

# A rarely diagnosed cause of anterior knee pain: Hoffa's disease

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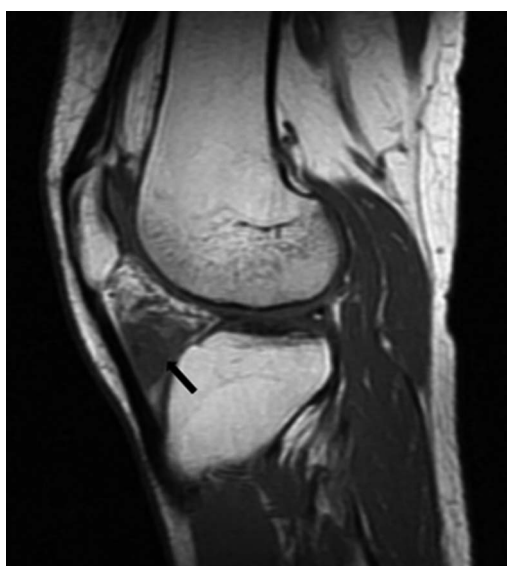
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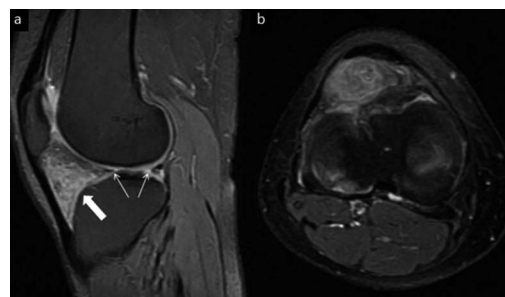
## DESCRIPTION

A 23-year-old football player presented with a 6-month history of mild pain on the anterior part of his right knee. Physical examination showed moderate swelling and restricted motion of the knee. Radiographs of the right knee revealed an increase in density in the infrapatellar fat pad (Hoffa's fat pad). Sagittal T1-weighted MRI showed hypointensity in the enlarged infrapatellar fat pad (figure 1). Sagittal and axial T2-weighted MRI revealed hyperintensity at the same localisation, minimal joint effusion and meniscus tears (figure 2A,B). The findings were compatible with inflammation of the infrapatellar fat pad. The diagnosis was made as Hoffa's disease. The lesion was excised arthroscopically. Histopathological examination confirmed Hoffa's disease.

Although the precise function of the infrapatellar fat pad is still unknown, the structure has clinical importance as the location of various tumour and tumour-like abnormalities such as para-articular chondroma or osteochondroma, Hoffa's disease, focal pigmented villo-nodular synovitis, synovial chondromatosis, lipoma, haemangioma, ganglion cysts and chondrosarcoma.<sup>1</sup> Hoffa's disease is an obscure cause of anterior knee pain resulting from impingement and inflammation of the infrapatellar fat pad due to acute or chronic repetitive micro-trauma.<sup>2</sup> While inflammation is prominent during



**Figure 1** Sagittal T1-weighted MRI showing hypointensity in the enlarged infrapatellar fat pad.



**Figure 2** (A and B) Sagittal and axial T2-weighted magnetic resonance images reveal hyperintense infrapatellar fat pad (large arrow), minimal joint effusion and meniscus tears (thin arrows).

the acute phase of the disease, impingement due to fibrosis and scar tissue of the infrapatellar fat pad plays a major role in the chronic phase.<sup>3</sup> Fibrous tissue may be transformed into fibrocartilaginous tissue and it may ossify. Hoffa's disease should be considered in the differential diagnosis of anterior knee pain.

## Learning points

- ▶ Hoffa's disease is an obscure and rarely diagnosed cause of anterior knee pain.
- ▶ Increased awareness of this clinical entity is required for early diagnosis and to facilitate the appropriate treatment, thus preventing morbidity of the patient.

**Contributors** AKS made the conception and design. SO treated the patient and drafted the manuscript. MI and HM participated in the design of the study. All authors read and approved the final manuscript.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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**To cite:** Sivrioglu AK, Ozyurek S, Incedayi M, *et al*. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2013-008795

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