

Arthroscopic Bony Correction and Labral Repair For Mixed Cam And Pincer Femoral Acetabular Impingement: Minimum One-Year Clinical Outcome

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Introduction:

Labral pathology is a well-recognised source of pain in the young athletic population. Bony deformities such as CAM and pincer abnormalities are well described, as are the consequences of chronic impingement, including labral and chondral pathology, leading to osteoarthritis in many cases. Labral repair may have advantages over debridement in restoration of the suction seal, improving joint lubrication, 'buffer' protection of the chondral verge, preserving an increased surface area and deepening the hip joint, improving stability. We present the clinical outcome following arthroscopic CAM and pincer deformity correction and labral repair for patients with mixed femoral acetabular impingement, at a minimum of one-year follow up.

Method:

Between September 2009 and April 2013, six hundred and forty-two patients were treated, by a single surgeon (PC), for symptomatic mixed CAM and pincer femoral acetabular impingement. In all cases, arthroscopic femoral osteochondroplasty, acetabular rim recession and labral repair (refixation) was performed. All patients underwent pre-operative assessment prospectively using the SF 36, HHS, UCLA activity rating and WOMAC score. At 3 months, 1 year and two years clinical outcomes following surgery was evaluated with the same scoring assessments along with a patient satisfaction survey. Clinical outcome scores at a minimum of one-year follow up were analysed and are presented. At each review, a patient satisfaction survey was conducted which subjectively examined four areas: the level of improvement following surgery, whether the relief of symptoms met the patient's expectations, would the patient repeat the procedure for similar symptoms on the other side and overall satisfaction with treatment and outcome.

Results:

The 642 patients were followed up at an average of 18 months (range 12-29 months). A total of 268 patients achieved a minimum of one-year outcome assessment. For the entire cohort the average age was 35 years (male 33 years/ female 41 years), there were 502 males and 140 females with a male to female ratio of 3.3:1. The median preoperative HHS was 80 with a median postoperative score of 96 at 1 year and 97 at two years; the median improvement was 16 and 17 points at 1 and 2 years, respectively which was highly significant ($p < 0.01$); UCLA activity rating increased from a median value of 7 to a postoperative value of 9 ($p < 0.05$); SF36 scores increased from a median preoperative score of 74.6 to a postoperative score of 90.4 ($p < 0.05$); the WOMAC score reduced from a preoperative median value of 17, to a postoperative value of 4 ($p < 0.01$). At minimum of one year, 84% of patients were satisfied with the improvement in their symptoms, 87.8% of patients indicated they would repeat the surgery for similar symptoms again and overall satisfaction with treatment and outcome was 85%. There were two cases of transient neuropraxia (0.7%) and 1.8% of patients required conversion to a total hip replacement, however they had significant degeneration pre-operatively.

Conclusion:

Objective clinical outcome assessment, at a minimum of one-year follow-up, has demonstrated a statistically significant functional improvement for this group of 268 patients.