

Therapy of Arthroscopically-Assisted for Developmental Dysplasia of the Hip in Children

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Summary:

Hip arthroscopy takes advantage of minimally invasive to explore the structure and removal, avoiding the larger trauma by traditional operation. It can delay the developing of DDH, improve clinical symptom and elevate quality of life.

Abstract:

Objective:

To explore the clinic effect of arthroscopy in the treatment of children developmental dysplasia of the hip (DDH).

Methods:

Seven cases (7 hips) of DDH were treated with debridement of the acetabulum and acetabular labrum plasty under the arthroscope. One case were male, six cases were female, and the age varied from 17 to 41 months (average 22.7 months). One of them was the preliminary diagnosis this time. Rest of them failed to to be reduced by manipulative close reduction or casts and brace. Two cases were bilateral involved, but we treated all the children unilateral because of the two hips were reduction after another management. Manipulative reduction under general anesthesia were tried and failed in all cases. Improvement Anterior and anterosuperior great trochanter portals were used to excise the hypertrophic, elongated and abraded ligamentum tear, the transverse ligament of acetabulum was resected, fibrosis and fat tissues on the acetabular bottom were removed also. Manipulative reduction and plaster cast immobilization within safe and stable position were done. The children were immobilized with a spica cast with external fixation for 6 weeks and subsequently switched to an abduction brace for part-load walking for 6 months.

Results:

All cases were reduction successfully during the follow-up with an average of 17.5 months (range, 11 months- 25 months). After debridement and lavage, the patients released from pain, restored function and the range of the motion. According to CE angle evaluation system, postoperative CE angle was 10°-16°(range, 13.8°+0.7°). According to Shenton's line evaluation, the lines were continuous. No redislocation and avascular necrosis(AVN) appear in our children.

Conclusion:

For some failed to manipulative close reduction children, abnormal structure hampered the reduction. Thus it is the key point to effect the development of the acetabular and proximal femoral. Hip arthroscopy takes the advantages of minisive invasive to explore the structure and removal it, avoiding the larger trauma by traditional operation. It can delay the developing of DDH, improve clinical symptom and elevate quality of life.