

Sex-Based Differences in Arthroscopic Treatment of Femoroacetabular Impingement: 10-Year Outcomes

Benjamin G. Domb, Allison Y. Kufra, Olivia Paraschos, Taylor W. Harris, Payam W. Sabetian, Paulo P. Padilla



Disclosures

I (and/or my co-authors) have something to disclose.

Detailed disclosure information is available via:

AAOS Orthopaedic Disclosure Program on the AAOS
website at

<http://www.aaos.org/disclosure>



Purpose



- The purpose of the present study was to compare minimum 10-year PROs and survivorship in a cohort of patients who underwent primary hip arthroscopy for FAIS and labral tear according to sex

Methods

- Data from patients who underwent primary hip arthroscopy between March 2009 and May 2011 were reviewed.
- Patients with minimum 10-year follow-up for the mHHS, NAHS, HOS-SSS, and VAS were eligible.
- The exclusion criteria were previous ipsilateral hip conditions or surgical procedures, Tönnis grade >1, or dysplasia.
- In the sub-analysis, female patients were matched to male patients using a 1:1 ratio by age, sex, and body mass index.

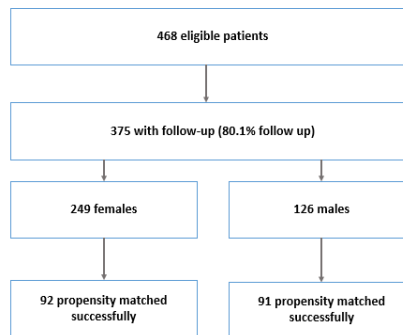
Results

- A total of 375 hips had minimum 10-year follow-up. There were 249 female patients (age 36.8 ± 13.1) and 121 male patients (age 38.9 ± 13.1).
- Sub-Analysis: 92 female patients were propensity matched to 91 male patients

Table 1. Demographics of Included Hip Arthroscopies of Entire Patient Population

	Females, n (%)	Males, n (%)	P Value
Hips			0.905
Left	113 (45.3)	58 (46.0)	
Right	136 (54.6)	68 (54.0)	
Age at surgery, y	36.8 ± 13.1	38.9 ± 13.1	0.160
BMI, kg/m	24.4 ± 5.0	27.0 ± 4.1	< 0.001
Follow-up time, mo	127.0 ± 6.22	127 ± 5.66	0.168

Values are presented as number of hips with percent in parenthesis or mean \pm standard deviation. BMI, body mass index. Bold indicates statistical significance ($p < 0.05$).



Results

Survivorship was defined as patients that did not convert to total arthroplasty.

Females and males exhibited similarly high rates of survivorship (80.3% vs 72.1%, $p = 0.076$).

Table 2. Secondary Surgeries of Included Hip Arthroscopies of Entire Patient Population

	Females, n (%)	Males, n (%)	<i>P</i> Value
Secondary hip arthroscopy	36 (14.5)	8 (6.3)	0.021
Tertiary hip arthroscopy	6 (2.4)	0 (0.0)	0.185
Conversion to THA	49 (19.7)	35 (27.8)	0.076
Time in Months to Conversion to THA	63.8 ± 35.8	40.5 ± 30.6	0.006

Values are presented as number of hips with percent in parenthesis or mean ± standard deviation. THA, total hip arthroplasty. Bold indicates statistical significance ($p < 0.05$).

Results

- Female patients had higher rates of capsular repair and iliopsoas fractional lengthening ($p < 0.0001$, $p < 0.001$).
- Males had significantly higher rates of grade 3-4 ALAD and acetabular Outerbridge cartilage damage ($p < 0.001$).
- Males underwent femoroplasty and acetabular microfracture at significantly higher rate ($p < 0.001$ for both).

Table 5: Surgical Procedures of Entire Patient Population

	Females, n (%)	Males, n (%)	P Value
Labral Treatment			0.220
None	1 (0.4)	1 (0.8)	
Selective debridement	79 (31.7)	52 (41.3)	
Repair	167 (67.1)	71 (56.3)	
Reconstruction	2 (0.8)	2 (1.6)	
Capsular Treatment			< 0.0001
Repair	138 (55.4)	21 (16.7)	
Acetabuloplasty	181 (72.7)	92 (73.0)	0.947
Femoroplasty	127 (51.0)	111 (88.1)	< 0.001
Acetabular Microfracture	12 (4.8)	21 (16.7)	< 0.001
Femoral Head Microfracture	2 (0.8)	5 (4.0)	0.032

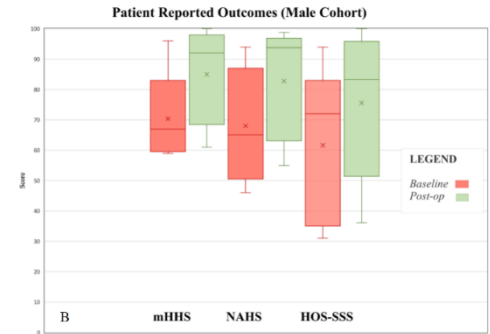
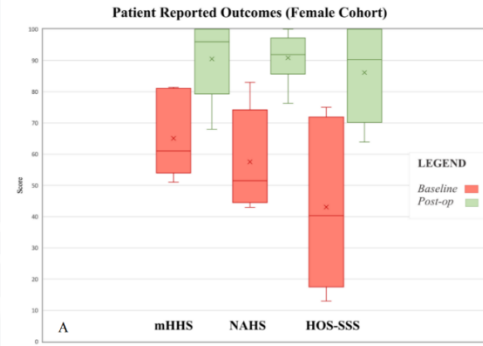
Values are presented as number of hips with percent in parenthesis. Significantly different findings are indicated with bold ($p < 0.05$).

Table 4: Intraoperative Findings of Entire Patient Population

	Females, n (%)	Males, n (%)	P Value
Seldes Grade			0.314
0 – no labral tear	2 (0.8)	1 (0.8)	
1 – chondrolabral	109 (43.8)	59 (46.8)	
2 – labral	71 (28.5)	25 (19.8)	
1&2 – combined	67 (26.9)	41 (32.5)	
ALAD			< 0.001
0 – no cartilage damage	32 (12.9)	22 (17.5)	
1 – softening	67 (26.9)	15 (11.9)	
2 – early peel	80 (32.1)	21 (17.5)	
3 – large flap	48 (19.3)	38 (30.2)	
4 – loss of cartilage	22 (8.8)	30 (23.8)	
Outerbridge (Acetabulum)			< 0.001
0 – normal	32 (12.9)	22 (17.5)	
1 – softening	67 (26.9)	15 (11.9)	
2 – partial thickness	80 (32.1)	21 (17.5)	
3 – full thickness	48 (19.3)	38 (30.2)	
4 – exposed bone	22 (8.8)	30 (23.8)	

Results: Sub-Analysis

- Both propensity-matched groups showed significant improvement from baseline (for all values, $p < 0.001$).
- Females had higher satisfaction ($p = 0.003$) and greater magnitude of improvement.
- However, all final PROs at minimum 10-year follow-up were similar between males and females.



Discussion/Conclusion

- After undergoing hip arthroscopy for FAIS, both female and male patients reported significant improvement in all PROs at minimum 10-year follow-up and high patient satisfaction, with similar final functional scores.
- While females demonstrated higher rate of secondary arthroscopies, they had higher satisfaction and greater magnitude of improvement.

Strengths

- 10 year follow up
- Large cohort of patients
- Propensity Matched



Limitations

- Change of surgical procedures over time
- Not a randomized trial
- Beighton's Score was not documented for entire cohort



AANA23
ANNUAL MEETING
NEW ORLEANS
MAY 4-6, 2023

AMERICAN  INSTITUTE

