Hip Arthroplasty After Hip Arthroscopy: Are Short-term Outcomes Affected? A Systematic Review of the Literature

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Other

Dr. Rosinsky reports non-financial support from Arthrex, non-financial support from Stryker, non-financial support from Smith & Nephew, and non-financial support from Ossur.
• Previous Hip Arthroscopy:
  • 9%-11.7% conversion to THA within 2 years

• Potential implications:
  • Tissue scarring and inflammation
  • Capsular deficiency
  • Acetabular morphology

• Conflicting studies on influence on outcomes of THA
The purpose of this study was to perform a systematic review of literature to determine if history of hip arthroscopy effects outcomes of THA:

- Intraoperative measures
- Patient reported outcomes
- Complications
Methods

- Records identified through PUBMED database searching (n = 265)
- Additional records identified through Cochrane and other sources (n = 161)

Records after duplicates removed (n = 305)

Records screened (n = 305)

Records excluded (n = 245)

Full-text articles assessed for eligibility (n = 60)

Studies included in qualitative synthesis (n = 8)

Studies included in quantitative synthesis (meta-analysis) (n = 8)

Full-text articles excluded, with reasons (n = 52)
- Biomechanical cadaver study (n = 1)
- Case reports - No outcome of THA (n = 4)
- Letters to editors - Not THA after HA (n = 4)
- No outcomes of THA reported (n = 24)
- Not reporting THA after HA (n = 9)
- Registry - No outcomes reported after THA (n = 2)
- Review - Not THA after HA (n = 7)
- Scope after THA (n = 1)
<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Journal</th>
<th>THA or HRA</th>
<th>Enrollment Patients (Hips)</th>
<th>Age, y (SD or Range)</th>
<th>Mean Follow-up, Mo</th>
<th>Mean Time for Conversion (SD or Range)</th>
<th>Minors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles et al.</td>
<td>2017</td>
<td>JO</td>
<td>THA</td>
<td>39 (39)</td>
<td>42.4 ± 8.7</td>
<td>32.4</td>
<td>—</td>
<td>21</td>
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<tr>
<td>Haughom et al.</td>
<td>2016</td>
<td>JA</td>
<td>THA</td>
<td>42 (42)</td>
<td>51.2 ± 1.04</td>
<td>39.6</td>
<td>21.6 ± 15.6</td>
<td>17</td>
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<tr>
<td>Konopka et al.</td>
<td>2018</td>
<td>JA</td>
<td>THA and HRA</td>
<td>64 (69)</td>
<td>51.8 ± 9.7</td>
<td>24</td>
<td>27.6 ± 24</td>
<td>19</td>
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<tr>
<td>Nam et al.</td>
<td>2014</td>
<td>AJO</td>
<td>HRA</td>
<td>43 (43)</td>
<td>45.6 ± 7.5</td>
<td>24 ± 12</td>
<td>30</td>
<td>20</td>
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<tr>
<td>Parker et al.</td>
<td>2017</td>
<td>JA</td>
<td>THA and HRA</td>
<td>35 (35)</td>
<td>46.7 (27-66)</td>
<td>54 (0-96)</td>
<td>22.8</td>
<td>19</td>
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<tr>
<td>Perets et al.</td>
<td>2017</td>
<td>JA</td>
<td>THA</td>
<td>35 (35)</td>
<td>53.4 ± 7.1</td>
<td>40.8 ± 16.9</td>
<td>18.6</td>
<td>20</td>
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<tr>
<td>Spencer-Gardner et al.</td>
<td>2016</td>
<td>JA</td>
<td>THA</td>
<td>23 (24)</td>
<td>42.6 (20-68)</td>
<td>33 (24-70)</td>
<td>12 (3-25)</td>
<td>22</td>
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<tr>
<td>Zingg et al.</td>
<td>2012</td>
<td>AOTS</td>
<td>THA</td>
<td>18 (18)</td>
<td>46 (36-74)</td>
<td>24.4 ± 15.1</td>
<td>16 (8-21)</td>
<td>19</td>
</tr>
<tr>
<td>Sum or average</td>
<td></td>
<td></td>
<td></td>
<td>505</td>
<td>48.2</td>
<td>35.9</td>
<td>23</td>
<td>19.6</td>
</tr>
</tbody>
</table>
Results – Intraoperative measures

No differences favoring control group:
  • Intraoperative bleeding
  • Surgical Time
Results – Patient Reported Outcomes

- Harris Hip Score
  - Used in 4 studies - only 1 study found difference
    - Perets et. al. → 82.6 vs 90.0

- WOMAC
  - 2 studies – no significant differences
Results – Complications

- Dislocations
  - 1.97% (6 hips) vs. 0.8% (4 hips)

- Infections
  - 1.64% (5 hips) vs. 0.2% (1 hip)

- Other
  - 1.64% (5 hips) vs. 2% (10 hips)

- Revisions
  - 3.31% (10 hips) vs. 2.78% (14 hips)
Conclusions

Short term outcomes-

- Patient Reported Outcomes are comparable
- Small numbers but concern for higher infection and dislocation rates.

*Perform the hip scope carefully and be aware of implications during arthroplasty*