Multi-center analysis of changes in Patient Satisfaction and Self-Reported Functional Outcomes between year-1 and year-2 following Hip Preservation Surgery

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  - Research grants from Arthrex

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- SN
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- JC
  - Research grants: Arthrex
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  - Consultant: Arthrex, Breg
  - Paid speaker: Arthrex, Breg
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  - AANA committee member

- AW
  - Consultant: Stryker, Allosource

- TE:
  - Consultant for Stryker and Pivot Medical
Success in hip arthroscopy can be quantified through differences in patient-reported outcome (PRO) scores between pre-operative and post-operative assessments. A minimum 2-year follow up is typical in the literature. Comparatively, improvements within the 2 years after hip arthroscopy as well as changes in this time frame are rarely reported. The goal of this study was to shed light on patient functional status prior to the 2 year post-operative time point in hip arthroscopy. To this end, we compared PRO scores in hip function and satisfaction before surgery with those recorded 1 and 2 years after surgery.
Introduction

Byrd and Jones (2010)³
- Level of Evidence: IV. N=50, follow up at 3,12,24 months
- Greatest improvement in modified Harris Hip Score (mHHS) noted in the first month after surgery, followed by gradual improvement until the 2 year time point.

Gedouin et al (2010)⁴
- Level of Evidence: IV. N=111, follow up at mean 10 months (range 6-18)
- 77% very satisfied, 25% moderately satisfied at follow up
- Mean improvement in WOMAC score: 22.7

Dippmann et al (2014)⁵
- Level of Evidence: IV.N=87, follow up at 3,6,12 months
- Significant improvement in mHHS and pain from 0-3 months and from 3-6 months, but not from 6-12 months
De-identified patient data was analyzed from a multi-center hip arthroscopy registry. Seven individual surgical practices that each perform >100 hip arthroscopy cases per year for a minimum of 8 years are included.

Paired T-tests with an a priori alpha set at 0.05 determined if a significant change occurred for the iHOT-12 and Visual Analog Scale (0-100) for patient satisfaction at 1-year versus 2-years post hip preservation surgery.

The frequency of patients that surpassed the Patient Acceptable Symptom State (PASS) for the iHOT-12 (>74) were also reported and compared at 1-year and 2-years after hip preservation surgery.

Inclusion criteria: isolated hip arthroscopy procedure, documented follow-up scores at 1 year and 2 years following the operation

Exclusion criteria: ineligibility for hip arthroscopy, including patients with osteoarthritis, septic arthritis, or previous hip arthroplasty. Patients with subsequent ipsilateral periacetabular osteotomy or ipsilateral hip arthroscopy were excluded.
## Results

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (M,F)</td>
<td>467 (182, 285)</td>
</tr>
<tr>
<td>Weight</td>
<td>161 lbs</td>
</tr>
<tr>
<td>Height</td>
<td>67 in</td>
</tr>
<tr>
<td>Age</td>
<td>18-72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radiographic Parameter</th>
<th>Mean value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnis Angle</td>
<td>3.3°</td>
</tr>
<tr>
<td>AP alpha angle</td>
<td>64.2°</td>
</tr>
<tr>
<td>Lateral center edge angle</td>
<td>33.1°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Surgical Procedure</th>
<th>Number performed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chondroplasty</td>
<td>183 (39.2)</td>
</tr>
<tr>
<td>Acetabular microfracture</td>
<td>13 (2.8)</td>
</tr>
<tr>
<td>Acetabuloplasty</td>
<td>180 (38.5)</td>
</tr>
<tr>
<td>Femoral chondroplasty</td>
<td>81 (17.3)</td>
</tr>
<tr>
<td>Femoroplasty</td>
<td>261 (55.9)</td>
</tr>
<tr>
<td>Synovectomy</td>
<td>259 (55.5)</td>
</tr>
<tr>
<td>Labral repair</td>
<td>233 (49.9)</td>
</tr>
<tr>
<td>Labral reconstruction</td>
<td>65 (8.1)</td>
</tr>
<tr>
<td>Labral debridement</td>
<td>19 (4.1)</td>
</tr>
</tbody>
</table>
Results

• Patients reported 77.8% ± 27.9 satisfaction at 1-year follow-up which increased to 80.1% ± 26.5 satisfaction at 2-year follow-up (p=0.05)

• No statistically significant difference in iHOT-12 scores was observed between years 1 (69.7 ± 25.4) and 2 (71.5 ± 25.0) (p=0.056)

• At 1 year after the operation, 52.2% of patients exceeded the PASS cut-off score (>74) for the iHOT-12.

• At 2 years after the operation, 55.9% of patients exceeded the PASS cut-off score (>74) for the iHOT-12.

• There were 43 subjects that reached PASS at 1 year that did not reach PASS at 2 year.

• Conversely, 60 subjects did not achieve PASS at 1 year, but surpassed the PASS score at 2-year follow-up.
Results

PRO Scores at Years 1 and 2 Post-Op

- **iHOT-12**
  - 1 Year Post Op
  - 2 Years Post Op

- **Satisfaction VAS**
  - 1 Year Post Op
  - 2 Years Post Op
Patients reach a relatively high level of satisfaction and function at 1-year after surgery and this is maintained at follow-up at 2-years post-operatively.

Surgeons and clinicians may advise patients that their level of satisfaction and functional outcome following hip arthroscopy is likely to be maximized by 1-year after surgery and remain relatively the same up to 2 years after hip preservation surgery.


