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Outcomes Following Bilateral Hip Arthroscopy For Femoroacetabular Impingement: An Age, Gender, And Bmi Matched Cohort Compared To Unilateral Surgery

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Introduction

- FAI may present as a unilateral or a bilateral disease.
- Allen et al. in their study reported that up to 78% of patients presenting with symptomatic FAI have evidence of contralateral radiographic disease and only 26% of the contralateral hips were symptomatic.[1]
- More recent studies have found that up to 20% of patients with FAI require a second procedure for contralateral disease.[2]
- These patients often have questions regarding when to have the second procedure, either staged or simultaneous, and what they can expect in terms of function and pain.

Methods

Patient selection

- Consecutive patients undergoing staged bilateral primary hip arthroscopy for FAI with a minimum of 2 year outcome were identified using our institutional hip registry between 1/2012 and 1/2014.

- Primary outcome measure: HOS-ADL questionnaire, HOS-SS , mHHS, VAS pain and satisfaction.

- Patients undergoing bilateral arthroscopic surgery were matched for age and gender in a 2:1 manner with a cohort of control patients undergoing unilateral surgery.

Results

- 45 patients had bilateral hip arthroscopies; 43 had full two-year follow-up data recorded (93%).
- Average time until the second hip arthroscopy was 6.1 ± 4.3 months.
- 24 (56%) females in the study population, with an average age of 28.0 ± 10.8 and average BMI of 24.7 ± 5.5.
- No statistically significant differences between study patients and matched control patients (n=86) according to age, gender, BMI, Tonnis grade, joint space width, or smoking status.

Results

- All groups demonstrated significant improvements in the HOS-ADL, HOS-SS and MHHS scores from preoperative scores ($p<0.001$ for all).
- Bilateral patients showed less improvement in MHHS (12.1 versus 21.0) and VAS pain (4.8 versus 6.3) compared to control patients ($p=0.006$ and 0.01, respectively).
- Both groups showed similar improvements in HOS-ADL, HOS-SS, and patient satisfaction following surgery.
- Patients with longer time to the second surgery had decreased two year HOS-ADL scores ($r=0.33$; $p=0.03$), MHHS scores, ($r=0.32$; $p=0.04$), and pain improvement ($r=0.59$; $p=0.0008$), but not HOS-ADL scores or patient satisfaction.

Conclusions

- Patients undergoing bilateral hip arthroscopy for FAI experienced significant improvement in all patient reported outcomes, but the improvement in MHHS and VAS is less than in patients undergoing unilateral hip arthroscopy.

- This study provides some insights that may help address patients' inquiry about prognosis of their treatment as well as risk of contralateral pathology.

References

1. Allen D, Beaulé PE, Ramadan O, Doucette S. Prevalence of associated deformities and hip pain in patients with cam-type femoroacetabular impingement. J Bone Joint Surg Br 2009;91(5):589–594. doi:10.1302/0301-620X.91B5.22028.
2. Klingenstein GG, Zbeda RM, Bedi A, Magennis E, Kelly BT. Prevalence and preoperative demographic and radiographic predictors of bilateral femoroacetabular impingement. Am J Sports Med 2013;41(4):762–768. doi:10.1177/0363546513476854.