



## Hip Arthroscopy Failure in the Setting of Acetabular Dysplasia: A Concerning Trend?

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**Introduction:** Despite the success of hip arthroscopy, evidence suggests that arthroscopy alone is inadequate for treatment of conditions such as acetabular dysplasia (AD) due to its failure to correct structural deformity. Our objective was to define the incidence of failed hip arthroscopy in patients with symptomatic AD requiring periacetabular osteotomy (PAO). We secondarily analyzed the patient and structural characteristics of the failed arthroscopy cases.

**Methods:** Utilizing a prospective, multicenter joint preservation database, we identified a cohort of patients from 2009-2014 who underwent PAO after a single prior ipsilateral hip arthroscopy. A comparison cohort of PAO patients without prior arthroscopy was isolated. Demographic and radiographic data were summarized for each group. We compared the proportion of PAO after failed hip arthroscopy between the beginning and end of the study period by 2-tailed z-test.

**Results:** One hundred twenty-six patients had arthroscopic hip surgery prior to PAO, while 1297 patients underwent PAO without prior hip arthroscopy. The proportion of PAO procedures after previous ipsilateral hip surgery stayed constant (15-20%); however, the rate of PAO after previous hip arthroscopy increased from 4% in 2009 to 10% in 2014 ( $P=0.009$ ). Female sex, increased average LCEA and ACEA, and decreased acetabular inclination were associated with failed hip arthroscopy ( $P<0.01$ ).

**Conclusion:** Our data illustrates an increase in the rate of PAO after previous hip arthroscopy over the past six years. While the rate of PAO following previous ipsilateral surgery remains constant, an increasing proportion of those previous procedures are failed hip arthroscopies. Additionally, we identified mild dysplastic features and female sex as characteristics associated with failure of hip arthroscopy. Our findings raise concern that isolated hip arthroscopy is being increasingly utilized in patients with acetabular dysplasia. These trends highlight the need for refined surgical indications for hip arthroscopy and further investigation into its impact on subsequent surgeries.