Rate and Predictors of Bilateral Hip Arthroscopy: Which Patients Undergo Bilateral Hip Scopes?

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HOSPITAL FOR JOINT DISEASES
DISCLOSURES

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No financial relationships to disclose

Pain consultant (Smith & Nephew; Arthrex)
BACKGROUND: *What about my other hip?*

Conditions treated with hip arthroscopy may affect both hips:

- Bilateral FAI present in 78% of patients with unilateral symptoms \(^1\)
- Bilateral signs present in 66% of asymptomatic patients with radiographic evidence of FAI \(^4\)
BACKGROUND: *what do we know?*

Prior studies have demonstrated that patients undergoing unilateral hip arthroscopy are more likely to undergo contralateral hip arthroscopy in the future $^3,^5$

Limited evidence regarding rates and risk factors for undergoing bilateral staged hip arthroscopy

- Which risk factors predict the need for bilateral arthroscopy?
- How long until patients likely to require a contralateral hip arthroscopy?
- Does the need for bilateral procedures affect outcomes?
PURPOSE

**Purpose:**

1. To determine the incidence of staged bilateral hip arthroscopy in a large, consecutive series of patients undergoing hip arthroscopy
2. To identify which risk factors predict the need for contralateral hip arthroscopy

**Hypothesis:**

- Younger patients and patients with more severe disease are more likely to undergo staged bilateral hip arthroscopy
METHODOLOGY

Study Population

All patients undergoing primary unilateral hip arthroscopy between 2010 – 2015 by a single sports-medicine fellowship trained orthopaedic surgeon at a single institution

• Exclusion Criteria:
  – Revision procedure
  – Simultaneous bilateral procedure

• Prospectively-collected data:
  – Demographics
  – Clinical data
  – Surgical details
  – Outcomes (MHHS, NAHS)

Study Population (n = 361)

Bilateral Group (n = 57, 16%)
Unilateral Group (n = 304, 84%)

Bilateral Group -- subsequent contralateral arthroscopy during study period
Unilateral Group -- no subsequent contralateral arthroscopy at minimum 2 years of follow-up
# DEMOGRAPHICS

<table>
<thead>
<tr>
<th></th>
<th>Bilateral Group (n = 57)</th>
<th>Unilateral Group (n = 304)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>34.5 ± 12.4</td>
<td>42.2 ± 13.6</td>
<td>&lt; 0.0001</td>
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<tr>
<td>Sex</td>
<td></td>
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</tr>
<tr>
<td>Male</td>
<td>21 (37%)</td>
<td>116 (38%)</td>
<td>0.883</td>
</tr>
<tr>
<td>Female</td>
<td>36 (63%)</td>
<td>188 (62%)</td>
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<tr>
<td>BMI (kg/m²)</td>
<td>25.0 ± 4.7</td>
<td>25.9 ± 4.76</td>
<td>0.102</td>
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<tr>
<td>Laterality (index scope)</td>
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<tr>
<td>Right</td>
<td>34 (60%)</td>
<td>174 (57%)</td>
<td>0.772</td>
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<tr>
<td>Left</td>
<td>23 (40%)</td>
<td>130 (43%)</td>
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</tbody>
</table>
**OPERATIVE INDICATIONS**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Unilateral 99%</th>
<th>Bilateral 99%</th>
<th>20%</th>
<th>87%</th>
<th>95%</th>
<th>86%</th>
<th>5%</th>
<th>35%</th>
<th>24%</th>
<th>36%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labral tear</td>
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<tr>
<td>CAM</td>
<td>79%</td>
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<tr>
<td>Pincer</td>
<td>93%</td>
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<tr>
<td>Chondral damage</td>
<td>86%</td>
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<tr>
<td>Subspine Impingement</td>
<td>5%</td>
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<tr>
<td>Loose body</td>
<td>24%</td>
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</table>

**OPERATIVE PROCEDURES**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Unilateral 82%</th>
<th>Bilateral 90%</th>
<th>20%</th>
<th>9%</th>
<th>85%</th>
<th>80%</th>
<th>93%</th>
<th>5%</th>
<th>34%</th>
<th>24%</th>
<th>36%</th>
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<tbody>
<tr>
<td>Labral repair</td>
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<td>Labral debridement</td>
<td>20%</td>
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<td>Chondroplasty</td>
<td>85%</td>
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<tr>
<td>CAM resection</td>
<td>80%</td>
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<td>Pincer resection</td>
<td>93%</td>
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<td>Subspine resection</td>
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<tr>
<td>Loose body removal</td>
<td>24%</td>
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Modified Harris Hip Score (MHHS)

Nonarthritic Hip Score (NAHS)
RESULTS AND CONCLUSIONS

• 16% of hip arthroscopy patients underwent bilateral staged procedures

• Mean time interval between contralateral hip arthroscopies was **13 months** (range, 2 – 58 months)

• Younger age was associated with bilateral arthroscopy

• **Subspine impingement (SI)** and **intraarticular loose body** were the only diagnoses associated with a greater rate of bilateral procedures

• Bilateral hip arthroscopy *more* commonly involved **labral repair**, **subspine resection**, and **loose body retrieval**, and *less* commonly involved **labral debridement**

• No significant difference in validated outcome scores (MHHS or NAHS) at any time point between unilateral and bilateral groups

• No difference in failure rate between groups
DISCUSSION

- **1 in 6 patients will require a contralateral knee scope:**
  - Bilateral rate of 16% consistent with previously published reports in similar populations

- **Younger patients at increased risk:**
  - Risk factors include younger age, presence of subspine impingement or intraarticular loose body
  - Bilateral patients may have more advanced disease and may develop symptoms that require surgery at a younger age
  - Subspine impingement and loose bodies may indicate more severe disease that may involve the contralateral side

- **Labral repair more common in patients undergoing bilateral staged hip arthroscopy:**
  - Labral debridement performed more infrequently
  - Increased frequency of repair may be secondary to younger mean age in bilateral group

- **Outcome scores and failure rates unaffected by bilateral arthroscopy:**
  - No difference between patients undergoing unilateral and bilateral procedures
REFERENCES


