Arthroscopic surgery of the osteoarthritic knee

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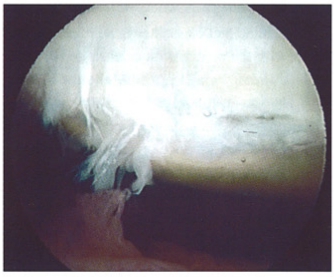
A frequent dilemma – what to do with the symptomatic knee in the "not so young patient"? If the knee is worn out, with bone on bone causing significant symptoms and impairment, there is no dilemma. The patient can expect significant improvement with a total (or unicompartmental) knee replacement. But what can be done to help those with less severe symptoms, impairment and disease?

The article *Non-operative Management of Knee Osteoarthritis*, Medical Forum November 05 edition, covered non operative measures.

Knee arthroscopy may also have a role in surgical treatment, particularly when initial conservative treatment fails.



■ *Fig 1. Chondromalacia*

For example, osteoarthritis may be associated with pathology suitable for arthroscopic treatment, with significant symptomatic improvement. Whilst the underlying disease is unaltered, significant functional improvement can be achieved in the short to medium term, sometimes with complete resolution of the patient's symptoms for an extended period. The natural history is, however, probably unaltered!

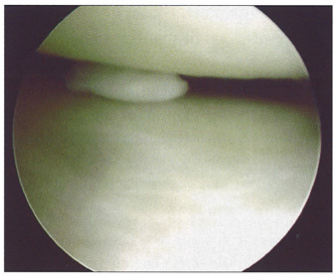
A wide variety of problems can be dealt at arthroscopy, including:

- Meniscal tear resection.
- Articular cartilage degeneration.
- Correction of maltracking patella.
- Loose body removal.
- Foreign body removal.
- Assessment prior to further surgery.

Symptoms that point to probable benefit from arthroscopic debridement

Which osteoarthritic patients may benefit from arthroscopic debridement? As a general rule, if the symptoms that the patient with OA complains of suddenly deteriorate, then it is wise to consider debridement.

Locking. True locking is where the patient complains of being unable to fully extend the knee due to a painful block in motion. It is usually intermittent. Locking like this is usually due to a mechanical block due to a torn meniscal fragment, loose body or chondral flap tear preventing full extension. (The differential diagnosis is painful inhibition – where the patient is reluctant to fully extend the knee or, more usually, flex the knee from full extension due to pain or discomfort at the patello-femoral joint.)

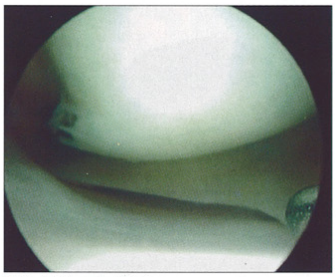


■ *Fig 2 Cartilagenous loose body.*

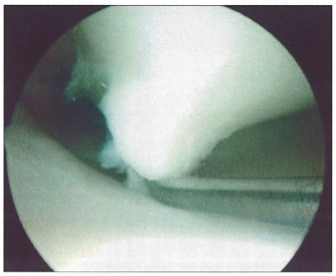
It is important to exclude a fixed flexion deformity where the patient is unable to fully extend the knee due to capsular changes and osteophytes caused by OA. This is not usually painful in its own right.

Giving way. The patient complains that their knee suddenly "buckles" underneath them when walking. They may or may not actually fall as a result. Pain may occur as the *result of* giving way or may *lead to* giving way.

If pain *leads* to giving way, the aetiology is often as for locking i.e. meniscal fragment, loose body or chondral flap tear. On the other hand, giving way may not be painful at all – look for a neurological cause after excluding a problem within the knee such as a large effusion. A large effusion or quadriceps weakness may be painless or cause pain as a *result of* giving way.

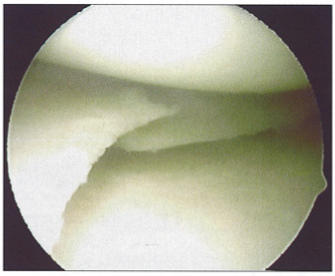


■ *Fig 3. Chondral flap tear.*

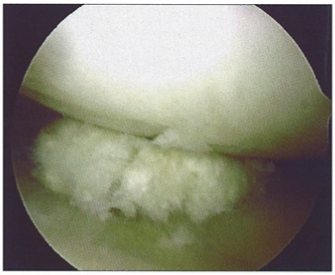


■ *Fig 4. Again, showing extent of loose cartilage when probed.*

Painful catching. Usually pain and crepitus is reported at the patello-femoral joint due to chondromalacia patellae or OA of the patello-femoral joint. Arthroscopic debridement is useful.



■ *Fig 5. Radial meniscal tear.*



■ *Fig 6. Degenerative meniscal tear in a background of chondrocalcinosis.*

Meniscal tears usually occur either as the result of degeneration with age occasionally exacerbated by coincidental problems such as chondrocalcinosis (psuedogout) or as the result of a traumatic event. On occasion there is an acute tear in the background of degenerative changes with or without chondrocalcinosis.

Patient considerations

Arthroscopy is usually undertaken as a day case procedure. It is well tolerated by even by those with significant co-morbidities (although such patients always need workup and it is often prudent to keep in overnight).

Arthroscopy is almost universally undertaken under general anaesthetic. Patients arrive on the morning of surgery and are discharged later in the day.

Pain is not usually a significant problem, although patients report a varying level of discomfort (often not requiring analgesia stronger than paracetamol).

In summary, a patient with a symptomatic osteoarthritic knee may indeed be a suitable candidate for arthroscopic debridement.