

Comparative Analysis of 2-Year Outcomes in Distinct Time Periods from a Single Surgeon's Practice: An Assessment of Temporal Trends in Hip Arthroscopy

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INTRODUCTION: The indications and technique surrounding hip arthroscopy for the treatment of femoroacetabular impingement syndrome (FAIS) has continuously evolved. Recently, the shift towards repairing labrum and closing capsule has been greatly supported by the literature. The purpose of this study is to highlight the differences in patient reported outcomes (PROs), clinically significant outcomes (CSOs), and reoperation rates in patients undergoing hip arthroscopy between the time periods of 2012-2014 and 2017-2019.

METHODS: Patients undergoing surgery between 1/2012-1/2014 were compared to patients undergoing hip arthroscopy between 9/2017-9/2019. PROs were collected preoperatively and at 2-years, including Hip Outcome Score–Activities of Daily Living (HOS-ADL), Hip Outcome Score–Sports Subscale (HOS-SS), modified Harris Hip Score (mHHS), and Visual Analog Scale (VAS) for Pain and Satisfaction. Achievement of Minimal Clinically Important Difference (MCID) and Patient Acceptable Symptomatic State (PASS) were calculated. Reoperation rates were compared.

RESULTS: A total of 474 patients (60.8% females; age: 33.2±12.1 years) from the 2012-2014 cohort were compared to 521 patients (73.1% females; age: 31.8±12.4 years) from the 2017-2019 cohort. The 2017-2019 cohort was significantly more female, had higher rates of exercise ≥1 a week, and had lower incidence of pre-operative injections. They also had significantly smaller preoperative and postoperative alpha angles (p<0.001), and higher rates of labral repair (p=0.032) and acetabular rim trimming (p<0.001). Preoperatively, the 2017-2019 cohort had significantly lower preoperative HOS-ADL (p=0.022), HOS-SS (p=0.017), and VAS Pain (p<0.001), but significantly higher mHHS (p=0.011) scores compared to the 2012-2014 cohort. At 2-years, the 2017-2019 had significantly better scores for all PROs (p < 0.016) other than VAS Pain and Satisfaction. The more recent cohort had significantly superior achievement of MCID for HOS-ADL, HOS-SS, and VAS Pain, and PASS for iHOT-12. The 2017-2019 experienced significantly lower rates of conversion to total hip arthroplasty (THA) (0.6% vs 6.1%, p < 0.001).

DISCUSSION AND CONCLUSION: Patients undergoing hip arthroscopy for FAIS in 2017–2019 achieved superior 2-year PROs, higher rates of clinically meaningful improvement, and lower conversion to THA compared to patients undergoing surgery between 2012–2014. These findings support the positive impact of evolving surgical techniques and patient selection

over

time.

	2017-2019 Cohort	2012-2014 Cohort	p-value
Any Reoperation, %	5.7	16.1	<0.001
Reoperation, %	2.7	4.6	0.001
THA, %	0.6	6.1	<0.001

	2017-2019 Cohort	2012-2014 Cohort	p-value
Demographics			
Female Sex, %	73.1	60.8	<0.001
Female Age, years	31.8 ± 12.4	33.2 ± 12.1	0.001
Age, years	31.8 ± 12.4	33.2 ± 12.1	0.001
Body Mass Index (BMI), kg/m ²	25.5 ± 5.5	24.8 ± 4.8	0.016
Female Sex, %	73.1	60.8	<0.001
Female Age, years	31.8	33.2	0.001
Female BMI, kg/m ²	25.5	24.8	0.016
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