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Arthroscopic Partial Meniscectomy versus Nonoperative Therapy in the Treatment of Degenerative Meniscus Tears

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INTRODUCTION

Arthroscopic partial meniscectomy (APM) is the most commonly performed orthopedic procedure in the United States. Currently, APMs are offered to patients with a degenerative meniscal tear experiencing knee pain with mechanical symptoms. Significant variation exists among surgeons regarding the decision to perform APM. Currently, there is no consensus on an evidence-based treatment of choice; practitioners continue to question whether operative or nonoperative treatment yields better short- and long-term results, particularly for those aged 30 and older and those with baseline evidence of osteoarthritis. The goal of this study is to compile evidence and determine the efficacy of the traditional (APM) and compare it with nonoperative therapy.

Clinical Question: Does arthroscopic partial meniscectomy provide long term pain relief to those with degenerative meniscus tears >35 y/o?

METHODS

Selection

Records identified through database searching (Pub Med) (n=138)
Additional records identified through other sources (WOMAC) (n = 12)
Records after duplicate removal (n = 138)
Studies included in qualitative synthesis

Records screened (n = 131)
Records excluded with filters (human, English, publication within 5 years, adults >15 years) (n = 21)
Studies included in quantitative synthesis (meta-analysis) (n = 10)
Selected studies

Figure 1. PRISMA Flowchart

RESULTS

Table 1. Cumulative Study Data; Overview

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Country</th>
<th>Design</th>
<th>Mean age, year</th>
<th>Male sex %</th>
<th>Conservative</th>
<th>Surgical</th>
<th>OA Inclusion</th>
<th>Loss to follow up</th>
<th>Grille of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yim et al</td>
<td>2013</td>
<td>South Korea</td>
<td>Randomized control trial</td>
<td>56</td>
<td>32</td>
<td>21</td>
<td>50</td>
<td>Kelgren-Lawrence</td>
<td>6</td>
<td>Standardized</td>
</tr>
<tr>
<td>Katz et al</td>
<td>2013</td>
<td>United States</td>
<td>Multicenter, randomized</td>
<td>58</td>
<td>61</td>
<td>43</td>
<td>50</td>
<td>Kelgren-Lawrence</td>
<td>0</td>
<td>Subjective; 2, 6, 12 months</td>
</tr>
<tr>
<td>Silvonen et al</td>
<td>2013</td>
<td>Finland</td>
<td>Multicenter, randomized, double-blind, sham-controlled study</td>
<td>52</td>
<td>61</td>
<td>61</td>
<td>50</td>
<td>Kelgren-Lawrence</td>
<td>0</td>
<td>Large study size; Double-blind; High crossover rate</td>
</tr>
</tbody>
</table>

Lysholm Knee Scoring Tool

A patient-reported, condition-specific, scoring questionnaire of joint space narrowing, osteophytes, sclerosis, and bony deformity.

Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)

A well-validated, patient-reported, condition-specific, scoring questionnaire of joint space narrowing, osteophytes, sclerosis, and bony deformity.

Kellgren-Lawrence Grading Tool

Used to grade the severity of knee osteoarthritis based on characteristics of joint space narrowing, osteophytes, sclerosis, and bony deformity.

Katz et al WOMAC Improvement from Baseline

Silvonen et al WOMAC Improvement from Baseline

RESULTS, cont.

CONCLUSION

A well-adhered-to physical therapy regimen is shown to be an effective treatment option for middle aged adults with non-traumatic, degenerative meniscal tears. At 12 months post-treatment, there is no significant benefit to undergoing an APM compared to physical therapy alone in relation to patient satisfaction, functional status of the knee, and pain. Since the research suggests structured physical therapy provides similar outcomes and fewer risks than the now commonly performed APM, a standardized physical therapy regimen should be first line treatment.

ACKNOWLEDGEMENTS

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REFERENCES