Ten-Year Outcome following Surgical Treatment of Femoroacetabular Impingement
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INTRODUCTION: This study aimed to determine 10-year outcome (joint preservation and patient-reported outcome measures (PROMs)) following femoroacetabular impingement (FAI) surgery. In doing so, we assessed whether evolution of practice from open to arthroscopic techniques influenced outcomes and tested whether patient, radiographic, or surgical factors were associated with outcome.

METHODS:
Prospectively collected data of a consecutive, single-surgeon, cohort (n=393 hips) operated for FAI between 2005–2015 was retrospectively studied. A total of 393 hips (365 patients; 71% males), with mean age of 34.5±10.0 years formed the cohort. Over the study period, techniques evolved from open surgical dislocation (SD; n=94) to combined arthroscopy-Hueter (HA+Hueter; n=61) technique to pure arthroscopic (HA; n=238) technique. Outcome measures of interest included modes of failures, including joint preservation at 10-years, complications, reoperation, and PROMs. Demographic, radiographic, and surgical factors were tested for possible association with outcome.

RESULTS:
At a mean follow up of 7.5±2.5 years, there were 80 failures in 68 hips (17%), 58 hips (15%) having one failure mode, 8 hips (2%) having 2 failure modes, and 2 hips (0.5%) having 3 failure modes. The 5- and 10- year preservation rates were respectively 94.1%±1.2 and 90.4%. Inferior survivorship was detected in the SD group. Age (below 35-years) at surgery, Tönnis Grade (Tönnis grade 0), cartilage damage (Beck≤2), and absence of rim-trimming were associated with improved preservation rates. Tönnis grade was the only independent predictor of hip preservation. All PROMs improved compared to preoperative. Factors associated with improvement in PROMs included higher lateral center-edge and alpha angles and lower retroversion index and BMI.

DISCUSSION AND CONCLUSION:
FAI surgery provides lasting improvement in function and preservation rate of 90.4% at 10 years. The evolution of practice was not associated with inferior outcome. Since degree of arthritis is the primary predictor of outcome, improved awareness and screening may lead to prompt intervention and better outcome.