

**References**

1. Byrd JW, Jones KS. Hip Arthroscopy in the Presence of Dysplasia. *Arthroscopy: The Journal of Arthroscopic & Related Surgery: Official Publication of the Arthroscopy Association of North America and the International Arthroscopy Association*. 2003; 19: 1055-60.
2. Cooperman D. What is the Evidence to Support Acetabular Dysplasia as a Cause of Osteoarthritis? *J Pediatr Ortho*. 2013; 33 Suppl 1: S2-7.
3. Domb BG, Lareau JM, Baydoun H, Botser I, Millis MB, Yen YM. Is Intraarticular Pathology Common in Patients With Hip Dysplasia Undergoing Periacetabular Osteotomy? *Clin Ortho Rel Res*. 2014; 472: 674-80.
4. Fujii M, Nakashima Y, Jingushi S, et al. Intraarticular Findings in Symptomatic Developmental Dysplasia of the Hip. *J Pediatr Ortho*. 2009; 29: 9-13.
5. Klaue K, Durnin CW, Ganz R. The Acetabular Rim Syndrome. A Clinical Presentation of Dysplasia of the Hip. *J Bone Joint Surg Br*. 1991; 73: 423-9.
6. Wiberg G. Shelf Operation in Congenital Dysplasia of the Acetabulum and in Subluxation and Dislocation of the Hip. *J Bone Joint Surg Am*. 1953; 35-A: 65-80.
7. Fukui K, Trindade CA, Briggs KK, Philippon MJ. Arthroscopy of the Hip for Patients With Mild to Moderate Developmental Dysplasia of the Hip and Femoroacetabular Impingement: Outcomes Following Hip Arthroscopy for Treatment of Chondrolabral Damage. *Bone Joint J*. 2015; 97-B: 1316-21.
8. Lane NE, Lin P, Christiansen L, et al. Association of Mild Acetabular Dysplasia With an Increased Risk of Incident Hip Osteoarthritis in Elderly White Women: The Study of Osteoporotic Fractures. *Arthritis Rheum*. 2000; 43: 400-4.
9. Matsuda DK, Gupta N, Khatod M, et al. Poorer Arthroscopic Outcomes of Mild Dysplasia With Cam Femoroacetabular Impingement Versus Mixed Femoroacetabular Impingement in Absence of Capsular Repair. *Am J Orthop (Belle Mead NJ)*. 2017; 46 :E47-E53.
10. McWilliams DF, Doherty SA, Jenkins WD, et al. Mild Acetabular Dysplasia and Risk of Osteoarthritis of the Hip: A Case-control Study. *Ann Rheum Dis*. 2010; 69: 1774-8.
11. Ricciardi BF, Fields KG, Wentzel C, Nawabi DH, Kelly BT, Sink EL. Complications and Short-term Patient Outcomes of Periacetabular Osteotomy for Symptomatic Mild Hip Dysplasia. *Hip Int*. 2016: 0.
12. Ueshima K, Takahashi KA, Fujioka M, et al. Relationship Between Acetabular Labrum Evaluation By Using Radial Magnetic Resonance Imaging and Progressive Joint Space Narrowing in Mild Hip Dysplasia. *Magn Reson Imaging*. 2006; 24: 645-50.
13. Chaharbakhshi EO, Perets I, Ashberg L, Mu B, Lenkeit C, Domb BG. Do Ligamentum Teres Tears Portend Inferior Outcomes in Patients With Borderline Dysplasia Undergoing Hip Arthroscopic Surgery? A Match-Controlled Study With a Minimum 2-Year Follow-up. *Am J Sports Med*. 2017; 45: 2507-16.
14. Chandrasekaran S, Darwish N, Martin TJ, Suarez-Ahedo C, Lodhia P, Domb BG. Arthroscopic Capsular Plication and Labral Seal Restoration in Borderline Hip Dysplasia: 2-Year Clinical Outcomes in 55 Cases. *Arthroscopy*. 2017; 33: 1332-40.

15. Cvetanovich GL, Levy DM, Weber AE, et al. Do Patients With Borderline Dysplasia Have Inferior Outcomes After Hip Arthroscopic Surgery for Femoroacetabular Impingement Compared With Patients With Normal Acetabular Coverage? *Am J Sports Med.* 2017; 45: 2116-24.
16. Domb BG, Chaharbakhshi EO, Perets I, Yuen LC, Walsh JP, Ashberg L. Hip Arthroscopic Surgery With Labral Preservation and Capsular Plication in Patients With Borderline Hip Dysplasia: Minimum 5-Year Patient-Reported Outcomes. *Am J Sports Med.* 2017: 363546517743720.
17. Domb BG, Stake CE, Lindner D, El-Bitar Y, Jackson TJ. Arthroscopic Capsular Plication and Labral Preservation in Borderline Hip Dysplasia: Two-Year Clinical Outcomes of a Surgical Approach to a Challenging Problem. *Am J Sports Med.* 2013; 41: 2591-8.
18. Evans PT, Redmond JM, Hammarstedt JE, Liu Y, Chaharbakhshi EO, Domb BG. Arthroscopic Treatment of Hip Pain in Adolescent Patients With Borderline Dysplasia of the Hip: Minimum 2-Year Follow-Up. *Arthroscopy.* 2017; 33: 1530-6.
19. Fukui K, Briggs KK, Trindade CA, Philippon MJ. Outcomes After Labral Repair in Patients With Femoroacetabular Impingement and Borderline Dysplasia. *Arthroscopy.* 2015; 31: 2371-9.
20. Hatakeyama A, Utsunomiya H, Nishikino S, et al. Predictors of Poor Clinical Outcome After Arthroscopic Labral Preservation, Capsular Plication, and Cam Osteoplasty in the Setting of Borderline Hip Dysplasia. *Am J Sports Med.* 2018; 46: 135-43.
21. Kalore NV, Jiranek WA. Save the Torn Labrum in Hips With Borderline Acetabular Coverage. *Clin Ortho Rel Res.* 2012; 470: 3406-13.
22. Nawabi DH, Degen RM, Fields KG, et al. Outcomes After Arthroscopic Treatment of Femoroacetabular Impingement for Patients With Borderline Hip Dysplasia. *Am J Sports Med.* 2016; 44: 1017-23.
23. Ganz R, Klaue K, Vinh TS, Mast JW. A New Periacetabular Osteotomy for the Treatment of Hip Dysplasias. Technique and Preliminary Results. *Clin Ortho Rel Res.* 1988: 26-36.
24. Murphy SB, Millis MB. Periacetabular Osteotomy Without Abductor Dissection Using Direct Anterior Exposure. *Clin Ortho Rel Res.* 1999: 92-8.
25. Novais EN, Kim YJ, Carry PM, Millis MB. The Bernese Periacetabular Osteotomy: Is Transection of the Rectus Femoris Tendon Essential? *Clin Ortho Rel Res.* 2014; 472: 3142-9.
26. Heyworth BE, Novais EN, Murray K, et al. Return to Play After Periacetabular Osteotomy for Treatment of Acetabular Dysplasia in Adolescent and Young Adult Athletes. *Am J Sports Med.* 2016; 44: 1573-81.
27. Klit J, Hartig-Andreasen C, Jacobsen S, Soballe K, Troelsen A. Periacetabular Osteotomy: Sporting, Social and Sexual Activity 9-12 Years Post Surgery. *Hip Int.* 2014; 24: 27-31.
28. Millis MB, McClincy M. Periacetabular Osteotomy to Treat Residual Dysplasia in Adolescents and Young Adults: Indications, Complications, Results. *J Child Orthop.* 2018; 12: 349-57.
29. Steppacher SD, Tannast M, Ganz R, Siebenrock KA. Mean 20-year Follow-up of Bernese Periacetabular Osteotomy. *Clin Ortho Rel Res.* 2008; 466: 1633-44.
30. McClincy MP, Wylie JD, Kim YJ, Millis MB, Novais EN. Periacetabular Osteotomy Improves Pain and Function in Patients With Lateral Center-edge Angle Between 18 degrees and 25 degrees, but Are These Hips Really Borderline Dysplastic? *Clin Ortho Rel Res.* 2018.

31. Ricciardi BF, Fields KG, Wentzel C, Nawabi DH, Kelly BT, Sink EL. Complications and Short-Term Patient Outcomes of Periacetabular Osteotomy for Symptomatic Mild Hip Dysplasia. *Hip Int.* 2017; 27: 42-8.
32. Clohisy JC, Ackerman J, Baca G, et al. Patient-Reported Outcomes of Periacetabular Osteotomy from the Prospective ANCHOR Cohort Study. *J Bone Joint Surg Am.* 2017; 99: 33-41.
33. Jayasekera N, Aprato A, Villar RN. Hip Arthroscopy in the Presence of Acetabular Dysplasia. *Open Orthop J.* 2015; 9: 185-7.
34. Larson CM, Ross JR, Stone RM, et al. Arthroscopic Management of Dysplastic Hip Deformities: Predictors of Success and Failures With Comparison to an Arthroscopic FAI Cohort. *Am J Sports Med.* 2016; 44: 447-53.
35. Fry R, Domb B. Labral Base Refixation in the Hip: Rationale and Technique for an Anatomic Approach to Labral Repair. *Arthroscopy.* 2010; 26: S81-9.
36. Atkins PR, Aoki SK, Whitaker RT, Weiss JA, Peters CL, Anderson AE. Does Removal of Subchondral Cortical Bone Provide Sufficient Resection Depth for Treatment of Cam Femoroacetabular Impingement? *Clin Ortho Rel Res.* 2017; 475: 1977-86.
37. Yeung M, Kowalczyk M, Simunovic N, Ayeni OR. Hip Arthroscopy in the Setting of Hip Dysplasia: A Systematic Review. *Bone Joint Res.* 2016; 5: 225-31.
38. Clohisy JC, Carlisle JC, Beaulé PE, et al. A Systematic Approach to the Plain Radiographic Evaluation of the Young Adult Hip. *J Bone Joint Surg Am.* 2008; 90 Suppl 4: 47-66.
39. Hanson JA, Kapron AL, Swenson KM, Maak TG, Peters CL, Aoki SK. Discrepancies in Measuring Acetabular Coverage: Revisiting the Anterior and Lateral Center Edge Angles. *J Hip Preserv Surg.* 2015; 2: 280-6.
40. Wylie JD, Kapron AL, Peters CL, Aoki SK, Maak TG. Relationship Between the Lateral Center-Edge Angle and 3-Dimensional Acetabular Coverage. *Orthop J Sports Med.* 2017; 5: 2325967117700589.
41. Murphy SB, Ganz R, Muller ME. The Prognosis in Untreated Dysplasia of the Hip. A Study of Radiographic Factors That Predict the Outcome. *J Bone Joint Surg Am.* 1995; 77: 985-9.
42. Thomas GE, Palmer AJ, Batra RN, et al. Subclinical Deformities of the Hip Are Significant Predictors of Radiographic Osteoarthritis and Joint Replacement in Women. A 20 Year Longitudinal Cohort Study. *Osteoarthritis Cartilage.* 2014; 22: 1504-10.
43. Tönnis D. Letter: Congenital Hip Dysplasia: Clinical and Radiological Diagnosis (author's transl). *Z Orthop Ihre Grenzgeb.* 1976; 114: 98-9.
44. Fa L, Wang Q, Ma X. Superiority of the Modified Tönnis Angle Over the Tönnis Angle in the Radiographic Diagnosis of Acetabular Dysplasia. *Exp Ther Med.* 2014; 8: 1934-8.
45. Siebenrock KA, Kistler L, Schwab JM, Buchler L, Tannast M. The Acetabular Wall Index for Assessing Anteroposterior Femoral Head Coverage in Symptomatic Patients. *Clin Ortho Rel Res.* 2012; 470: 3355-60.
46. Lequesne M, de S. False Profile of the Pelvis. A New Radiographic Incidence for the Study of the Hip. Its Use in Dysplasias and Different Coxopathies. *Rev Rhum Mal Osteoartic.* 1961; 28: 643-52.
47. Crockarell JR Jr, Trousdale RT, Guyton JL. The Anterior Centre-edge Angle. A Cadaver Study. *J Bone Joint Surg Br.* 2000; 82: 532-4.

48. Notzli HP, Wyss TF, Stoecklin CH, Schmid MR, Treiber K, Hodler J. The Contour of the Femoral Head-Neck Junction as a Predictor for the Risk of Anterior Impingement. *J Bone Joint Surg Br.* 2002; 84: 556-60.
49. Agricola R, Heijboer MP, Bierma-Zeinstra SM, Verhaar JA, Weinans H, Waarsing JH. Cam Impingement Causes Osteoarthritis of the Hip: A Nationwide Prospective Cohort Study (CHECK). *Ann Rheum Dis.* 2013; 72: 918-23.
50. Wyatt M, Weidner J, Pfluger D, Beck M. The Femoro-Epiphyseal Acetabular Roof (FEAR) Index: A New Measurement Associated With Instability in Borderline Hip Dysplasia? *Clin Ortho Rel Res.* 2017; 475: 861-9.
51. McClincy MP, Wylie JD, Yen YM, Novais EN. Mild or Borderline Hip Dysplasia: Are We Characterizing Hips With Lateral Center-Edge Angle Between 18° and 25° appropriately? *Am J Sports Med.* 2018; Publication Pending.
52. Ibrahim MM, Poitras S, Bunting AC, Sandoval E, Beaulé PE. Does Acetabular Coverage Influence the Clinical Outcome of Arthroscopically Treated Cam-type Femoroacetabular Impingement (FAI)? *Bone Joint J.* 2018; 100-B: 831-8.
53. Nepple JJ, Clohisey JC. The Dysplastic and Unstable Hip: A Responsible Balance of Arthroscopic and Open Approaches. *Sports Med Arthrosc Rev.* 2015; 23: 180-6.
54. Nepple JJ, Wells J, Ross JR, Bedi A, Schoenecker PL, Clohisey JC. Three Patterns of Acetabular Deficiency Are Common in Young Adult Patients With Acetabular Dysplasia. *Clin Ortho Rel Res.* 2017; 475: 1037-44.
55. Yoon RS, Koerner JD, Patel NM, Sirkin MS, Reilly MC, Liporace FA. Impact of Specialty and Level of Training on CT Measurement of Femoral Version: An Interobserver Agreement Analysis. *J Orthop Traumatol.* 2013; 14: 277-81.
56. Fabricant PD, Fields KG, Taylor SA, Magennis E, Bedi A, Kelly BT. The Effect of Femoral and Acetabular Version on Clinical Outcomes After Arthroscopic Femoroacetabular Impingement Surgery. *J Bone Joint Surg AM.* 2015; 97: 537-43.
57. McKibbin B. Anatomical Factors in the Stability of the Hip Joint in the Newborn. *J Bone Joint Surg Br.* 1970; 52: 148-59.