

Supplementary article data

The role of the acetabular labrum in hip dysplasia

A literature overview

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Submitted 12-05-09. Accepted 12-10-02

Appendix 1. Different handling of labral pathology despite underlying bony malformation

Study	No. (hips)	FU (mo)	Bony deformity	Treatment	Results	Study limitations
Fitzgerald 1995	56	53	Majority of the hips had "normal" anteroposterior radiographs. 4 had evidence of previous acetabular or pelvic surgery	Diagnostic injection with celestone and marcaine followed by partial weight bearing, followed by complete or partial excision of the torn labrum through open arthrotomy or arthroscopy	7 hips showed complete recovery, 49 hips had surgery. 43 out the 49 hips improved by treatment. 13 hips required additional surgery for chronic trochanteric bursitis after arthrotomy. 3 hips without improvement lesions of the femoral head	Lack of precise description of the pelvic radiographs. Particularly if any signs of dysplasia or FAI were present
Farjo et al. 1999	28	34	14 hips were dysplastic or arthritic	Arthroscopic debridement	13 patients had good patient reported outcome, if arthritis was present the outcome was poor. No statistic correlation between outcome and mechanical symptoms, tear type, localization, dysplasia etc.	14 hips described with arthritis or dysplasia Description of the remaining radiographs is lacking
Byrd and Jones 2003	48	27	Hip dysplasia (CE<25°)	Partial excision of a torn labrum or lig. teres. Chondroplasty and microfracture treatment if needed. Loose bodies were removed	Modified HHS was improved. No differences between the dysplastic and borderline dysplastic group. The hips with loose bodies or debridement of ruptured lig. teres did best. Labral or chondral lesions results were average. Worst outcome in arthritic hips	Small patient number Only short term followup
Peters et al. 2006	83	46	Hip dysplasia (59 classic) (22 retroverted) (2 Legg-Calvé Perthes)	PAO or arthrotomy and PAO. Partial labrum excision and osteoplasty when indicated	49 patient underwent arthrotomy had labral tears that were taken care of during surgery. Good HHS (90 points) at followup	The study is used to describe the learning curve of performing PAO. Decision to routinely arthrotomy, was taken in the latter third of the study period, to be able to optimize treatment. A comparison between the non-arthrotomy and the arthrotomy group could be interesting

Burnett et al. 2006	66	16	Retrospective radiographic evaluation showed: 24 normal hips. 42 demonstrated hip dysplasia, impingement or degenerative changes	Non-operative treatment prior arthroscopy. Arthroscopic labral debridement	Conservative treatment unsuccessful for symptomatic tear. After arthroscopy HHS increased and 59 patients reported clinical improvement. Recommend osteotomy in most DDH hips. In FAI they recommend arthroscopy maybe combined with limited open arthrotomy	Lack of a control group Short term followup
Byrd and Jones 2009	31	120	Radiographic evaluation missing	Arthroscopic labral debridement	HHS significant increased at followup. If arthritis was present prior to arthroscopy they had a higher rate of conversion to THA	Few patients. The lack of radiographic description besides osteoarthritis. Where there any bony abnormalities?
Parvizi et al. 2009	36	42	Hip dysplasia (30 hips) Retroversion (6 hips)	Arthroscopic labral debridement	Significant improvement during the first 6 weeks of surgery. In 24 patients arthroscopy failed to control symptoms. 16 patients had further surgery. They do not recommend hip arthroscopy alone for dysplastic hips	Lack of control group. All had debridement of the labrum. No repairs. Retrospective study
Ross et al. 2011	73	0	Hip dysplasia (various degree of severity)	Arthroscopy and PAO if mechanical symptoms and a positive MRI were present. Labral tears were repaired or partial resected	5 hips had a labrum without tear or hypertrophy. In 37% of the cases, no intra-articular lesions were found, and the arthroscopy was only diagnostic.	No followup on the clinical effect, so the long-term effect of extending the PAO with arthroscopy remains unknown
Kain et al. 2011	51	0	Hip dysplasia	Outcome measured by WOMAC scores or the need for a THA in 2 groups. 1 group had failed arthroscopic labral debridement and referred to PAO (17 hips). 1 group had primary PAO (matched control 34 hips, all had MRI evidence of labral pathology)	No significant difference in WOMAC score or frequency of THA between the two groups. PAO can be done after failed arthroscopy with good functional outcome. Overall they do not recommend arthroscopy alone, and if decided, closely followup is essential.	Retrospective study, limited number of patients. No long-term followup of the patient with preserved hips. Only given time interval is the known dates of the hips converted to THA