

Patient-Centered Outcomes in Borderline Dysplastic Patients with Femoroacetabular Impingement Who Underwent Labral Repair and Treatment of Impingement

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Summary:

New arthroscopic techniques including labral repair with correction of concomitant femoroacetabular impingement can adequately address symptoms and loss of function in borderline dysplastic hip patients.

Abstract:

INTRODUCTION

It is a controversial issue to perform hip arthroscopy on the dysplastic hip patients. Guidelines have not been established for patients with borderline dysplasia. New arthroscopic techniques including labral with correction of concomitant femoroacetabular impingement may adequately address symptoms and loss of function in these patients. The purpose of this study was to determine 2-year outcomes in patients with borderline dysplastic hips undergoing hip arthroscopy.

METHODS

The study protocol was IRB approved. Between June, 2005 and March, 2009 patients with dysplasia were identified from a prospective database. Hips were considered borderline dysplastic if center edge of Weiberg angle (CEA) was between 20 to 25 degrees. The study included only primary hip arthroscopies in patients over 18 years of age performed by the senior author with borderline dysplasia. Data included age, gender, labral treatment, microfracture of chondral surfaces, acetabular rim resection, femoral osteoplasty, and capsular plication. Conversion to total hip arthroplasty (THA), peri-acetabular osteotomy, or repeat procedures were recorded. Minimum 2-year follow-up was obtained on all available patients.

RESULTS

One hundred two hips (100 patients, 50 females and 50 males) were included in the study. The average age was 35 years (range, 18 to 69 years). The average CEA was 23 degrees (range, 20 to 25 degrees). Average time from onset of symptoms to surgery was 29 months (range, 1 week to 10.6 years). At arthroscopy, all hips underwent labral repair. There were 5 isolated pincer lesions, 7 isolated cam lesions, and 90 combined FAI lesions (cam + sub-spinal impingement). Twenty-six hips required microfracture for chondral lesions. Five (4 males and 1 female; average age, 42 years) patients were converted to THA an average of 2 years following (range, 11 months to 4 years) arthroscopy. Eighty out of 95 patients (100 - 5 THAs) completed minimum 2-year follow-up. At a mean follow-up of 40 months (range, 24 months to 97 months), the modified Harris hip score improved from 63.5±14 preoperatively to 84.9±14 at latest follow-up ($p<0.001$). The WOMAC score improved from 25.3±13 to 9.7±13 ($p<0.001$). Besides, the HOS ADL and Sport scores significantly improved from 70.9±13, 51.4±22 to 84.7±17, 75.7±25 respectively. Median patient satisfaction with outcome was 8.0 (range, 1 to 10). The SF-12 Physical Component score also significantly improved (42.5 to 50.9; $p=0.001$), while the SF-12 Mental Component Score did not change (52.4 to 54.1; n.s.) as expected. Age at surgery was correlated with months from onset ($\rho=0.270$; $p=0.007$) and months follow-up ($\rho=0.337$; $p=0.003$) but not with outcome scores. Gender, months from onset or CEA was not correlated with outcome scores. Seven

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patients required revision arthroscopy.

DISCUSSION & CONCLUSIONS

In this study, we demonstrated that arthroscopic treatment of intra-articular hip pathology allowed patients with borderline dysplasia and symptomatic hips to improve their function. This resulted in high patient satisfaction. However, 5 patients had THAs following arthroscopy. Longer follow-up is required to determine if an increased rate of THA is seen in borderline dysplastic patient following hip arthroscopy.