

Problems in DDH Treatment

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1-Persistent instability with treatment

- ↳ **Exclude N.M. disorders.**
- ↳ **Prone position with Pavlik.**
- ↳ **If still dislocated
consider spica cast after arthrogram.**

2- Redislocation following closed reduction

↳ **Obstacles to reduction.**

- * **Tight psoas.**
- * **Capsular constrictions.**
- * **Tight adductors.**

↳ **Torsional problems (Femur, acetabulum).**

↳ **Acetabular insufficiency.**

↳ **Capsular laxity.**

3- Persistent instability after open reduction.

∞ Failure of removal of obstacles to a complete concentric reduction.

- * Tight psoas.
- * Pulvinar fat.
- * Ligamentum teres.
- * Transverse acetabular ligament.

3- Persistent instability after open reduction.

- ↳ Femoral torsion.
- ↳ Capsule not sutured well.
- ↳ Failure to address the acetabulum.

4- Late Subluxation following treatment (Closed or Open)

∞ **Persistent Femoral Anteversion.**

*** Do Abd./IR film.**

∞ **Acetabular Torsion or Deficiency.**

5- Post. Subluxation following open reduction & combined osteotomy

Usually in late presented DDH.

 Excessive derotation of the femur.

 Remember to keep anteversion

10-15 degrees :

(Wenger, 1989).

6- Femoral head Subluxation with large acetabulum.

- ⚙ **Usually in older children.**
- ⚙ **Do arthrogram (Then Pemberton - Dega acetabuloplasty).**
- ⚙ **Correct valgus deformity of the hip.**

7- Hinge Abduction due to Growth Arrest.

Radiologicaly

- Varus deformity.
- Over growth of G.T.
- Acetabular dysplasia.
- Lateralization of the head.

On arthrogram

- * Egg - Shaped head.
- * Med. pooling of the dye.
- * Abduction ---> hinging--->subluxation.

Management

1. Valgus- Extension- I.T.Osteotomy.
2. Capsulorrhaphy.
3. Innominate osteotomy.

8- Proximal Growth Arrest

Radiologically

- * Subluxation.
- * A.D.
- * Short femoral neck/Slight G.T. over growth.
- * Oval head.

Clinically

- * LLD < 2 cm.
- * Good ROM.
- * Abductor lurch.

Management

- * Trans iliac lengthening osteotomy with trapezoidal iliac graft.
- * G.T. transfer distally at the age of 10Y.

9- Late presented bilateral DDH

- * 3D CT Scan.
- * Open reduction.
- * Femoral shortening and adjust rotation according to the 3D results.
- * Acetabular osteotomy according to the 3D result.

Asymptomatic dislocation remains for decades
(Wedge & Wasy Lenko 1979)

- * Late bilat. DDH.**
 - Asymptomatic = No treatment.**
 - Symptomatic = Surgery.**
- * Late unilat. DDH = Surgery.**

10- Recurrent unilateral dislocation following multiple operative procedure.

Clinically

- * Short limb.
- * Painful hip.

Management

- * Open reduction/Capsulorraphy.
- * Chiari osteotomy.

11- Symptomatic adolescent dysplasia & subluxation.

Clinically

- * Abductor lurch.
- * + ve Trendelenburg sign.
- * LLD.

Radiologicaly

- * Subluxation.
- * Deformed lat. acetabular rim.
- * Abduction views -- incomplete centring.

Management

- ☾★ Open reduction + Acetabular debridement.
- ☾★ Px femoral shortening/Varus osteotomy.
- ☾★ Acetabuloplasty.
- ☾★ Later stage : G.T. transfer.

12- Acetabular rim syndrome with AD.

(Klaue et al. 1991)

Clinically

- ☉ Mature patient.
- ☉ Occasional hip pain with history of sudden pain.
- ☉ Antalgic gait.

Radiological

- ☉ A.D.
- ☉ Fracture lateral rim.
- ☉ Lat. subluxation.

Management

- ☞ **Varus I.T. Osteotomy.**
- ☞ **Periacetabular Osteotomy.**

- ☞ **Remember to do abduction views to check for congruence.**
- ☞ **If you suspect labral tear --- MRI.**

13- Teratologic dislocation (CDH)

Clinically

- * Very tight adductors.
- * Ortolani -ve (Stiff hip).

Radiologically

- * Small acetabulum/Flat or oblique roof.
- * High head/Ant. dislocation.
- * Ante or retroverted neck.

Management of CDH

* Bilat :

If not high and walker child ---> Surgery.

* Unilat:

No splint, no closed reduction, no traction.

Open reduction, when?.

Femoral shortening.

Acetabular reconstruction procedures.

CDH Problems

↳ Surgical.

- * AVN : 48%.
- * Resubluxion/Redislocation 41%.
- * Needs multiple procedures.

↳ C.I. to surgery

1. Multiple LL deformities. 2. Hypotonia.
3. Developmental delay (Non walker).
4. Poor head control (Non walker).
5. Very high dislocation.

Avascular Necrosis/Physeal Injury.

Complications

1. Femoral head deformity.
2. A.D.
3. Lat subluxation.
4. LLD.
5. O.A.
6. G.T. over growth.

14- DDH with CKD

Treat knee dislocation 1st by serial casting for 3/12 then apply pavlik Harness for both.

15- DDH with CTEV

1st treat CTEV by serial casting.

As a rule : In multiple LL problems treat foot then knee then hip.

16- DDH with short limb.

Treat DDH 1st then do leg lengthening.