Acta Orthop. Belg., 2005, **71**, 221-222

TECHNICAL NOTE

Arthroscopic evaluation of intra-articular haemangiomatous lesions A technical note

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We are describing an arthroscopy tip, which is helpful in suspected/diagnosed cases of intra-articular haemangioma of the knee.

Intra-articular haemangiomas of the knee are a rare but known condition. Arthroscopy or MRI can be used for diagnosis.

Arthroscopy was performed in a case of haemangioma diagnosed on MRI performed for anterior knee pain. Appearances of the haemangioma were entirely different when hydrostatic pressures inside the knee joint were different.

The picture with bright strawberry coloured haemangioma was seen when lowered hydrostatic pressure in the knee allowed the haemangioma to fill up, defining its full extent. The appearance of the same haemangioma changed to a pale appearance when we allowed hydrostatic pressure to build up inside the knee.

We recommend that when dealing with intra-articular haemangiomas of the knee, arthroscopy should be performed under low hydrostatic pressure for better and complete visualisation of the haemangioma, which will prevent incomplete treatment.

INTRODUCTION

Intra-articular haemangiomas in the knee are unusual. Excision biopsy is considered to be curative. Arthroscopic cauterisation of the lesion has been described, but can prove to be challenging in visualisation of the pathological area as the haemangioma can be small and the synovium pigmented with haemosiderin following previous intra-articular bleeds (*3*).

METHOD

Initial arthroscopic inspection of the joint was performed using a tourniquet at 300 mm Hg and hydrostatic pressure of approximately 100 cm of H_2O as per routine knee arthroscopies. While several areas of the synovium were noted to be pigmented, the surgeon failed to locate the lesion. Identification was subsequently accomplished following release of the tourniquet and simultaneous decrease of the hydrostatic pressure to the minimum necessary (fig 1 and 2). The lesion was subsequently cauterised and excised.

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Fig. 1. — Arthroscopic view of the knee synovium with high hydrostatic pressure.

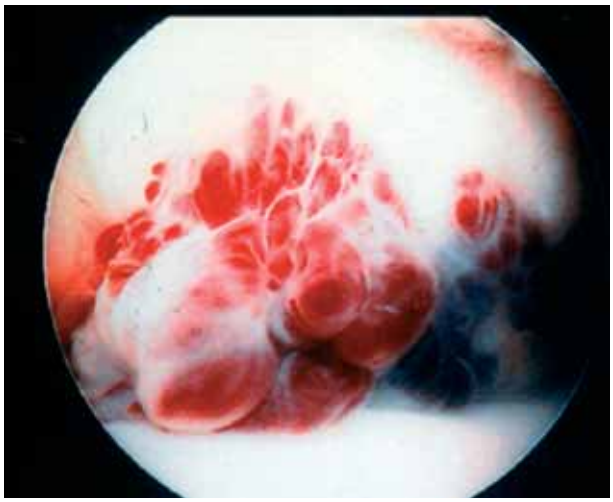

Fig. 2. — Arthroscopic appearance of the knee synovium with low hydrostatic pressure.

DISCUSSION

We present the case of a 17-year-old male who had previous incomplete open excision of an intra-articular cavernous haemangioma. The indication for revision surgery was documented recurrent haemarthosis associated with pain.

Dominant histological patterns of haemangiomatous lesions include cavernous haemangioma (50%), lobular capillary haemangioma (25%), arterio-venous haemangioma and venous haemangioma (*1*). Patients present with pain alone, pain associated with swelling or a painless mass (*1*). Differential diagnosis includes pigmented villonodular synovitis, traumatic haemarthrosis or synovial osteochondromatosis (*2*).

Our experience has allowed us to conclude that visualisation of small intra-articular synovial haemangiomas can be considerably assisted if the intraoperative hydrostatic pressure is reduced in a limb without an inflated tourniquet, in order to allow better expansion and visualisation of the lesion.

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