



Paper # 35

Cartilage Status at Time of Hip Arthroscopy Predicts Failure in Patients with Hip Dysplasia

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Introduction: Long-term survivorship following hip arthroscopy has been shown to be dependent upon the presence and severity of chondral damage at the time of surgery. However, it is unknown whether chondral damage at the time of arthroscopy can predict failure in patients with dysplasia. We examined whether chondral damage at the time of arthroscopy predicted conversion to THA in patients with dysplasia.

Methods: Between 1991 and 2013, we identified 228 hips in 185 patients with dysplasia who underwent hip arthroscopy. The articular cartilage of the posterior, superior, lateral, and anterior regions of the acetabulum and femoral head were assessed for signs of chondral damage (absent, mild (grades I or II), or moderate to severe (grades III or IV)). Sixty-five patients went on to receive total hip arthroplasty at an average of 3.1 ± 3.1 years after arthroscopy. A stepwise multivariable logistic regression analysis was conducted to determine predictors of the eventual need for THA following hip arthroscopy for patients with dysplasia.

Results: Logistic analysis revealed increasing age ($p=0.019$), presence of mild chondral changes on the posterior femoral head ($p=0.001$), and presence of moderate to severe chondral changes on the anterior acetabulum ($p=0.007$), made a significant contribution to the predictor. Older patients were 1.046 times (95%CI:1.007,1.086) more likely to convert to THA. Patients with mild arthritic changes of the posterior femoral head were 9.97 times (95%CI:2.62,37.99) more likely to convert to THA, while patients with moderate to severe arthritic changes of the superior acetabulum were 6.12 times (95%CI:1.66,22.58) more likely to convert to THA.

Conclusion: Our findings show that the presence of chondral damage on the posterior femoral head and anterior acetabulum are strong predictors of ultimate conversion to THA in patients with hip dysplasia. For those patients with advanced cartilage damage, specifically on the anterior acetabulum, open procedures may provide greater benefit.
