Long-term Outcomes After Treatment of Femoroacetabular Impingement in Adolescents

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INTRODUCTION: Femoroacetabular impingement (FAI) commonly affects the adolescent population, but the ability of surgery to provide a durable long-term outcome in this young population is not well investigated. To date, many studies focus on cohorts that combine both adolescent and adults or have limited follow-up duration. The purpose of the current study was to determine the outcomes of FAI surgery in adolescents (ages 10-19) at long-term follow-up.

METHODS:

This is a multicenter, prospective cohort that enrolled hips undergoing FAI surgery between 2008 and 2012. Patients with ages 10-19 and follow-up of a minimum of 8 years were included. Exclusion criteria were patients with prior ipsilateral operations or associated conditions. Follow-up data included patient-reported outcome measures, revision surgery, and conversion to total hip arthroplasty (THA). Multivariable analysis was used to identify independent predictors of outcome. Kaplan-Meier curves represented survivorship.

RESULTS: Seventy-seven hips were assessed at a mean follow-up of 10.5 ± 1.8 years. Mean age was 17.0 ± 1.6 and 41.6% were female. All PROMs demonstrated significant improvement including: mHHS 64.6±13.7 to 87.1±16.5, HOOS pain 61.7±20.6 to 88.2±16.0, and HOOS sports and recreation 46.5±22.8 to 82.2±24.8 (p-values<0.001). The overall reoperation rate was 10.4% including six patients had revision arthroscopy (mean 2.3 years) and two patients had conversion to THA (mean 5.7 years). Preoperative mHHS was predictive of postoperative mHHS scores (BE:0.563, p<0.001). Increasing preoperative mHHS was associated with decreased chance of overall reoperation (OR:0.93, p=0.031).

DISCUSSION AND CONCLUSION: Adolescents benefit from surgical treatment for FAI with maintained outcomes at over ten-year follow-up. Increasing preoperative mHHS was associated with better postoperative scores and decreased chance of overall reoperation or revisions. Longer-term studies would help further determine the long-term survivorship of this population at 20-year follow-up and beyond.