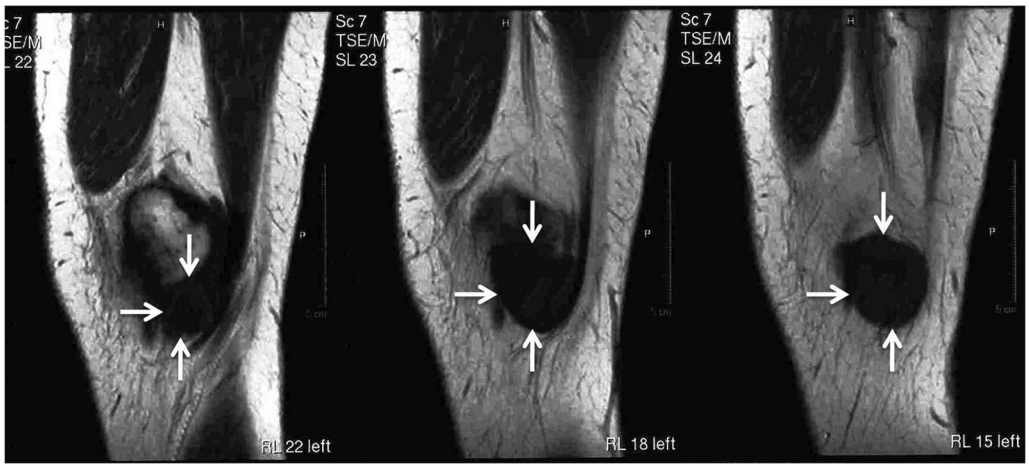


**Fig. 1 – Contiguous images, medial to lateral. The lesion is isointense to muscle on T1WI (arrows).**

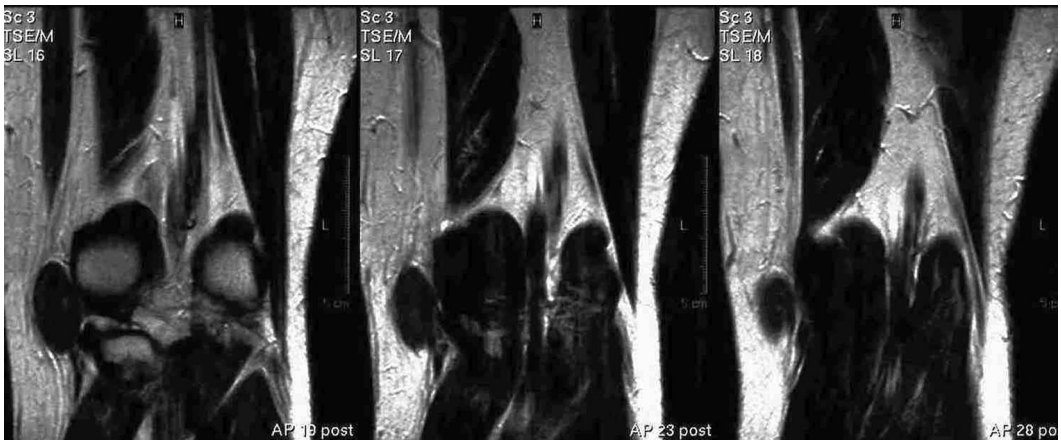


**Fig. 2 – Contiguous images, anterior to posterior. The lesion is isointense to muscle on T2WI.**

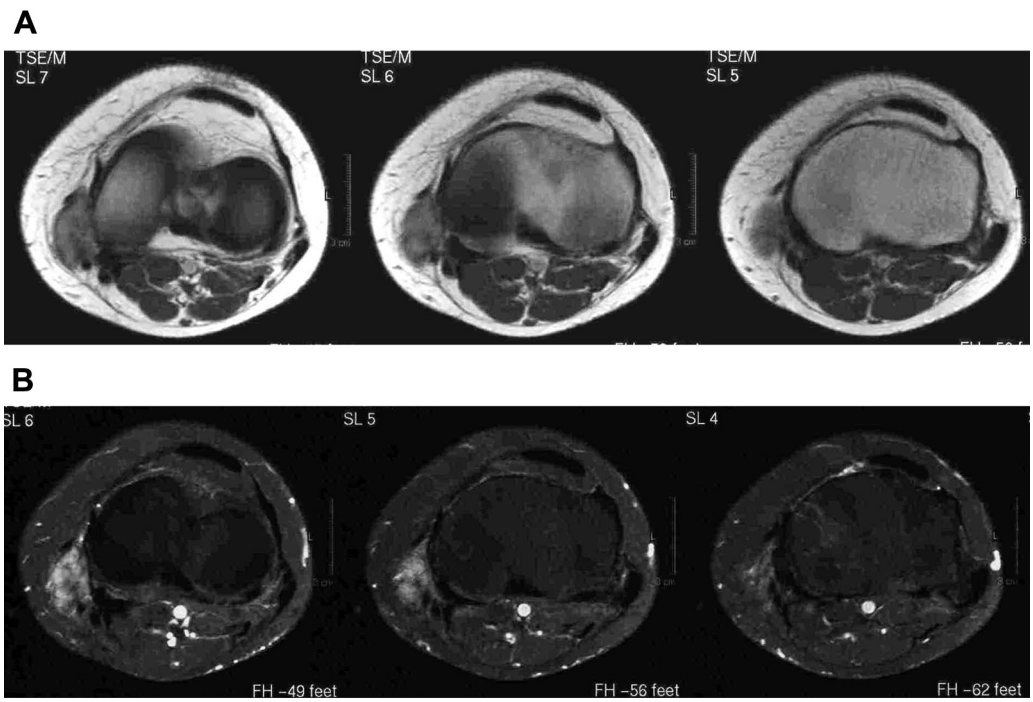


**Fig. 3 – (A) T1WI+Gad: contiguous images, superior to inferior. The mass enhances and is hyperintense to muscle. The lesion abuts the tendons of sartorius muscle(anteriorly) and gracilis(posteriorly). (B) T1WI+Gad with FS: contiguous images, superior to inferior. The enhancement of the mass is more conspicuous.**

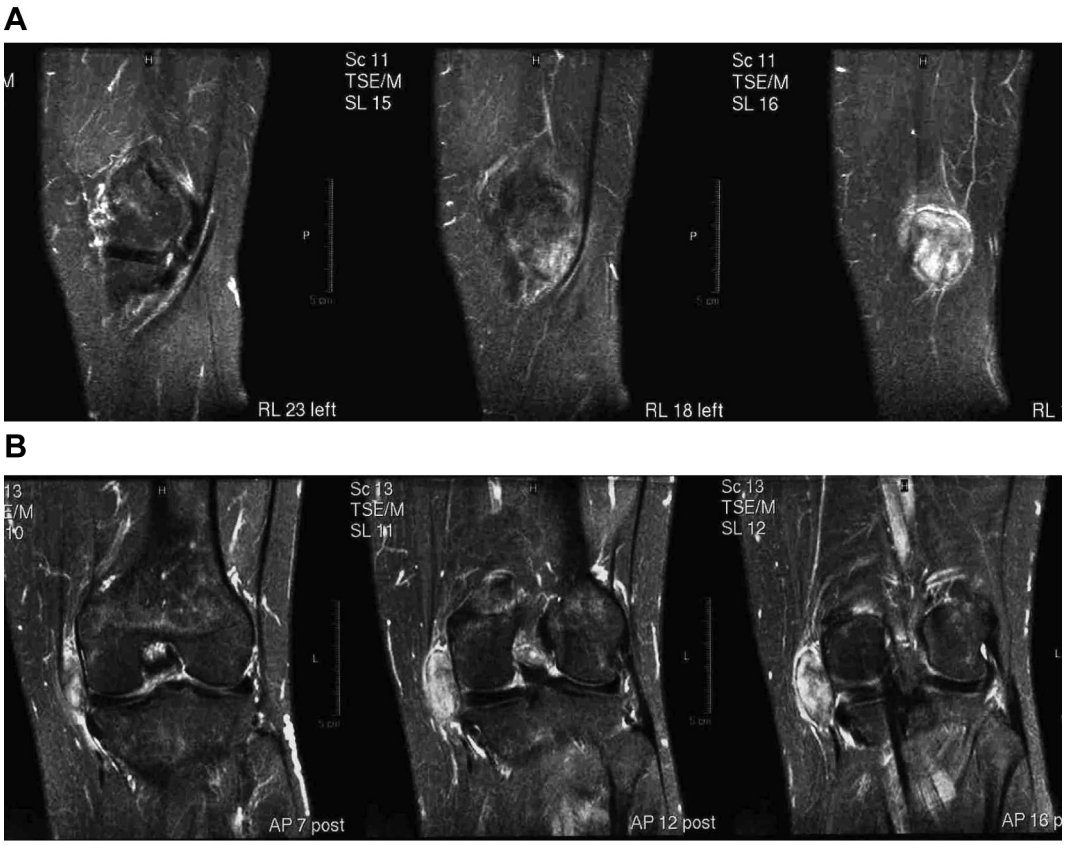


**Fig. 4 – (A) Contiguous sagittal images, medial to lateral. There is inhomogeneous enhancement of the lesion. (B) Contiguous coronal images, anterior to posterior. The lesion margins are more conspicuous. The mass enhances intensely, however, heterogeneously.**

There have been few reports about GCTTS/PVNS involving the pes anserine tendon/bursa complex in the modern literature [6–14], with maximum diameter of the lesions ranging from 4 to 8 cm. In one case, bone extension is reported [15].

The most characteristic feature of GCTTS is its location along the tendon sheath without involvement of the adjacent joint. These tumors do not have specific clinical characteristics, although edema or a palpable mass along tendons may be present.

Ultrasonography may be helpful not only in distinguishing these tumors from ganglion cysts but also in surgical planning. On ultrasonography, they may be hypoechoic or hyperechoic, heterogeneous or homogeneous, with typically increased vascularity on color and power Doppler [16].

On MRI, GCTTS typically exhibits low-signal intensity on all pulse sequences, with variable degrees of contrast enhancement [9,17]. The differential includes ganglion cyst, PVNS, desmoid tumor, and fibroma/fibrosarcoma.

Surgical removal of the entire lesion is the gold-standard treatment of GCTTS in order to minimize recurrence.

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