Double camera and four portal technique for tumoral excision at the posterior knee space

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Introduction

The main objective of this paper is to show the advantages of simultaneously combining a 30 degree scope and a 70 degree scope plus a working portal to reach tumoral lesions located in the posterior aspect of the knee joint when the ACL and the PCL are intact making more difficult to reach and visualize this area.

Methods

A young patient was diagnosed of a synovial lesion compatible with pigmented villonodular synovitis. The mass was just behind the medial condyle and very high located, in close relation with the posterosuperior capsule and the proximal insertion of the PCL. Instead an open procedure, we designed an approach using a 70 degree scope situated in the posteromedial portal and a 30 degree scope situated in the central or/and the medial portal to improve the visualization. Also, we used a lateral working portal and combined an approach between the cruciate ligaments (and sometimes between the lateral condyle and the PCL) and a trans-septal approach to get to the lesion and excise it completely.

Results

The result of this technique is a complete resection of the lesion, a complete visualization of the posterior space of the knee joint and a beautiful surgery with complete examination of the joint and remaining healthy tissues using the two cameras.

Discussion and Conclusions

Sometimes small intracapsular lesions are located in "obscure" areas very difficult to reach with a single scope or with a single working portal; in this cases arthroscopy is not the best technique especially when it is crucial to remove the whole lesion. Combining the two cameras and different working portals we can achieve a perfect visualization and be sure that the resection of the lesion is complete.
Illustrations

Illustration 1

Sinovial Tumor at the posterior space

Illustration 2

Step 1
Illustration 3

Step 2

Illustration 4

Step 3
Illustration 5

Step 4

Illustration 6

Step 5
Illustration 7

Step 6

Illustration 8

Step 7
Illustration 11

Step 10