Clinical and Radiological Aspects of Closed Reduction in Developmental Dysplasia of the Hip Treated in the First Six Months

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Abstract:

Objective: To evaluate the success rate and subsequent restoration of normal acetabular angle (AC°), and associated growth changes secondary to avascular necrosis of the proximal femur in cases of developmental dysplasia of the hip (DDH) treated during the first six months of life Design: Retrospective study from 1998 to 2006 Setting: Department of Pediatric Orthopedics, Altona Children Hospital, Hamburg, Germany Subjects: Twenty six patients with twenty nine dysplastic hips were evaluated regarding grade of hip dysplasia. The success rate of closed reduction, postoperative restoration of normal acetabular coverage (AC angle) and associated complication were noted. Intervention: Closed reduction of DDH with intraoperative arthrogram followed by spica cast Main Outcome Measures: Success rate of closed reduction and restoration of normal acetabular index. Results: Closed reduction could be achieved in twenty two hips (76%). Out of those twenty two hips fifteen (68%) developed normal acetabular index, six (27%) showed persistent acetabular dysplasia and one (5%) had border-line measurement. Closed reduction was not successful in seven hips. Those seven hips were treated by open reduction and capsulorrhaphy. Conclusion: Closed reduction of DDH in the first six months of life was achieved in (76%) of dislocated hips, and did not show any significant growth changes in the proximal femur. The early changes in the ossific nucleus of capital femoral epiphysis (CFE) alone were found to be of very little value in predicting the nature of development of the hip.

Keywords:

closed reduction, developmental dysplasia of the hip

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