



There has been much debate in the recent press, both scientific and public, on the effects of arthroscopic surgery in the arthritic knee. Recently reported randomised clinical trials (*Mosley 2002, Bradley 2002*) as well as previous population-based studies (*Wai et al, 2002*) have highlighted a less than beneficial effect and that “the benefits of therapeutic arthroscopy and its role among alternative treatments for knee osteoarthritis (OA) remain unclear”. (*Chapman & Feller MJA 2003*) This summary provides our current feelings with literature support on the arthroscopic treatment of knee OA.

Mechanical symptoms associated with knee arthritis have been regarded as one indication for arthroscopic surgery. The “mechanical” locking and catching may be due to a meniscal tear but may also be due to generalised cartilage wear, but this remains unclear and, as yet, unproven.

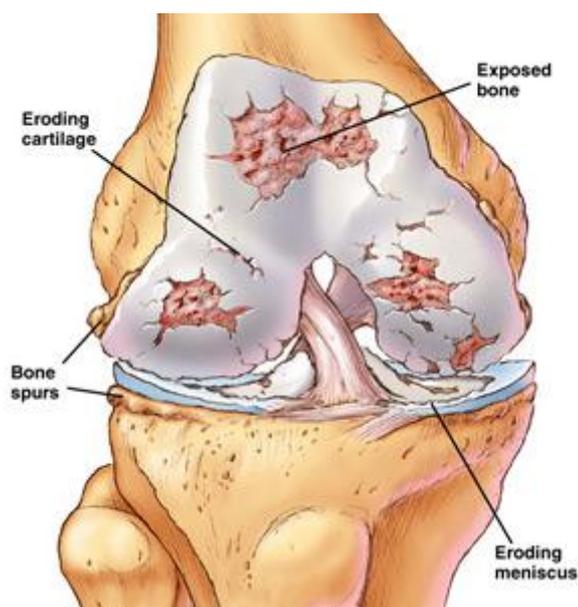


Figure 1. Example of an osteoarthritic knee

A recent MRI study has shown that meniscal tears in patients with osteoarthritis were not associated with any increase in pain or impairment (*Bhattacharyya et al JBJS 2003*). Therefore symptoms in osteoarthritic knees should predominantly be regarded as due to the generalised cartilage wear. There is no evidence that arthroscopy cures or arrests osteoarthritis and there are possible risks with surgery, in particular, the risk of being made worse.

In this scenario, therefore, of recent evidence and current opinion there are few indications for arthroscopic treatment of knee osteoarthritis. Aggressive non-operative modalities including physical therapy, home exercises, non-impact loading exercise, weight reduction, anti-inflammatories and simple analgesics remain the main stay of treatment and avoid the potential complications of operative treatment.

The following articles have been selected from current peer-reviewed scientific journals to highlight the above opinion.

References

1. Mosely J B, et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2002;347: 81-88

This study has shown the great potential for a placebo effect with surgery. One hundred and eighty patients were randomly allocated to 3 treatment groups – arthroscopic debridement and lavage, arthroscopic lavage alone, or sham surgery. The sham surgery consisted of patients having an anaesthetic, receiving skin incisions, and undergoing a simulated operation without insertion of the arthroscope. All patients provided an informed consent prior to entering the study.

Follow-up at 2 years found little improvement in patients in each of the 3 groups and no statistically significant difference between the groups as assessed by specific pain and function scores. These findings provide strong evidence that arthroscopic lavage with or without debridement is not better than and appears to be equivalent to a placebo procedure in improving knee pain and self-reported function. This is contrary to the opinion that “washing the knee out” provides a beneficial cleansing effect removing loose and painful debris from the knee to improve symptoms.

The study concluded that it is unclear whether the placebo effect is due solely to the natural history of the condition or whether there is some independent effect. Arthroscopy in patients with osteoarthritis of the knee should therefore be regarded as a procedure that provides no more benefit than doing nothing at all.

2. *Dervin G F, Stiell G, et al.* Effect of arthroscopic debridement for osteoarthritis of the knee on health related quality of life. *JBJS* 2003; 85A: 10-19.

This study looked at the ability of 2 groups of surgeons to independently predict the outcome of arthroscopic debridement using clinical symptoms, signs and plain radiography. One hundred and twenty six patients were followed for 2 years following failure of medical management and subsequent arthroscopic debridement of the knee.

Only fifty six patients (44%) were rated as having had a clinically important reduction in pain, as determined by the WOMAC pain scale.

Physicians were poor at predicting which patients would have improvement with neither group predicting the correct outcome more than 59% of the time, and the agreement between the 2 groups was only slightly better than chance.

The conclusion in this study was that arthroscopic debridement of the osteoarthritic knee provides a less than previously reported quality – of – life benefit. So, even though patient and surgeon may feel it is “worth a try”, a less than 50% benefit does not outweigh the potential risks of surgery with the current methods of patient selection.

3. *Bhattacharyya T et al* *The clinical importance of meniscal tears demonstrated by magnetic resonance imaging in osteoarthritis of the knee.* *JBJS* 2003; 85-A: 4-9

The clinical importance of meniscal tears demonstrated by MRI...

This study clearly showed that meniscal tears are highly prevalent in both asymptomatic (prevalence 76%) and clinically osteoarthritic (prevalence 91%) knees. However, osteoarthritic knees with a meniscal tear are not more painful than those without a tear ($P= 0.8 - 0.9$), and the meniscal tears do not effect functional status.

The etiology of pain in patients with osteoarthritis is not as clear as one might think, and cartilage lesions, synovial inflammation, and periarticular muscle strain have all been implicated. Only the outer-third of the meniscus has pain fibres, and for meniscectomy to be successful, the meniscal tear must be the source of the pain.

As a result of this study, one can conclude that MRI contributes little to the decision making process regarding the treatment of patients with symptomatic osteoarthritis of the knee and that the presence of meniscal tears in osteoarthritic knees should not effect the predicted success of a meniscectomy in improving the patients functional status.