

Arthroscopic Surgery For Symptomatic Osteoarthritis Of The Knee: Are We Helping Our Patients?

M Hossain, Y Gwynedd, A Hussain

Citation

M Hossain, Y Gwynedd, A Hussain. *Arthroscopic Surgery For Symptomatic Osteoarthritis Of The Knee: Are We Helping Our Patients?*. The Internet Journal of Orthopedic Surgery. 2005 Volume 3 Number 1.

Abstract

Over a three-month period, a postal survey was conducted of all hospital orthopaedic consultants in Wales. Of a total of 62 questions sent we received a reply of 37. 31 surgeons perform arthroscopic lavage or debridement. 4 surgeons perform arthroscopic surgery for symptomatic meniscal tear only. There was no defined protocol regarding the management. Early OA was the commonest indication (18). Arthroscopic lavage (17) was equally popular to lavage and debridement (16). 26 surgeons felt that the results of the procedure are unpredictable, but still continued to perform it. Arthroscopic surgery is a commonly performed symptomatic treatment for arthritic knee. The physiological basis for arthroscopic washout is not clear. It bears a significant financial commitment. Average cost of each operation is £1000. A majority of the Welsh surgeons have reservations about this procedure. In spite of evidence of limited usefulness, it is still performed widely.

INTRODUCTION

Arthroscopic surgery is a common intervention for osteoarthritis of the knee. However, the benefits from such an intervention are not clear, nor are the indications. It was hypothesized that removal of noxious debris from the arthritic knee would result in pain improvement. Recent studies have fiercely challenged that assumption and attributed symptomatic improvement to placebo effect. Available literature review suggests that there may still be a role for arthroscopy in osteoarthritic knees in selective indications. We wanted to perform a postal questionnaire of the orthopaedic surgeons of Wales to identify the prevalent practice of arthroscopy for osteoarthritic knee. Our aim was to find out whether our practice conforms to published evidence.

METHODS

A postal survey was conducted over a three month period. A set of questionnaire was sent to all hospital orthopaedic consultants in Wales. A stamped addressed envelope was sent to facilitate response.

RESULTS

Of a total of 62 questions sent we received a reply of 37. Of them 3 surgeons only perform paediatric surgery. Of the rest 31 surgeons perform arthroscopic lavage or debridement. 4 surgeons perform arthroscopic surgery for symptomatic

meniscal tear only. There was no defined departmental protocol regarding the management. Early OA was the commonest indication for arthroscopy (18), followed by OA in patients too old (10) or too young (9). 4 surgeons did not mention any definite indication for surgery. Most of these cases were done as day surgery (25). The rest were done in routine list. However, some of these cases may be done in routine list because of lack of a day theatre list. Half of the respondents themselves like to put patients on the waiting list, while the other half are prepared to delegate the responsibility to the middle grade. 6 respondents like to perform the surgery themselves while the majority would allow a middle grade surgeon to operate with or without supervision. Arthroscopic lavage (17) was equally popular to lavage and debridement (16) while only 4 perform abrasion arthroplasty. An overwhelming majority injected local anaesthetic (31) after surgery.

26 surgeons felt that the results of the procedure are unpredictable, but still continued to perform it. 6 surgeons-excluding the 4 who only perform arthroscopy for meniscal tear - felt a continued relevance of the procedure. 1 surgeon used the procedure as a "temporising" measure.

DISCUSSION

Evidence based medicine is about "doing the right things right for the right people at the right time"¹. This can only be implemented through the application of best current

knowledge. However, the transition from evidence to practice is not easy. Changing behaviour is a complex process that requires the participation of patients, healthcare professionals and policy makers. The result is often that political, economic and socio-cultural considerations usurp the scientific ones.

Arthroscopic surgery as a symptomatic treatment for an arthritic knee is a very commonly performed procedure. On going through the operation log book of a district general hospital, we found that in a year 256 arthroscopic surgery of the knee was performed, of whom 115 was for arthroscopic washout. Average cost of each of these operations as a day case is £ 1000 ². So, over a hundred thousand pounds is used over a year in one district hospital performing this procedure. This is symptomatic treatment. However, the physiological basis for symptom relief is not clear ³. It has been suggested that pain relief may be due to removal of inflammatory debris from the knee and resulting loss of noxious stimuli ⁴. But the source of pain in osteoarthritis remains unclear ⁵. A recent randomised trial has attributed symptomatic improvement to placebo effect ³. This presents obvious ethical challenge to the surgeon. Is invasive surgery appropriate? If only for placebo effect? In spite of this evidence, it remains a popular procedure. Surgeons have been vociferous in defending its usefulness ⁶.

More recent studies have advocated selective indication and usefulness for arthroscopic surgery in arthritic knee. Authors have suggested that arthroscopic lavage and or debridement is effective only for early stages of OA but less reliable for late stages ⁶. Others have emphasised the importance of removal of mechanical bony block to extension for improvement of symptoms ⁷. Arthroscopic meniscectomy is commonly performed in symptomatic osteoarthritis of the knee. But even its role has come under challenge ^{5,8}. It has been suggested that surgical treatment for meniscal tear is appropriate only in presence of mechanical symptoms.

What appears from review of published literature is that the role of arthroscopic surgery in treatment of symptomatic arthritis of the knee is not as widespread as it was assumed to be in the past ⁹. It is still performed widely in the surveyed area. A majority of the surgeons have reservations about the success of this procedure, but still continue to perform it. Improvement in quality of life is debatable or absent after some of the indications.

Commenting on why doctors use treatments that do not work, authors in a recent article suggested many reasons

“including their inability to stand idle and do nothing” ¹⁰. There could hardly be a situation more apt than knee osteoarthritis. Most of the patients offered arthroscopy are deemed not suitable for conventional joint replacement. Patients know that it is only a symptomatic treatment, is relatively safe and pain free and may be tempted, like the surgeon, to have a go without sky high expectations.

Arthroscopy of the knee is a very common procedure. If it is ineffective, then the financial toll to the UK National Health Service must be heavy indeed. In the face of increasing evidence of its ineffectiveness as a treatment for symptomatic osteoarthritis, it may be worthwhile to discuss and debate the available evidence and act accordingly if we are to offer our patients the best evidence based treatment.

CONCLUSION

The limitation of this paper is the poor response rate and the small numbers available. However, this is likely to be representative of the scenario on a national basis. Arthroscopic surgery as a stop-gap measure for symptomatic arthritis of the knee has enjoyed an extended period of popularity. However, recent evidence would suggest that the effectiveness of this procedure for treatment of symptomatic osteoarthritis of the knee is limited. In spite of growing doubts, surgeons in Wales continue to perform the procedure routinely. The aim of this paper is to highlight our practice on a national basis and stimulate a public and professional debate on this important issue. We can only aspire to provide best treatment to our patients by an honest assessment of published evidence.

CORRESPONDENCE TO

M Hossain Flat 138, Judkin Court Heol Tredwen Cardiff CF10 5AX UK Phone and fax: 00442920 930 162 e-mail: munierh@doctors.org.uk

References

1. Muir JA. Evidence based healthcare. Churchill Livingstone, Edinburgh, 2001.
2. Personal communication, CSSD department, Prince Charles Hospital.
3. Mosley JB, O'Malley K, Petersen N et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2002;347(2):81-88.
4. Jackson RW, Silver R, Marans H. Arthroscopic treatment of degenerative disease. *Arthroscopy*, 1986; 2:114.
5. Bhattacharya T, Gale D, Dewire P et al. The clinical importance of meniscal tears demonstrated by magnetic resonance imaging in osteoarthritis of the knee. *J Bone Joint Surg Am*, 2003; 85:4-9.
6. Jackson RW, Dieterichs C. The results of arthroscopic lavage and debridement of osteoarthritic knees based on the severity of degeneration: a 4 to 6 year symptomatic follow-

up. Arthroscopy 2003; 19(1): 13-20.

7. Fond J, Rodin D, Ahmad S, Nirschal RP. Arthroscopic debridement for the treatment of osteoarthritis of the knee: 2 and 5 year results. Arthroscopy 2002; 18(8): 829-834.

8. Dervin GF, Stiell IG, Rody K, Grabowski J. Effect of arthroscopic debridement for osteoarthritis of the knee on

health related quality of life. J Bone joint Surg Am, 2003;85:10-19.

9. Levesley PJ, Doherty M, Needoff M, Moulton A. Arthroscopic lavage of osteoarthritic knees. J Bone joint Surg (Br), 1991; 73-B:922-6.

10. Doust J, Del Mar C. Why do doctors use treatments that do not work ? BMJ 2004; 328: 474-5.

Author Information

M. Hossain, MSc, FRCS

Prince Charles Hospital

Ysbyty Gwynedd

Prince Charles Hospital

A. Hussain, MCh, MS

Prince Charles Hospital