Clinical Presentation of Patients Undergoing Hip Arthroscopy for Symptomatic Femoroacetabular Impingement

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Disclosures

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- Allston J. Stubbs, M.D., M.B.A.
  - I have financial relationships with the following companies:
    - Consultant: Smith & Nephew
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Introduction

- Femoroacetabular impingement is a morphological hip condition that can cause hip pain in younger, active adults.
- The purpose of this study is to capture the nature of physical impairments associated with symptomatic FAI in a large surgical database of 1000 subjects.

- Our hypothesis is that patients who present with femoroacetabular impingement demonstrate significantly asymmetric findings of hip pain, loss of hip motion, and pain with provocative testing.

Methods

- A retrospective analysis of a prospectively collected hip data within a large healthcare system (single surgeon).
- 1000 consecutive patients with symptomatic femoroacetabular impingement attending their pre-operative visit for hip arthroscopy.
- Clinical history, physical exam, and previous treatments were evaluated.

Statistical Analysis

- Statistical analysis comprised paired sample t-tests to calculate differences between the involved and non-involved sides of all continuous variables.
- A related sample McNemar Test was performed to compare differences of the involved and non-involved sides for the Flexion Adduction Internal Rotation (FADIR) test.
- To compare clinical findings between gender, a multivariate general linear modeling was performed only on the symptomatic hip.
- Significance was determined at $p<0.05$.

Demographics

- The average patient age was 32.9 (+/-12.2) years
- 67% were female
- BMI was 25.7 (+/-5.5)
- Average pain duration was 28.1 (+/-3.7) months.
- The right hip was the symptomatic hip in 54% of the sample population.

Results - History

- Asymmetric symptoms included
  - 77% reported hip pain while sitting
  - 64% reported pain while walking
  - 73% reported pain while crossing their legs
  - 43% reported night pain
  - 97% reported pain with activity.
  - Of those offered an NSAID previously, only 35% reported any relief.

Results – Physical Exam (1)

	Surgical Side	Contralateral Side	P-Value
Anterior Impingement Test	89%	15%	<0.001
Avg. Hip Flexion	95.0° (13.4)	106° (13.2)	<0.001
	mean difference of 11.4° (13.1)		
Avg. Internal Rotation	10.1° (11.0)	19.2° (13.0)	<0.001
	mean difference of 9.1° (11.3)		
Average FABER distance	25.1cm (9.1)	15.9cm (7.5)	<0.001
	mean difference of 9.1cm (8.2)		

Results – Physical Exam Gender (2)

	Males	Females	P-Value
Mean Flexion Values	95.5° (12.4)	96.5° (13.1)	= 0.28
	mean difference of 1.0° (favor of females)		
Mean Internal Rotation	7.6° (8.7)	11.4° (11.6)	<0.001
	mean difference of 3.8° (favor of females)		
Mean FABER distance	26.6cm (9.6)	24.0cm (8.6)	<0.001
	mean difference of 2.6cm (favor of females)		

Results - Radiology

- 27% of these patients were classified radiographically as CAM only
- 14% were classified as Pincer only
- 71% were classified as Mixed FAI.

Conclusions

- Our study of a large database of 1000 patients supports our hypothesis that at original diagnosis for femoroacetabular impingement, patients characteristically have:
  - asymmetric hip pain with activity
  - loss of hip motion
  - hip pain with provocative testing
- Additionally, this study highlights two other findings consistent with smaller case series:
  - females appear to present more often than males with prearthritic hip pain
  - mixed impingement is the predominate pathomorphology

Thank You!

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