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Arthroscopic Management of Femoral Acetabular Impingement with Concomitant Os Acetabuli Lesion

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Summary:

This study presents the results of our algorithm for diagnosis and management of patients with FAI and concomitant Os Acetabuli Lesions treated with hip arthroscopy.

Abstract:

Purpose

An Os Acetabuli is a lesion of the acetabular rim often encountered in patients with hip dysplasia and Femoral Acetabular Impingement (FAI). While such lesions have been identified as a potential cause of intra-articular hip pain, the optimal management of an Os in the setting of symptomatic FAI remains unclear. We present our approach to management of such concomitant pathology in a series of 20 patients treated with hip arthroscopy.

Methods

As part of an initial workup, plain films of the hip along with a Three-Dimensional CT and MRI were obtained. In addition to calculation of pre-intervention alpha and center edge angles, individual Os lesions were identified arthroscopically and managed via an algorithm based on four distinct anatomic locations. All patients underwent a predetermined treatment algorithm for FAI and the identified Os lesions. Pre and post-surgery outcomes were collected in the form of a Harris Hip Scoring along with ADL and Sports Hip Outcome Score subsets.

Results

Outcome data was successfully collected in 20 patients with a mean age of 35.04 (range 20-51) years. When compared to plain films (68.7%) and MRI (31.3%), three-dimensional CT represented by far the most sensitive method of pre-intervention screening, detecting 100% of Os lesions eventually confirmed during arthroscopy ($p < 0.001$). Following treatment at a mean follow-up of 40.33 (range 22-62) months, average Harris Hip Scores improved by 22.66 points ($p = .037$) from baseline. Hip Outcome Scores increased by an average 15.98 points for ADL and 24.99 points for sports ($p = 0.023$) subsets, respectively.

Conclusions

Symptomatic FAI with concomitant a Os acetabuli lesion can be successfully managed arthroscopically via a treatment algorithm based on anatomic location. Due to its increased sensitivity in detecting Os lesions compared to other imaging modalities, a three-Dimensional CT scan should be considered prior to surgical intervention.