High hip center in Total hip arthroplasty for dysplastic hips, a comparison study

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Introduction

- Inserting cup in true acetabulum is a difficult procedure with some complications and needs femoral osteotomy and massive soft tissue release.
Introduction

- On the other hand, inserting cup in the false acetabulum (high hip center) is a simple procedure with less complications.
Advantages

- Less soft tissue release
- No need bone graft
- No need acetabulum reconstruction
- No need femoral osteotomy
- Less operation time
Advantages

• Less neurological complications (sciatic nerve traction)
• Can insert cup in host bone
• Larger cups can be used
Disadvantages

• Cannot correct hip biomechanics completely (medial offset, vertical offset)
Disadvantages

- Cannot correct LLD
Materials and methods

- 32 hips studied, 16 in each group, one group with cup in false acetabulum and the other group cup in true acetabulum.
- Variables are Harris hip score, leg length discrepancy, dislocation, nerve injury, contractures, operation time, bleeding, cup failure and need for acetabulum reconstruction.
- Average follow up was 18 months
Results

- In the false acetabulum group, there were 2 cm discrepancy, 2 dislocations, no nerve injury, 10 degree flexion contracture and 5 need to reconstruct acetabulum. In 3 cases there were cup failur.
• In the other group, there were no LLD, 2 dislocations, two femoral nerve injuries, 10 degree flexion contracture. 2 need acetabulum reconstruction with bone grafting and no cup failure.
Discussion

- In one glance, cup failure is a major complication of inserting cup in the false acetabulum.
- Because there is no roof for bone graft, there is no good support for cup and graft failure occurs.
- HHS and other factors have not significant difference.
- So if there is no chance to bring the femoral head in the true acetabulum, accepting putting the femoral head in the false acetabulum is a choice.