

Orthopedics & Sports Medicine

Role of Arthroscopy in Knee Osteoarthritis

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Knee Arthroscopy

- One of most widely employed procedures for internal derangement of the knee
- Role in osteoarthritis controversial and unproven
- Remains widely practiced world-wide
- Over 600,000 per year in US



Arthroscopy for Meniscal Tears

- Used to treat meniscal tears in older patients
 - Continues despite sufficient evidence
- Traditional teaching:
 - Mechanical symptoms from meniscal pathology can be improved
 - Generalized symptoms of OA cannot be improved with arthroscopy
 - **May even be exacerbated!**



Arthroscopy for Meniscal Tears

- Conditions for considering surgical treatment:
 - Mechanical symptoms of meniscal injury
 - Locking, catching, swelling, etc
 - Corroborating exam findings
 - Joint line tenderness, effusion, motion restriction, positive McMurray Test
 - Failure to respond to non-surgical treatment
 - Exclusion of other non-knee sources of pain
 - MRI may be helpful

Arthroscopy for Meniscal Tears

- **Confounding the issue:**
 - Up to 36-76% of asymptomatic knees may have MRI evidence of meniscal pathology!



Clinical Outcomes

- Factors that correlate with **poor outcomes** after arthroscopic medial meniscectomy
 - **Age greater than 40**
 - **Varus alignment** with medial meniscus tear
 - Same for valgus alignment and lateral meniscus tear
 - **Deficient ACL**
 - **Degree of OA at time of surgery**
 - The more advanced the OA, the poorer the outcome with arthroscopy!



Clinical Outcomes

- Meta-analysis of partial medial meniscectomy, debridement or both
- Middle-aged or older individuals versus non-operative interventions
 - 9 RCTs / 1270 patients
 - Small benefit in pain relief favoring surgical intervention was observed at 3 and 6 months
 - **Disappeared at one year and beyond!**
 - **No benefit in patient-reported functional outcomes were observed with surgical intervention at any time period!**

AAOS Clinical Practice Guidelines



- Recommendation 18
- **We recommend against performing arthroscopy with débridement or lavage in patients with a primary diagnosis of symptomatic OA of the knee.**
 - Levels of Evidence: I and II
 - Grade of Recommendation: A

Level 1 Randomized Controlled Trial

- Moseley et al. NEJM 2002
- Veterans Hospital in Texas
- **Randomized, placebo-controlled trial of arthroscopy versus “sham” surgery for knee OA**
- 165 patients
- **No difference in either group in pain or function out to 2 years**
- No clinical meaningful difference based on confidence intervals as well.

AAOS Clinical Practice Guidelines

- **Recommendation 18**
- None of the evidence examined specifically included patients who had a primary diagnosis of meniscal tear, loose body, or other mechanical derangement and who also had a concomitant diagnosis of OA of the knee, and **the present recommendation does not apply to such patients.**

AAOS Clinical Practice Guidelines

- Recommendation 19
- Arthroscopic partial meniscectomy or loose body removal **is an option** in patients with symptomatic OA of the knee who also have primary signs and symptoms of a torn meniscus and/or a loose body.
 - **Level of Evidence: V**
 - **Grade of Recommendation: C**

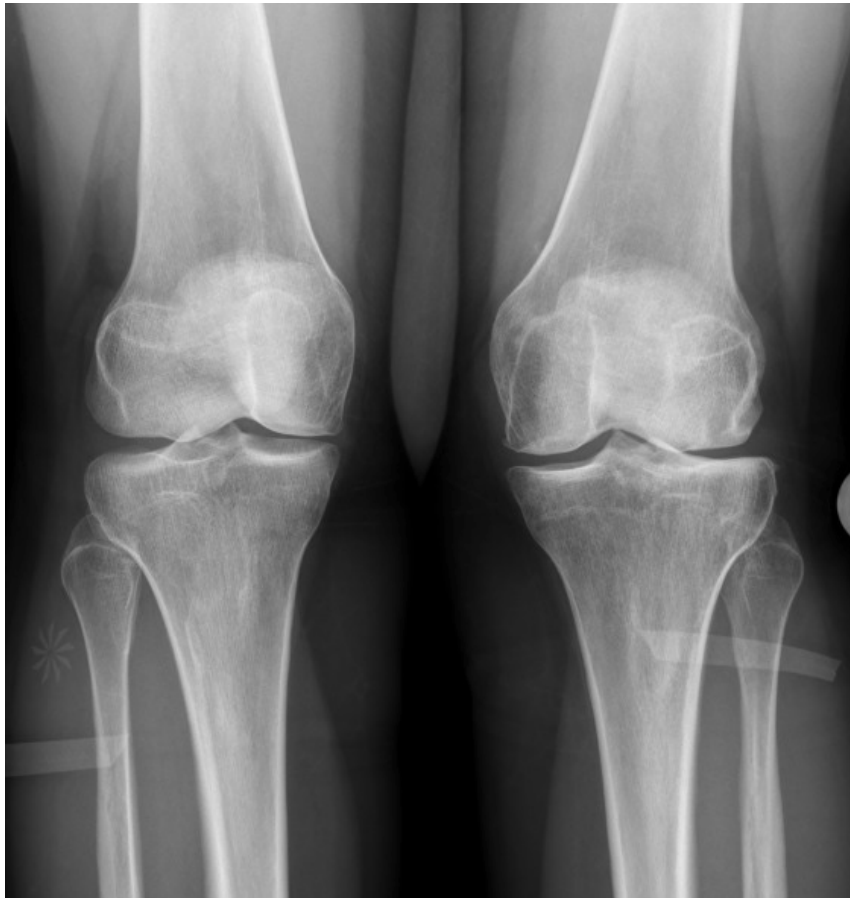
AAOS Clinical Practice Guidelines

- *Recommendation 19*
- Currently, arthroscopic partial meniscectomy and/or loose body removal is routinely performed in patients with symptomatic OA of the knee who also have primary signs and symptoms of a torn meniscus and/or a loose body.
- No level I or II evidence is available to suggest that arthroscopic partial meniscectomy and/or loose body removal is or is not appropriate for a patient with a primary diagnosis of a torn meniscus and/or a loose body in whom OA of the knee is identified secondarily.

AAOS Clinical Practice Guidelines

- Recommendation 19
- The expert opinion consensus (level V evidence) of the AAOS work group is that arthroscopic partial meniscectomy or loose body removal is an option for patients with primary signs and symptoms of a torn meniscus and/or loose body.
- Additional studies are warranted to look at the outcomes of arthroscopic surgery in this population.

Case Example: 35 year old female



Conclusion

- Arthroscopy has a VERY LIMITED role in knee osteoarthritis
- Has the potential to accelerate the disease progression and/or patient's pain
- Evidence and AAOS consensus recommendations do not recommend arthroscopy in the setting of osteoarthritis
- **Limited consideration in younger patients with minimal, if any, osteoarthritis and confirmed meniscal pathology**

Conclusion

- If any significant osteoarthritis present and all non-operative interventions have failed consider....



OR



Thank You

