JBR–BTR, 2010, 93: 166-167.

LIPOMA ARBORESCENS OF THE KNEE

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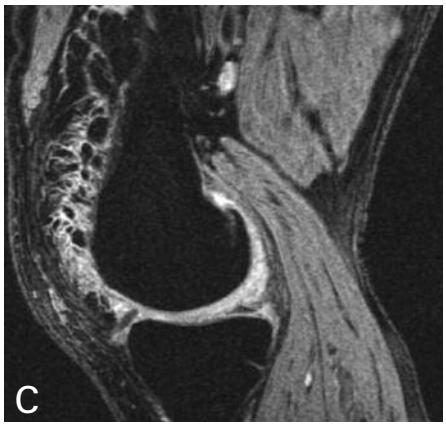
Key-word: Lipoma and lipomatosis

Background: A 35-year-old man presented with a progressive painless swelling in the right knee. Medical history mentioned an arthroscopic partial medial meniscectomy. There was no recent trauma nor fever.



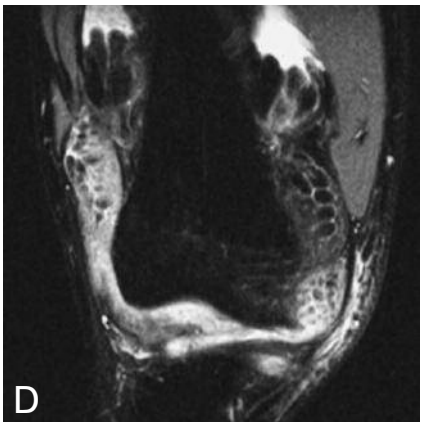


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Fig.	1A	1B
	2A	2B
	2C	2D

Work-up

Plain radiograph of the right knee (Fig. 1) includes an antero-posterior view (A) and a lateral view (B) on which no bony abnormalities are visible. There is a slight narrowing of the medial joint space. Intra-articularly, a fatty mass is suspected with distension of the joint capsule and suprapatellar pouch.

MRI of the right knee (Fig. 2) consisted of a sagittal unenhanced T1W image (A), a coronal T2W fat saturation image (B), a sagittal fat saturation image (C) and a coronal fat saturation image (D). A large frond-like, intra-articular fatty mass of synovial origin is visible. There is distension of the joint capsule, including the supra-patellar pouch. Some degenerative abnormalities are seen in the medial compartment of the knee. Saturation of the synovial mass is visible when the fat saturation technique is used.

Radiological diagnosis

Based on the imaging and histopathology findings, the diagnosis of *lipoma arborescens* was made.

Discussion

Lipoma arborescens is a very rare frond-like intra-articular mass, characterized by villous lipomatous proliferation of the synovium, usually involving the knee joint. It forms part of the differential diagnosis for a slowly progressive chronically swollen knee.

Most likely it is an idiopathic, unusual response to chronic synovial irritation and underlying degenerative joint disease.

The clinical presentation is a painless swelling of the knee and this abnormality is reported in adolescents and adults, with no predilection of gender.

MRI shows a high accuracy in the identification and characterization of lipoma arborescens.

Saturation of the synovial mass on fat saturation techniques is diagnostic evidence.

MRI allows correct evaluation of size and grade, accurate treatment planning (synovectomy) and effective follow-up.

The differential diagnosis consists of the following disorders: synovial lipoma, which occurs usually a single mass in or on Hoffa's fat pad, synovial osteochondromatosis, calcified masses, synovitis, visualized as thickened synovium but without saturation with fat saturation techniques, and loose bodies, visualized as decreased signal structures most often calcified, in some cases with a cortical rim.

Other causes of synovial proliferation should be considered. Saturation of the frondlike synovial masses on fat saturation techniques leads to the diagnosis.

Bibliography

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