

LIPOMA ARBORESCENS

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Key-word: Lipoma and lipomatosis

Background: A 34-year-old man presented with recurrent and intermittent painful hydrops of the knee. This has started 13 years ago, after he underwent a reconstruction of the anterior cruciate ligament (ACL) and a partial resection of the lateral meniscus. Clinical examination revealed marked swelling due to the hydrops.

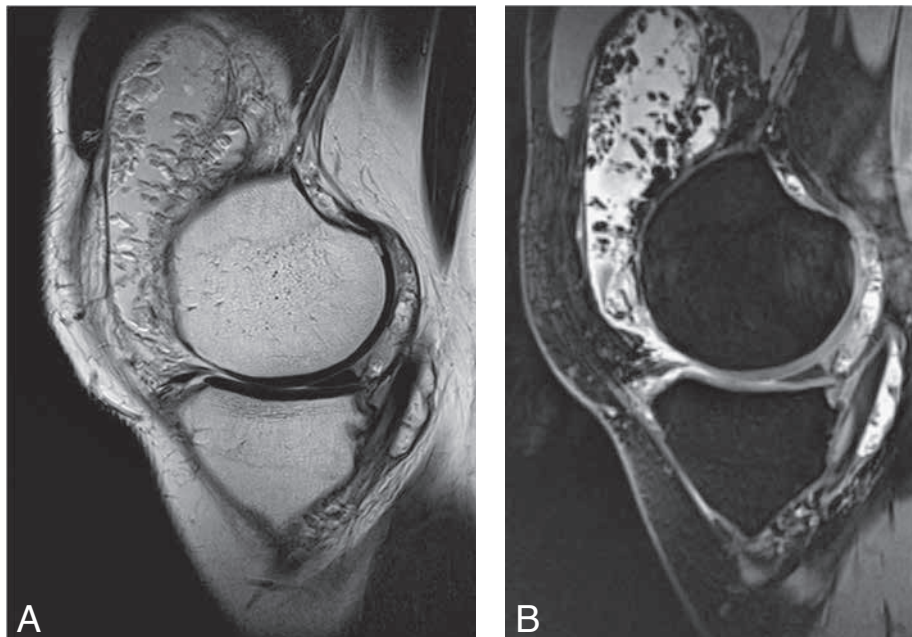


Fig.

1
2A 2B

Work-up

On lateral radiograph of the knee (Fig. 1) hydrops of the suprapatellar recess and degenerative changes are seen. Orthopedic hardware is present in the lateral aspect of the distal femur and proximal tibia after extraarticular ACL repair.

Notice the hypodense area cranial to the patella in the suprapatellar recess.

MRI of the knee (Fig. 2), sagittal proton density-weighted image (A) confirm effusion in the knee joint.

Numerous and large synovial proliferations with signal intensity equal to that of fat are observed. Chemical-shift artifacts are seen at the interface of the proliferations with the effusion. Sagittal gradient echo image with water excitation (B) shows complete loss of signal at the proliferations.

Radiological diagnosis

Based on the MRI findings the diagnosis of *lipoma arborescens* was made.

Discussion

Lipoma arborescens is a rare intra-articular mass in which hypertrophic synovial villi are seen, that are distended by fat, due to infiltration of the subsynovial tissue by mature adipocytes. The lesion is of unknown origin, but is frequently associated with degenerative joint disease, diabetes mellitus, chronic rheumatoid arthritis or prior trauma.

The condition is mainly found in adults, there is a male predominance.

It occurs most frequently in the knee, particularly in the suprapatellar pouch. Patients usually report a long-standing, painless, slowly progressive swelling of the joint with recurrent effusions. The clinical course is typically marked by intermittent exacerbations.

Radiographs typically show soft tissue swelling, rarely with radiolucent areas, joint fulness and frequently osteoarthritic changes. The diagnosis of lipoma arborescens can be suspected only when radio-lucent areas suggestive of fat are seen in a joint space.

Sonography is useful for documenting the joint effusion as well as the villous nature of the mass.

Precise diagnosis with MR imaging is possible, especially when T1-weighted and fat-suppressed sequences are used, since the villous proliferations in lipoma arborescens display fat signal intensity on all pulse sequences and a chemical shift-artifact at the interface with the effusion.

Synovectomy is the definitive treatment.

Bibliography

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