Mechanical Symptoms as a Predictor of Short-term Outcomes of Hip Arthroscopy in Patients with FAI over the Age of 40

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DISCLOSURE

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I have financial relationships with the following companies:
- DePuy Synthes Mitek Sports Medicine
- ConMed Linvatec
BACKGROUND

- Symptomatic FAI without advanced changes of osteoarthritis in patients over 40 years old is common.
- Outcomes of arthroscopic treatment of FAI in the population of patients over 40 are variable and there is a need for predictive preoperative indicators of postoperative outcome.  
- Mechanical symptoms defined as acute “sharp moments” of pain with or without associated clicking, locking or catching are a frequent presenting complaint in this population.
- We question if the presence or absence of preoperative mechanical symptoms is associated with outcome.
PURPOSE

To determine if the presence of mechanical symptoms in the hip can be used to help predict the outcome of hip arthroscopy in patients over 40 years old with FAI.
HYPOTHESIS

We hypothesize that patients that pre-operatively report mechanical symptoms will show greater subjective improvement following hip arthroscopy for FAI than patients without mechanical symptoms.
METHODS

- This study was approved by the Institution Review Board (IRB #001640).
- Retrospective analysis of our patient database from January 2011 to August 2014.
- All surgeries were conducted by one surgeon (HSW).
- All patients followed the same rehabilitation protocol supervised by the same physical therapist (JDM).
- The patients included in this study were diagnosed with FAI, were active and aged 40 or older.
- Patients were excluded from this study if they were diagnosed radiographically with OA Tonnis grade >2, peritrochanteric pain, internal or external snapping hip or dysplasia. Patients were also excluded if they had hip pain due to trauma (e.g. motor vehicle accident).
METHODS

- Patients were divided into two groups based on the presence or absence of mechanical symptoms.
  - Mechanical symptoms in the hip were defined as acute “sharp moments” of pain with or without associated clicking, locking or catching.
  - Dull, achy, constant pain was not considered a mechanical symptom.
- The international Hip Outcome Tool (iHOT-12) was recorded preoperatively, 3 months and 1 year postoperatively.
- A linear mixed effects analysis was used to evaluate the outcomes of the two groups of patients. P-values were obtained by likelihood ratios. P<0.05 was significant.
RESULTS

45 hips (45 patients) met the inclusion criteria, mean age 47, range 40-59.

A) 36 hips were grouped into mechanical or non-mechanical symptoms for statistical analysis
   1) 22 hips had mechanical symptoms
      -17 female, 5 male
      -mean pre-op iHOT of 29
   2) 14 hips had non-mechanical symptoms
      -11 female, 3 male
      -mean pre-op iHOT of 27

B) 9 hips were lost to follow-up
RESULTS

- No statistical difference in pre-op scores, gender, hip side \( (p>0.05) \).

- Statistically significant difference between mechanical and non-mechanical symptoms over time \( (p=0.002) \).
RESULTS

- 3 patients converted to THA before 1 year, 2 with mechanical symptoms (1 female, 1 male) and 1 without mechanical symptoms (1 female).
- 2 additional patients were diagnosed with AVN and went on to THA at 6 and 9 months.
DISCUSSION

- Future research includes the accumulation of more patient outcomes so that the cohort is larger.
- We also plan to track these patients to look at longer term outcomes (> 1 yr).
- Finally, we want to compare these results to a cohort of patients younger than 40 years old.
CONCLUSION

The presence of mechanical symptoms is predictive of greater subjective improvement with arthroscopic treatment of FAI in patients over 40 years compared with patients who present with no mechanical symptoms.
REFERENCES


