Short to Midterm Outcomes of Hip Arthroscopy for Femoroacetabular Impingement and Labral Tears in Patients with Diabetes

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Disclosures

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

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Introduction

- Diabetes mellitus (DM) is a world pandemic and is a known adverse prognostic factor in orthopedic surgical interventions
- There is a paucity of literature investigating its effects on hip arthroscopy for labral tears and FAI.

Purpose

- To conduct short- to mid-term analysis of the outcomes of patients with DM who underwent hip arthroscopy for FAI and labral tears, with a secondary sub analysis based on glycemic control, and a comparison of these results to a benchmark control group of patients with no DM.

Methods

- Patients were excluded if they had previous ipsilateral hip pathology, hip dysplasia defined as Lateral Center Edge Angle (LCEA) <18°, or a preoperative Tönnis osteoarthritis grade > 1.
- DM patients were matched in a 1:3 ratio based on age, sex, BMI, Acetabular Outerbridge grade, labral treatment, and capsular treatment to a benchmark control group of patients without DM.

Methods

- A sub-analysis of DM patients was conducted, dividing them into well-controlled pre-prandial glucose and uncontrolled pre-prandial glucose

Results

- DM patients had significantly lower preoperative outcome scores and lower satisfaction at latest follow-up
- Both groups had significant improvement across all PROs

Table 2. Patient-Reported Outcomes

	Diabetic Group (n = 20)	Control Group (n = 75)	P Value
mHHS			
Preoperative	49.20 ± 13.80	57.85 ± 17.32	**<0.05**
Postoperative	78.45 ± 21.19	84.99 ± 16.07	0.14
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	29.25 ± 16.40	27.13 ± 19.14	0.65
NAHS			
Preoperative	47.84 ± 18.49	58.07 ± 18.79	**<0.05**
Postoperative	80.38 ± 20.26	84.03 ± 19.18	0.46
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	32.54 ± 22.21	25.96 ± 20.98	0.22
iHOT-12			
Preoperative	30.76 ± 25.72	34.47 ± 21.62	0.59
Postoperative	65.73 ± 30.44	74.13 ± 27.40	0.24
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	34.85 ± 29.18	39.80 ± 26.57	0.56
HOS-SSS			
Preoperative	24.63 ± 20.19	37.15 ± 23.40	**<0.05**
Postoperative	69.02 ± 33.70	70.42 ± 31.23	0.87
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	43.15 ± 32.91	32.28 ± 28.25	0.18
VAS			
Preoperative	6.86 ± 2.04	5.31 ± 2.66	**<0.05**
Postoperative	2.57 ± 2.40	2.20 ± 2.41	0.54
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	-4.29 ± 2.25	-3.11 ± 2.92	0.10
Satisfaction	7.70 ± 2.43	8.63 ± 1.57	**<0.05**

*The values are given as the mean and the standard deviation in points.
mHHS – Modified Harris Hip Score, NAHS – Non-Arthritic Hip Score, HOS-SSS – Hip Outcome Score Sport-Specific Subscale, VAS – Visual Analog Scale.

Results: Sub-analysis

- No significant differences in outcomes were observed between the well-controlled and uncontrolled DM groups

Table 3. Sub-Analysis Patient-Reported Outcomes

	Well Controlled (n = 8)	Uncontrolled (n = 12)	P Value
mHHS			
Preoperative	47.25 ± 11.68	50.50 ± 15.42	0.62
Postoperative	82.20 ± 23.18	83.39 ± 19.84	0.91
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	32.91 ± 19.24	32.89 ± 20.43	0.99
NAHS			
Preoperative	50.34 ± 12.46	46.17 ± 22.00	0.63
Postoperative	88.04 ± 18.23	84.27 ± 15.24	0.64
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	36.93 ± 18.22	38.10 ± 23.81	0.91
iHOT-12			
Preoperative	43.43 ± 36.86	26.53 ± 22.13	0.35
Postoperative	89.49 ± 6.02	75.21 ± 27.84	0.34
Preoperative vs postoperative P value	**< 0.05**	**< 0.01**	
Δ	33.51 ± 52.93	47.30 ± 29.16	0.60
HOS-SSS			
Preoperative	26.91 ± 16.99	23.10 ± 22.67	0.69
Postoperative	82.55 ± 15.39	77.78 ± 28.60	0.76
Preoperative vs postoperative P value	**< 0.01**	**< 0.01**	
Δ	46.09 ± 12.03	51.69 ± 36.48	0.77
VAS			
Δ	-5.68 ± 2.25	-4.19 ± 2.98	0.27
Satisfaction	8.00 ± 3.70	8.00 ± 2.41	1.00

*The values are given as the mean and the standard deviation in points.
mHHS – Modified Harris Hip Score, NAHS – Non-Arthritic Hip Score, HOS-SSS – Hip Outcome Score Sport-Specific Subscale, VAS – Visual Analog Scale.

Complications and Secondary Surgery

- The non-DM patients had significantly more revision arthroscopies than the DM group ($p < 0.05$) with a relative risk of 2.63.
- Complication rates were similar between groups.

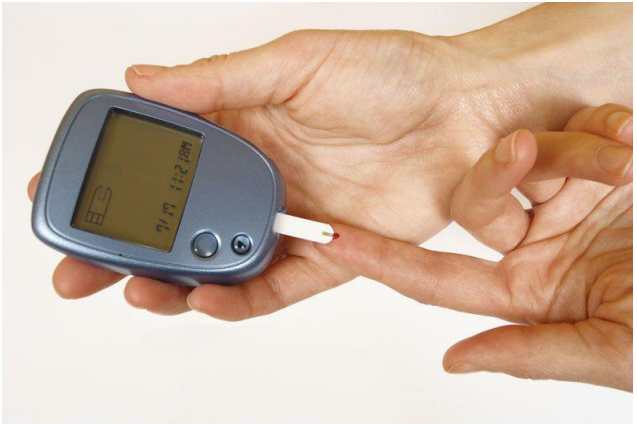
Table 4. Secondary Surgeries and Complications

	Diabetic Group	Control Group	P Value
Revision Arthroscopy*	7 (24.1%)	8 (9.2%)	**<0.05**
HbA1C	6.86 ± 1.03	--	NA
Time to Revision Arthroscopy†	46.27 ± 44.89	52.44 ± 31.89	0.46
Conversion to arthroplasty*	2 (6.9%)	4 (4.6%)	1.0
HbA1C	6.19 ± 1.72	--	NA
Time to arthroplasty (mo.) †	44.02 ± 32.49	26.43 ± 9.98	0.42
Complication Rate*	4 (13.8%)	5 (5.7%)	0.16
HbA1C	6.48 ± 1.52	--	NA

Conclusion

- Hip arthroscopy for the treatment of FAI and labral tears in DM patients resulted in significant short- to mid-term improvements in PROs, comparable to a matched control non-DM group.

- DM patients had an overall 2.63-fold increased relative risk of revision hip arthroscopy compared to non-DM patients, with a trend of more uncontrolled DM patients undergoing revision hip arthroscopy. Perioperative diabetic control is recommended.



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