Lipoma arborescens of the knee joint

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DESCRIPTION

A 26-year-old woman presented to our orthopaedic clinic with a difficulty in walking, prolonged pain and recurrent swelling in her left knee joint for the previous 2 years. On physical examination, there was no limitation in the range of motion of the knee; however, both flexion and extension were painful. Other findings were normal. In the laboratory findings, erythrocyte sedimentation rate and C reactive protein were slightly above normal.

MRI revealed effusion and villous thickening with a similar signal as the fat tissue in all sequences of synovial membrane which was more prominent in the suprapatellar of the left knee (figure 1A–D). MRI also demonstrated frond-like

projections. These findings were consistent with lipoma arborescens (LA). The synovial mass with villonodular thickening was excised with arthroscopy and synovectomy. Histopathological examination revealed a lesion which formed villous structures and contained synovial epithelium with hyperplastic form and a mature adipose tissue, hence it was reported as LA (figure 2).

LA is a rare, benign lesion characterised by lipomatous villous proliferation of the synovial membrane. Its aetiology is unknown.¹ Though it occurs in the knee joint most commonly, it may also occur in other joints. LA presents with painless, slowly progressing swelling associated with intermittent joint effusions.² MRI is the best modality to

Figure 1 The lesion structuring villous thickening in synovial membrane (arrows). It demonstrates signal intensity similar to fat tissue in sagittal T1 (A), axial T2 (B) and coronal fat suppressed T2 (C) images. An associating effusion (star) is present in suprapatellar bursa (D).

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Figure 2 The mature adipocyte concentrations in villous structure (H&E×20), hyperplasia in the lining epithelium of synovial membrane and mature adipocytes under the epithelium (H&E ×100).

diagnose LA. Synovial mass has similar signal intensity as that of fat tissue in all sequences. In addition, MRI easily reveals the frond-like architecture of LA.¹ Typically, LA is treated by open or arthroscopic synovectomy, and postoperative recurrence is uncommon.^{1–3}

Learning points

- ▶ Lipoma arborescens (LA) is a rare, benign lesion characterised by lipomatous villous proliferation of the synovium, predominantly affecting the knee joint. It forms parts of the differential diagnosis for a slowly progressive chronically swollen knee.
- ▶ MRI is the best imaging modality and the cornerstone of the preoperative diagnosis of LA.
- ▶ Typically, LA is treated by open or arthroscopic synovectomy, and postoperative recurrence is uncommon.

Competing interests None.

Patient consent Obtained.

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