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A simplification of the knee-joint meniscectomy operation

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Summary

A modification of the standard meniscectomy procedure has been described to simplify the detachment of the posterior horn of the medial cartilage of the knee-joint.

Introduction

Occasional difficulty is experienced in mobilizing the posterior horn of the medial meniscus, in spite of the use of the special cartilage knives and snares that have been designed to overcome this. The purpose of this paper is to describe a modification of the standard meniscectomy procedure and thereby simplify it.

The modification consists of the section of the posterior attachment of the meniscus by the introduction of a tenotomy knife through a small skin incision placed opposite the postero-medial aspect of the joint, i.e. between the medial ligament of the knee and the inner hamstring muscles—with the knee at a right angle. In this position the hamstring muscles lie posteriorly and are out of the way of the knife. As the point of the knife is directed anteriorly there is no risk of injury to the popliteal structures. This method is not used in performing a lateral meniscectomy because of the presence of important structures on the postero-lateral aspect of the joint, viz. the lateral popliteal nerve and the popliteus tendon, which are liable to be injured by the knife. Furthermore, the configuration of the posterior horn of the lateral cartilage is such that after section too large a portion would be left *in situ*. The shape of the posterior horn of the medial meniscus on the other hand lends itself to this procedure, and this meniscus can be removed almost completely (see Fig. 1).

Procedure

An exsanguinating bandage and tourniquet is applied. The limb is draped and allowed to hang out over the end of the table, with the distal end of the thigh supported on a sandbag. The surgeon sits opposite the end of the table facing the knee joint, so that he can see clearly to the posterior aspect of the joint when it is exposed. An oblique incision 2 in. in length is made over the anteromedial aspect of the knee, commencing below the inner border of the patella, the skin, capsule and synovial membrane being divided in the same line.

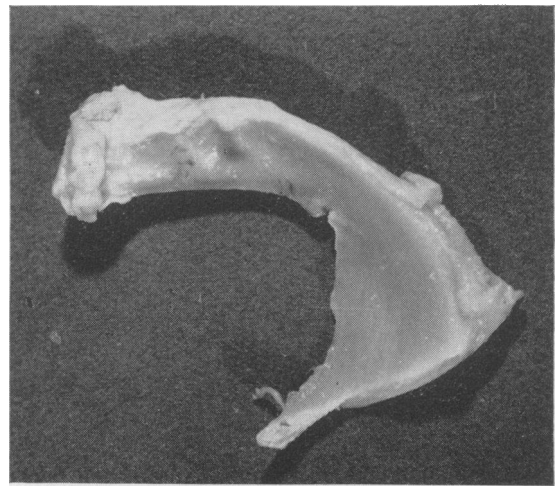

FIG. 1. Meniscus of knee.

When the joint has been opened, retractors are introduced. After an inspection is made, a blunt hook is placed below the cartilage, and its anterior attachment is divided close to the tibia; and continuing the separation posteriorly, the rest of the cartilage is freed as far posteriorly as possible (see Fig. 2).

Then a curved forceps (see Fig. 3) is introduced into the knee along the joint line until its point is opposite the postero-medial aspect of the joint. An incision, approximately 1 cm in length, is made over the point of the forceps and the latter withdrawn from the joint. A tenotomy knife is next introduced through this incision into the joint with its point directed forwards

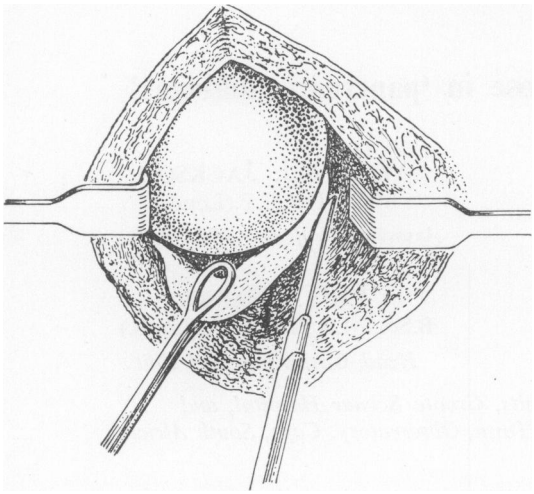

FIG. 2.

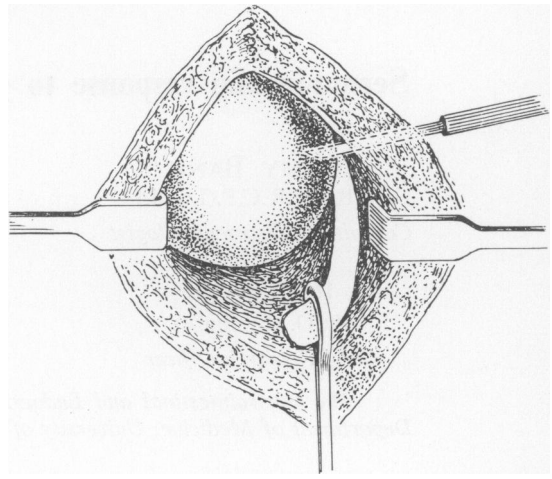

FIG. 4.

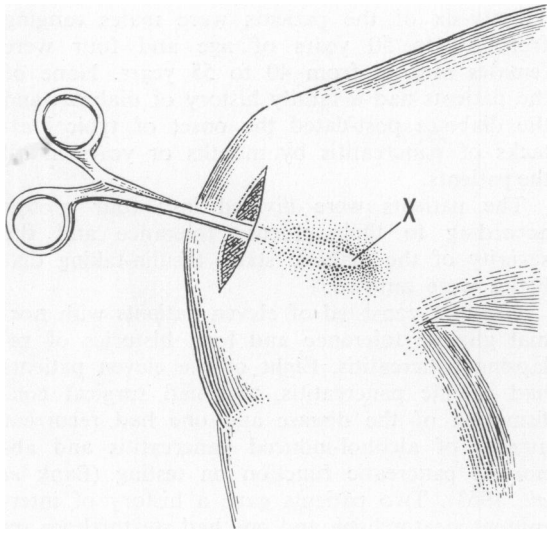

FIG. 3. X indicates the site for the 1-cm incision through which the tenotomy knife is introduced.

and laterally, so that it comes to lie above the meniscus (see Fig. 4). The exact position of this knife is controlled by the surgeon looking into the joint through the anterior incision. The knife is held at right angles to the upper end of the tibia and the posterior attachment is divided, and the cartilage next withdrawn from the front.

The posterior wound is closed by one skin suture, and the anterior wound by introducing interrupted sutures to the synovial membrane and capsule and then to the skin.

A firm compression bandage is applied.

Postoperative treatment

Quadriceps exercises are commenced as soon as possible, and the patient is allowed up on the 10th day.