Arthroscopic-Assisted Surgical Treatment for developmental dislocation of the hip.

Hassan El Barbary[1], Mahmoud Abd Elhamid Madbouly[1], Ahmed Khedr, Ahmed Omar Sabry, Mahmoud Ahmed El-Desouky
[1]Orthopaedics

INTRODUCTION:
Developmental dysplasia of the hip (DDH) encompasses a spectrum of pathological conditions including dislocation, subluxation, and deformities of the femoral head and acetabulum. The optimal surgical approach for DDH remains a subject of debate, particularly regarding the management of soft tissue obstacles such as the iliopsoas, adductor tendons, pulvinar tissue, contracted transverse acetabular ligament (TAL), and enlarged ligamentum teres, which are critical for achieving a stable concentric reduction and preventing future subluxation or dislocation.
METHODS:
Patients and methods: Nineteen patients with DDH (22 involved hips) were included in this prospective study from January 2019 to October 2023. Their age ranged from nine to 53 months. They were treated with arthroscopic-assisted surgical reduction with or without pelvic and/or femoral osteotomies. All the patients were evaluated and followed both clinically and radiologically via Severin, modified Severin scores, Shenton line and acetabular index measurement up to 24 months.
RESULTS:
Results: The mean age of included patients was 26.9 months. Their mean preoperative acetabular index was 42.8o. The mean operative time was 54.7 minutes (36-90 minutes). At final follow-up, clinical assessment using modified Severin classification revealed that 16 hips (72.7%) were grade I, and three hips (13.6%) were grade II. Radiological evaluation using Severin classification revealed that 17 hips (77.3%) were grade I, three hips (13.6%) were grade II. There was statistically significant correlation between final clinical evaluation and Severin radiological grading (p=0.008). Hip redislocation was experienced in one case while Avascular necrosis (AVN) was seen in two cases. There were no cases with stiffness and physiotherapy was not needed.
DISCUSSION AND CONCLUSION: Arthroscopic-assisted reduction of DDH and preservation of the capsule and femoral head blood supply offers a good alternative to the classic open reduction techniques with better clinical and radiographic outcome, better and quicker rehabilitation, and a lower complications rate.