

A SURGICAL APPROACH FOR
SYNOVECTOMY OF THE KNEE JOINT

BY

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Total synovectomy of the knee-joint is a rather rare operation. Usually only parts of the synovial membrane are removed. Excluding tumours the most important indication for partial removal of the joint capsule is chronic synovitis, usually with exudate. Diagnostic excisions are also made in order to obtain material for pathological examination.

One of the disadvantages of opening the knee-joint in irritable conditions is the necessary post-operative inactivity. If this is prolonged, the scar formation and adhesions, which so readily occur, delay the recovery of the original function of the joint.

If the operation could be performed so that the tissues most important for the function of the joint were not injured, the indications for synovectomy could be widened, and the results of therapeutic excision of the capsule could be better assessed. Some of the bad results which are now obtained may be caused by intra-articular synechia.

In 1945 *Abbott* and *Carpenter* gave a full account of the different approaches to the knee-joint. All involve incision of the fibrous capsule in one way or another, and the period of postoperative immobilisation is determined by the time which the capsule takes to heal. Even when the fibrous capsule is carefully sutured, so that movements can be begun early, the fact that there is a lesion of the capsule means that the normal

function of the knee cannot be restored before a considerable period of time has elapsed, and the scar causes a loss of elasticity which limits the range of movement. Incision of the outer capsule has, however, the advantage that more of the joint can be seen, and this may be of diagnostic importance.

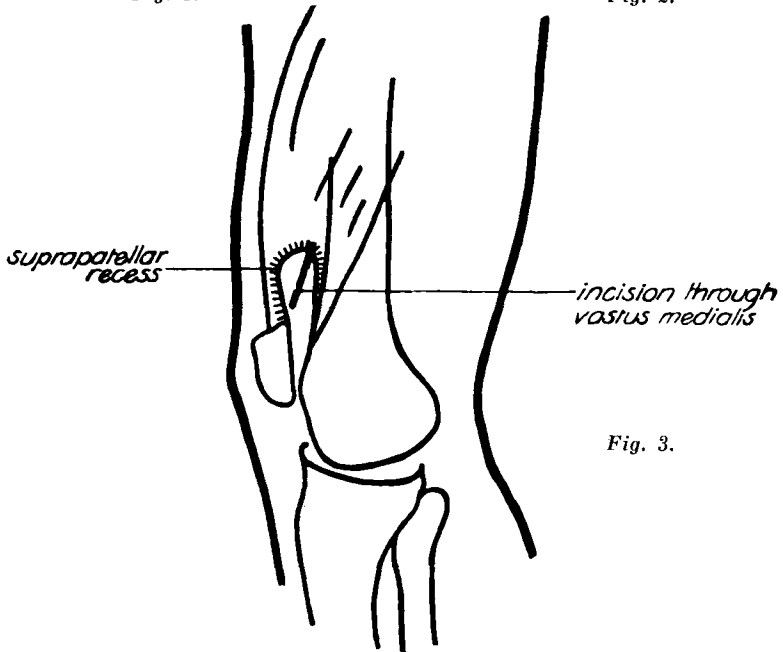
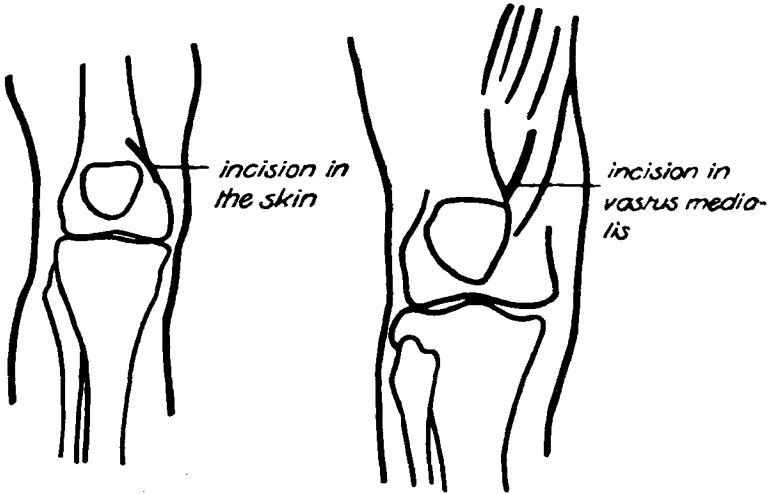
In cases in which one can a priori decide to limit the operation to a partial excision of the synovial membrane, it is often sufficient to remove only the suprapatellar pouch, which, with few exceptions, communicates with the knee-joint. In 7 cases the author has used a method which has not, as far as he can find, been described before, and which seems worth describing.

The patient lies on his back with the knee extended. A curved incision is made round the upper medial border of the patella (see fig. 1).

The fascia of the vastus medialis is found deep to the subcutaneous fat. It is incised and the muscle is divided by blunt dissection in the line of the fibres, which run roughly at right angles to the skin incision (fig. 2 and 3).

One now has direct access to the suprapatellar synovial pouch and can usually separate off its upper and medial parts by blunt dissection. Either the whole or parts of this sack-shaped extension from the joint cavity are freed and excised. The fibres of the vastus return to their original position, so the author inserts only a few separate subcutaneous and skin sutures. The vastus is not sutured. The operation has always been performed after application of an Esmarch's bandage, and no bleeding has been encountered. After the wound is closed, a compression bandage is applied to the knee, with maximum pressure over the site of the pouch. This bandage is left on for one or two days. It is then replaced by a light elastic bandage, and active exercises, consisting of raising the extended leg and flexion exercises, are now begun. After a week the patient is allowed to get up.

4 of the cases had a chronic non-specific exudative synovitis, and 3 a subacute polyarthritis. No complications occurred.



SUMMARY

The author describes a technique for partial or total synovectomy of the suprapatellar pouch. He uses a transmuscular approach through the vastus medialis, and the fibrous capsule is not damaged. In this way the risk of scarring and adhesion formation is reduced, and the post-operative function is less impaired because the operation allows early movements.

RESUME

L'auteur décrit une technique de synovectomie partielle ou sub-totale de la bourse supra-partellaire. Il utilise la voie trans-musculaire à travers le vastus medialis et la capsule fibreuse n'est pas endommagée. De cette manière, on diminue le risque de cicatrice ou de formation d'adhérences, et la fonction post-opératoire est moins troublée, étant donné que l'opération permet le rétablissement rapide des mouvements.

ZUSAMMENFASSUNG

Der Verfasser beschreibt eine Technik für die teilweise oder subtotale Synovektomie des Recessus suprapatellaris. Er verwendet einen transmuskulären Zugang durch den vastus medialis, wobei die fibröse Kapsel nicht geschädigt wird. Dadurch wird die Gefahr der postoperativen Narben und Adhäsionsbildung herabgesetzt. Die postoperative Funktion ist weniger gestört, da die Operation zeitige Bewegung erlaubt.

LITERATURE

Abbott, L. C. and Carpenter, W. F.: Surgical Approaches to the Knee-Joint. *J. Bone and Jt. Surg.* Vol. XXVII, 2, 1945.