What Factors affect Outcome at 2-5 Years following Hip Arthroscopy?

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Background

- Assessing patient-reported outcomes after hip arthroscopy is essential to determining the success of the procedure to the patient.

- While many studies have reported outcomes over time for this patient population[1-4], no study has assessed the effect of potential confounding factors on outcomes in a comprehensive fashion.

Study Aim

- The present study was undertaken to examine the relationship between patient, clinical, and surgical factors and total score on the IHOT-33 in patients who had undergone hip arthroscopy 2-5 years prior to evaluation.

Methods

- Patients who had undergone arthroscopic labral debridement by the senior author between 2-5 years prior to evaluation participated in this study.

- Eighty patients met our inclusion criteria
  - 27 males, 53 females
  - Average age: 39.3 ± 12.5 years
  - Average alpha angle: 44.3 ± 9.5°
  - Average follow-up: 3.10 ± 1.1 years

Methods

- All patients were assessed using the IHOT-33 at their most recent follow-up visit.
- Clinical and surgical data were acquired for each patient and binary categories were created for each variable.
  - Sex
  - Age (<40 years, ≥ 40 years)
  - Presence of dysplasia (DYS)
  - Primary or revision procedure (SURG)
  - Unilateral or bilateral (HIPS)
  - Presence of joint space narrowing on pre-surgical x-ray (XRAY)
  - History of low back pain (LBP)
  - Presence of severe chondral damage at time of arthroscopy (SEV)
  - Presence of chondral damage in more than one region at time of arthroscopy (GLOBAL)

Methods

- Total score on the MHHS was calculated (0 - 100 points)
- Patients were grouped based on each binary variable, and total score on the IHOT-33 was compared for each variable using separate independent samples t-tests.
- A multiple linear regression analysis was conducted to examine a relationship between total score on the IHOT-33 and those variables for which univariate analyses demonstrated significant differences.
- Level of significance was set *a priori* at $p \leq 0.05$.

Results

	Category	IHOT- 33	P-value
AGE	< 40 years	60.3 ± 27.7	0.01*
	≥ 40 years	74.2 ± 20.5	
SURG	Primary	69.7 ± 23.8	0.04*
	Revision	53.3 ± 29.5	
HIPS	One	70.3 ± 23.9	0.05*
	Two	57.5 ± 27.6	
SEX	Male	74.8 ± 21.4	0.05*
	Female	63.4 ± 26.3	
DYS	Yes	66.1 ± 26.1	0.53
	No	69.9 ± 24.0	

	Category	IHOT- 33	P-value
LBP	Yes	66.4 ± 25.8	0.87
	No	67.5 ± 25.2	
XRAY	Yes	69.8 ± 24.0	0.44
	No	65.3 ± 26.5	
SEV	Yes	67.7 ± 26.4	0.88
	No	66.8 ± 24.6	
GLOBAL	Yes	71.2 ± 23.8	0.24
	No	64.4 ± 26.1	

DYS = dysplasia

LBP = low back pain

Results

- Multiple regression analysis revealed that revision surgery (p=0.047) and age (p=0.017) made significant contributions to total score on the IHOT-33 * independent of number of hips (0.13) and sex (0.19).

Results

- Predicted total score on the IHOT-33 at 2-5 years following hip arthroscopy
  - 15.1 ± 7.5 points lower for revision versus primary surgery.
  - 13.1 ± 5.4 points lower for patients < 40 years versus patients ≥ 40 years of age.
  - 30.0 ± 9.4 points lower for patients < 40 years of age undergoing revision surgery versus patients ≥ 40 years of age undergoing primary surgery.

Conclusions

- Our findings demonstrate that, in the presence of all other factors, only patient age and revision procedure affected IHOT-33 scores at 2-5 years following hip arthroscopy.

- We observed reduced outcome scores for patients who were younger compared to older patients, with greater reductions present for revision procedures.

Conclusions

- The reduced scores for younger patients in our study may reveal unmet expectations compared to older patients and a greater impact of revision on outcome.

- The predicted reductions in IHOT-33 score can be used to provide guidance to patients on realistic expectations following hip arthroscopy.

References

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