



Orthopaedic surgery

MENISCUS

Meniscal lesions

The intact meniscus, consisting of fibrous cartilage, decreases joint pressure by enlarging the contact area between the incongruent joint surfaces of femur and tibia. Thus the menisci work as “shock absorbers” between these two bones. In addition, the menisci are flexible, partially mobile and can adapt themselves to the different positions of the joint during motion. This gives them an important function in terms of joint stabilization and cartilage protection. Meniscal lesions are quite common after sports injuries. Rotational forces while playing soccer or in alpine skiing e.g. may lead to overload and classical injuries of the ligaments and the menisci. Chronic overload due to obesity or age related degenerative lesions are also very frequent. Since about 60 – 70 % of the load is transmitted by the medial meniscus, it is involved mostly. The patients suffer from intensive pain at the medial side of the knee joint which becomes worse by rotational movements. Sometimes pain appears only during sports, sometimes it occurs as night pain. Very often the range of movement is limited and locking as well as repetitive effusions are typical. A defect meniscus generally acts as a mechanical obstacle and without operative treatment it will lead to consecutive damage to the cartilage, which is the onset of osteoarthritis. For the majority of the cases arthroscopic treatment is most helpful.

Operative technique

Through two tiny little skin incisions the arthroscope and instruments are introduced and the menisci will be examined. We distinguish between different typical types of lesions like flap – horizontal or bucket handle tears. With little punches and power instruments the ruptured or degenerated meniscal tissue is carefully resected whereas intact areas are spared.

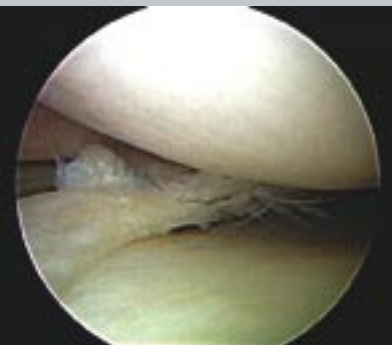
Unlike decades ago, the complete resection of the meniscus must be avoided. In particular situations, mainly for younger patients, meniscal ruptures can be sutured or fixed with pins. The indication is favourable when the meniscus is ruptured at its basis where the tissue is well vascularised. The sutures and the pins are of resorbable material which is resorbed after a couple of months. After meniscal refixation rehabilitation time is considerably longer because the sutured meniscus should not be loaded for a couple of weeks and the operated joint has to be protected by a brace or a splint. In general arthroscopic surgery is done on an outpatient- or a day-case-basis. As a routine the patients are operated in general or in epidural/spinal anaesthesia. If necessary, such an intervention can also be performed under local anaesthesia.

Rehabilitation

The intervention is followed by early functional treatment with partial weight bearing and physiotherapy with active and passive motion. From the day of the operation until the day when full weight bearing is possible, prophylactic low dose heparine is given daily against thrombo-embolism. Most patients will be able to walk with full weight bearing after a couple of days and will be able to begin with some sports activities after two weeks. After meniscal suture or surgical treatment of the cartilage, only partial weight bearing is allowed for the first weeks. Regular physiotherapy is mandatory. The prognosis after meniscal surgery is very good and most patients will continue their previous sports on the former level without any problems.



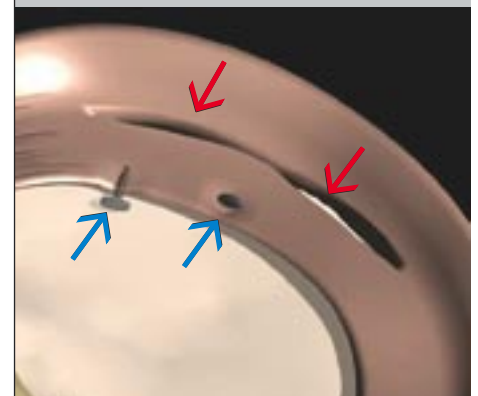
medial meniscal flap tear
intact cartilage surface



degenerative medial meniscus



removal of meniscal tear



longitudinal meniscal tear (red), fixation with resorbable pins (blue)