What Factors affect Outcome at 2-5 Years following Hip Arthroscopy?

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Financial Disclosures

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Background

• Assessing patient-reported outcomes after hip arthroscopy is essential to determining the success of the procedure to the patient.

• While many studies have reported outcomes over time for this patient population\(^1-4\), no study has assessed the effect of potential confounding factors on outcomes in a comprehensive fashion.
Study Aim

- The present study was undertaken to examine the relationship between patient, clinical, and surgical factors and total score on the IHOT-33 in patients who had undergone hip arthroscopy 2-5 years prior to evaluation.
Methods

• Patients who had undergone arthroscopic labral debridement by the senior author between 2-5 years prior to evaluation participated in this study.

• Eighty patients met our inclusion criteria
  – 27 males, 53 females
  – Average age: 39.3 ± 12.5 years
  – Average alpha angle: 44.3 ± 9.5°
  – Average follow-up: 3.10 ± 1.1 years
Methods

• All patients were assessed using the IHOT-33 at their most recent follow-up visit.
• Clinical and surgical data were acquired for each patient and binary categories were created for each variable.
  – Sex
  – Age (<40 years, ≥ 40 years)
  – Presence of dysplasia (DYS)
  – Primary or revision procedure (SURG)
  – Unilateral or bilateral (HIPS)
  – Presence of joint space narrowing on pre-surgical x-ray (XRAY)
  – History of low back pain (LBP)
  – Presence of severe chondral damage at time of arthroscopy (SEV)
  – Presence of chondral damage in more than one region at time of arthroscopy (GLOBAL)
Methods

• Total score on the MHHS was calculated (0 - 100 points)

• Patients were grouped based on each binary variable, and total score on the IHOT-33 was compared for each variable using separate independent samples t-tests.

• A multiple linear regression analysis was conducted to examine a relationship between total score on the IHOT-33 and those variables for which univariate analyses demonstrated significant differences.

• Level of significance was set a priori at p ≤ 0.05.
## Results

<table>
<thead>
<tr>
<th>Category</th>
<th>IHOT- 33 (Mean ± Standard Deviation)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 40 years</td>
<td>60.3 ± 27.7</td>
<td>0.01*</td>
</tr>
<tr>
<td>≥ 40 years</td>
<td>74.2 ± 20.5</td>
<td></td>
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<tr>
<td><strong>SURG</strong></td>
<td></td>
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<tr>
<td>Primary</td>
<td>69.7 ± 23.8</td>
<td>0.04*</td>
</tr>
<tr>
<td>Revision</td>
<td>53.3 ± 29.5</td>
<td></td>
</tr>
<tr>
<td><strong>HIPS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>70.3 ± 23.9</td>
<td>0.05*</td>
</tr>
<tr>
<td>Two</td>
<td>57.5 ± 27.6</td>
<td></td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
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<tr>
<td>Male</td>
<td>74.8 ± 21.4</td>
<td>0.05*</td>
</tr>
<tr>
<td>Female</td>
<td>63.4 ± 26.3</td>
<td></td>
</tr>
<tr>
<td><strong>DYS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66.1 ± 26.1</td>
<td>0.53</td>
</tr>
<tr>
<td>No</td>
<td>69.9 ± 24.0</td>
<td></td>
</tr>
</tbody>
</table>

**DYS = dysplasia**

**LBP = low back pain**
Results

• Multiple regression analysis revealed that revision surgery ($p=0.047$) and age ($p=0.017$) made significant contributions to total score on the IHOT-33 * independent of number of hips (0.13) and sex (0.19).
Results

• Predicted total score on the IHOT-33 at 2-5 years following hip arthroscopy
  – $15.1 \pm 7.5$ points lower for revision versus primary surgery.
  – $13.1 \pm 5.4$ points lower for patients $< 40$ years versus patients $\geq 40$ years of age.
  – $30.0 \pm 9.4$ points lower for patients $< 40$ years of age undergoing revision surgery versus patients $\geq 40$ years of age undergoing primary surgery.
Conclusions

• Our findings demonstrate that, in the presence of all other factors, only patient age and revision procedure affected IHOT-33 scores at 2-5 years following hip arthroscopy.

• We observed reduced outcome scores for patients who were younger compared to older patients, with greater reductions present for revision procedures.
Conclusions

• The reduced scores for younger patients in our study may reveal unmet expectations compared to older patients and a greater impact of revision on outcome.

• The predicted reductions in IHOT-33 score can be used to provide guidance to patients on realistic expectations following hip arthroscopy.
References


