Paper #10

OUTCOME TRENDS AFTER HIP ARTHROSCOPY FOR FEMOROACETABULAR IMPINGEMENT: WHEN DO PATIENTS IMPROVE?

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Summary: Positive outcomes after hip arthroscopy for treatment of FAI have been consistently reported, but the timing and course of improvement have yet to be well-defined - this analysis reveals the mean time to reach the threshold of success based on patient reported outcomes.

Background: Hip arthroscopy has gained popularity in the treatment of femoroacetabular impingement (FAI). Several studies have reported excellent clinical outcomes after hip arthroscopy in this population. However, the expected course of recovery has not been clearly defined and the time to critical improvement has not been identified.

Purpose: The current study was designed to evaluate clinical outcomes at various postoperative time points after hip arthroscopy in a population of patients with FAI. The study set out to determine the time to reach clinical success after primary hip arthroscopy. We hypothesized that it would take at least 6 months for patients to reach a threshold of clinical improvement.

Materials and Methods: All patients undergoing primary hip arthroscopy for FAI between 2010 and 2014 by a single surgeon at a single institution were identified. Patients with a minimum of two years of clinical follow-up were included. Clinical outcomes scores, consisting of the Modified Harris Hip Score (mHHS) and the Non-arthritic

Hip Score (NAHS), were obtained preoperatively, and at 3 months, 6 months, 1 year, and 2 years postoperatively. Failure was defined as need for subsequent operation in the ipsilateral hip, mHHS less than 70, or change in NAHS less than 10. Exponential regression analysis was performed to estimate the mean time to success postoperatively.

Results: 352 hip arthroscopies were performed in 318 patients meeting the inclusion criteria. The mean clinical follow-up was 52.5 months (range, 25 – 80 months). The mean mHHS was 44.9 at baseline, 56.9 at 1 month, 66.5 at 3 months, 73.4 at 6 months, 74.4 at 1 year, and 76.8 at 2 years. The mean NAHS was 47.1 at baseline, 64.3 at 1 month, 73.1 at 3 months, 81.4 at 6 months, 83.5 at 1 year, and 85.2 at 2 years. Scores at baseline and final follow-up were statistically different for both metrics ($p < 0.001$). Hip survivorship was 85.1%. The overall success rate was 81.1%. The mean time to revision was 28.1 months. The estimated time to reach the threshold of success based on regression analysis was 5.7 months. Out of the cohort of cases that achieved success, the estimated time to success was 4.2 months. Regression analysis revealed that age was the only risk factor for increased time to success. There was no significant association between sex, laterality, or BMI and time to success.

Conclusions: Primary hip arthroscopy for patients with FAI had excellent clinical outcome scores at a minimum of two years of follow-up. The average time to achieve success postoperatively, as defined, was less than six months. Overall, the success rate was 81.1%, which was consistent with prior studies. Age was the only factor identified that correlated with a longer time to success. As a result, older patients should be informed that they are at risk of an extended healing time after hip arthroscopy.