

Some Problems in Pediatric Orthopedics

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Legg - Calvé - Perthes disease

- Idiopathic juvenile avascular necrosis of the femoral head
- most commonly in boys between ages 4 and 8 years
- 10% of cases are bilateral
- antalgic limp, pain



LCP disease

- Physical examination
loss of motion, push and pull test

Imaging Studies

- X ray
- bone scan
- MRI

LCP disease

Classification

- 1. by the extent of head involvement
Caterall – 25, 50, 75, 100 %
- 2. by the stage of the disease
Waldenström – synovitis, necrosis or collapse, fragmentation, reconstitution

LCP disease

Treatment

Containment is management technique which relies on the acetabulum to maintain the sphericity of the femoral head

1. Conservative t.- Atlanta brace
2. Surgery t.- varus osteotomy
 - redirectional ot.- Salter, Steel
 - combination



Slipped Capital Femoral Epiphysis

- ..is a failure of the upper femoral epiphysis allowing displacement of the femoral head on the neck
- Most commonly in boys between ages 7 and 15 years
- Etiology is complex

SCFE

Diagnosis

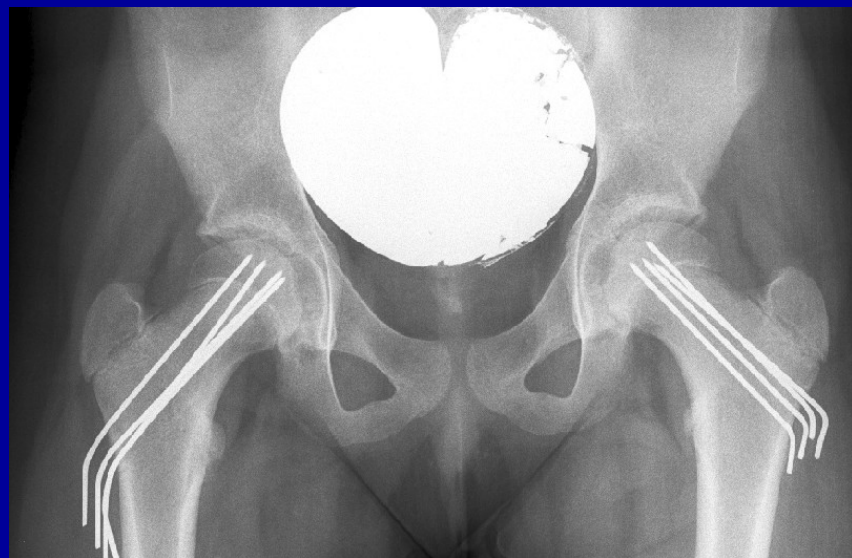
- Knee pain, loss of medial hip rotation, Drehman sign
- Radiography
- Bone scans
- CT scans



SCFE

Treatment

- Only surgery treatment
- Mild 0 - 30 degrees
oper. sec. Arriese- Diase
- Moderate 30 – 60 degrees
Osteotomy by Imhäuser- Weber, Southwick
- Severe 60+ degrees
Osteotomy in femoral neck



Developmental Dysplasia of Hip

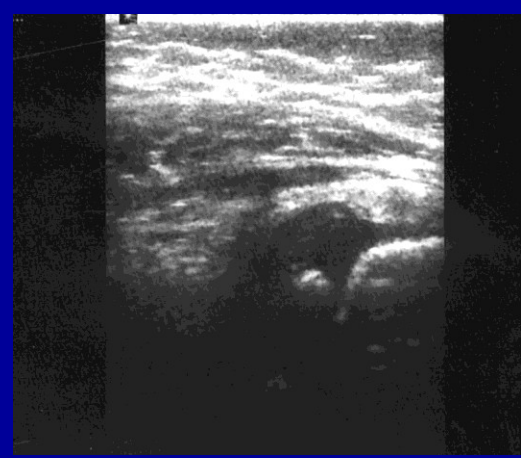
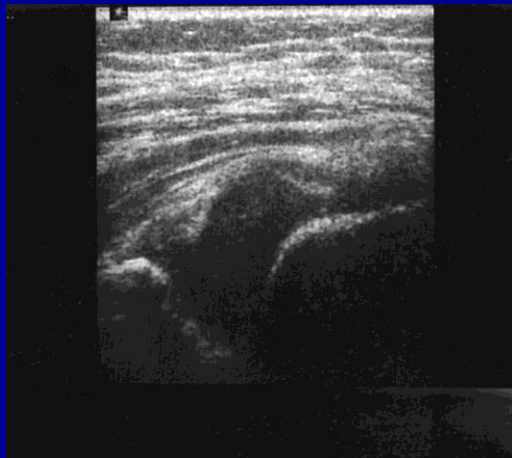
- DDH is a generic term describing a spectrum of anatomic abnormalities of the hip that may be congenital or develop during infancy or childhood
- Girls 6 : boys 1
- Incidence Czech Rep. 5%
- Etiology is multifactorial: genetic factor, intrauterine position, neonatal positioning, joint laxity, hormonal effects

DDH

Diagnosis

- Clinical examination 3x – 2 days, 6 weeks, 3-4 months
- Barlow's sign, Ortolani's sign, instability, limitation of abduction, shortening
- Ultrasound Hip Screening – Graf
- Radiography







DDH

Treatment

- Frejka pillow
- Pavlik harness
- Vertical traction, Over head traction



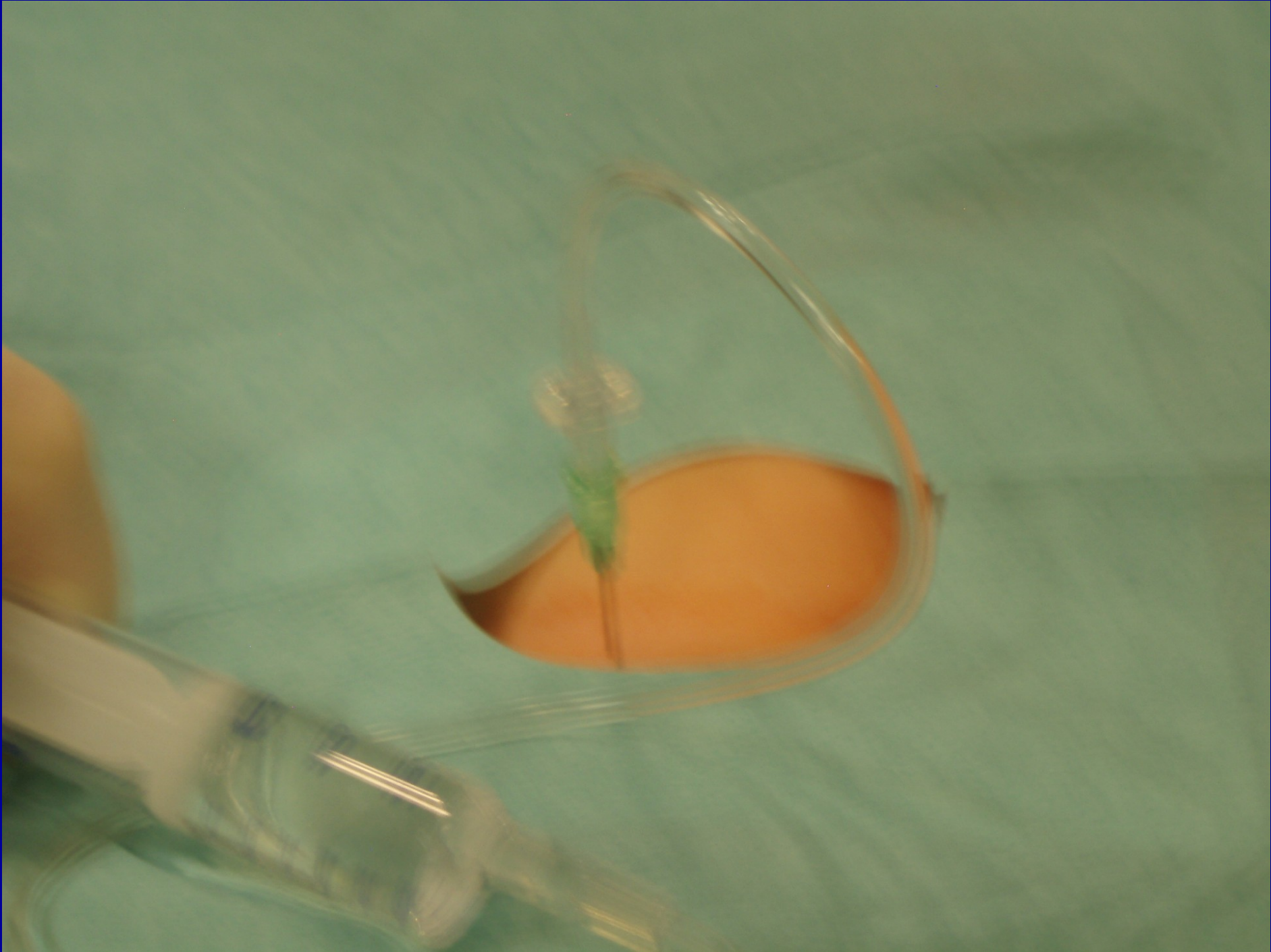






DDH

- Contrast arthrography – reduction, spica cast
- Obstructing limbus
- Lig. transversum
- Lig. teres - open reduction
- Pulvinar
- Tend. M. iliopsoas







DDH

Surgery treatment

- A : Capsular arthroplasty – Chiari
- B : Redirectional Osteotomy – Salter, Steel
- C : Periarticular Osteotomy - Pemberton

DDH

- Missed cases, residual dysplasia



Clubfoot

- syn. Talipes equinovarus
- CF is a complex congenital deformity which includes components of equinus, varus, adductus and medial rotation
- 1 : 1000 , bilateral in half
- Polygenic disorder
- The tarsals are hypoplastic, the talus is most deformed

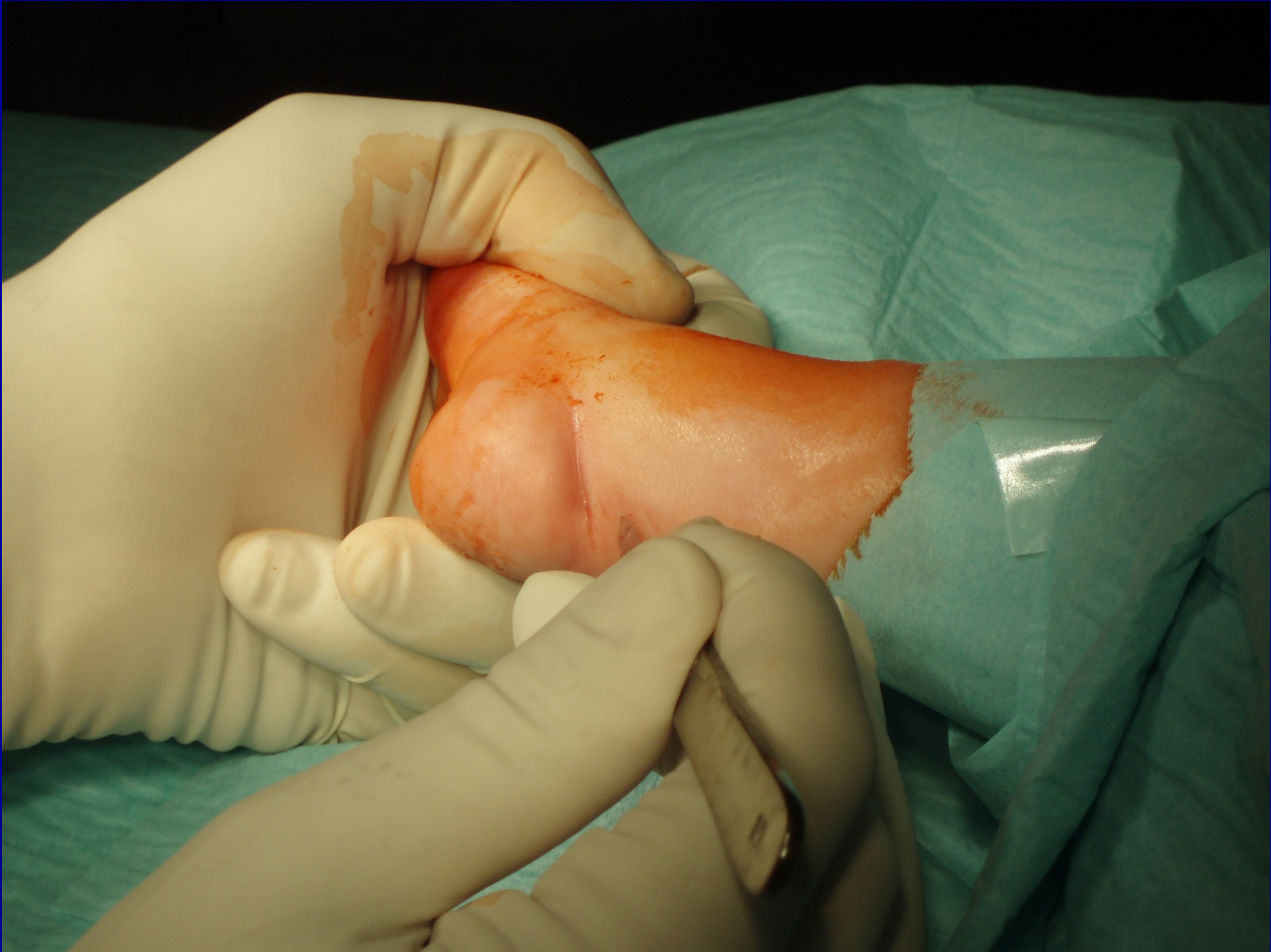




Clubfoot

Treatment

- Ponseti concept – cast treatment, percutaneous achilotomy, splint
- Operative treatment- complete subtalar release sec McKay





Vertical Talus



Genu Varum - Valgum

- Genua vara



- Genua valga



Toe deformities

- Polydactyly



Leg Length Inequality

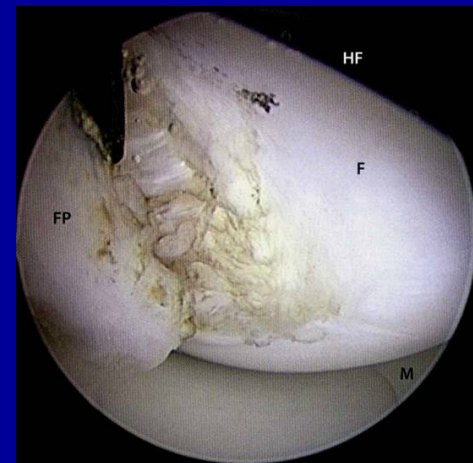
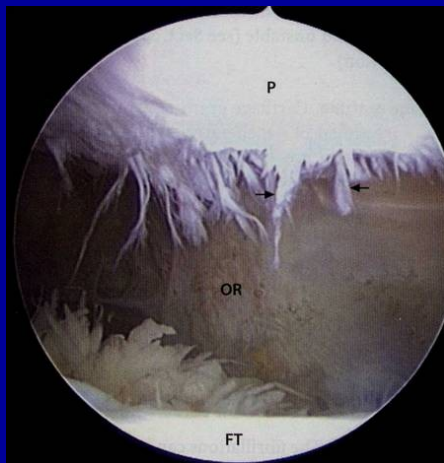
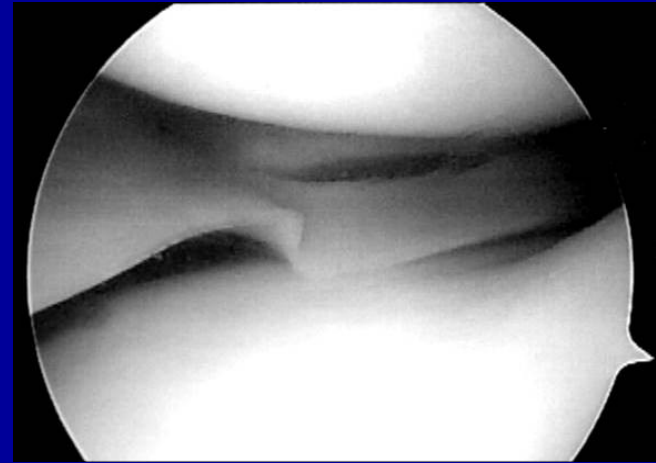
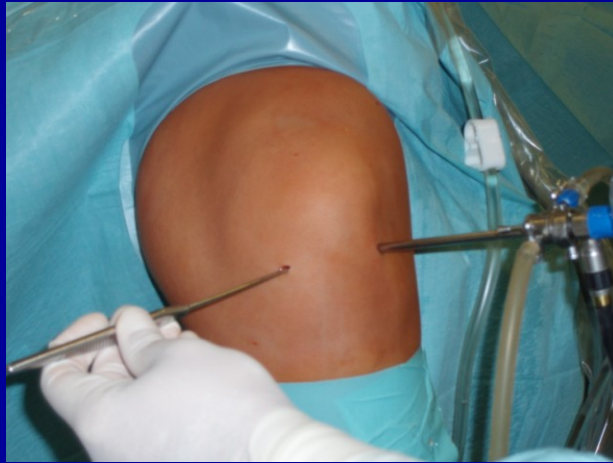
- Femoral lengthening
- Ilizarov lengthening



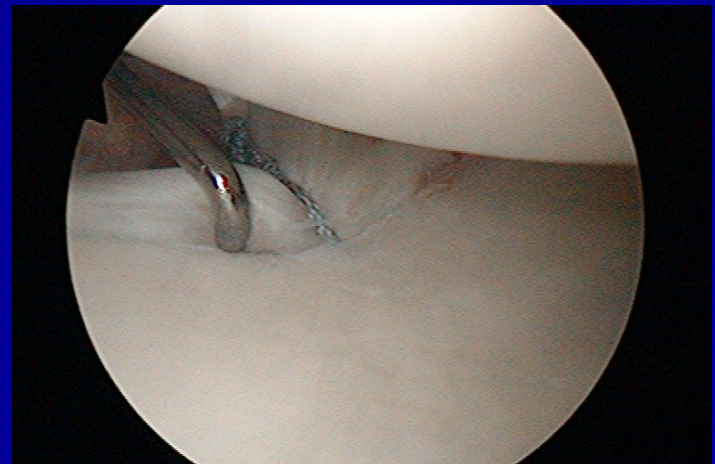
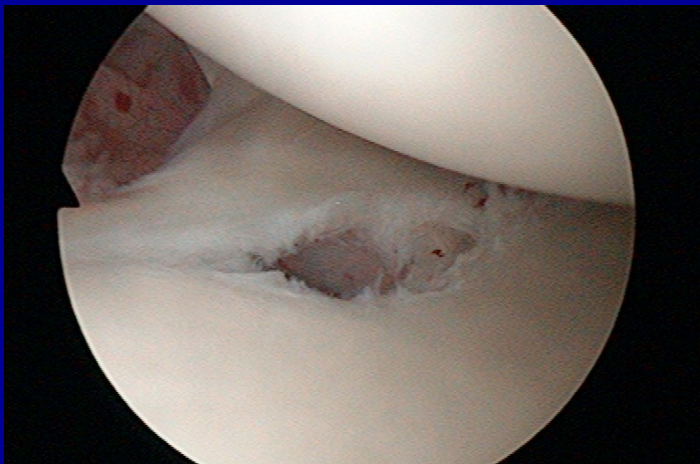
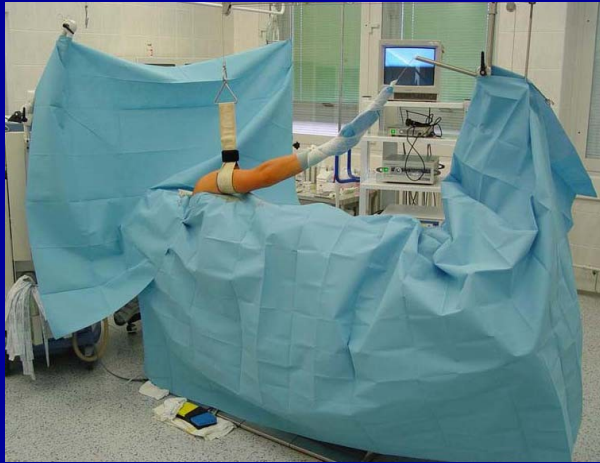
Torticollis muscularis cong.



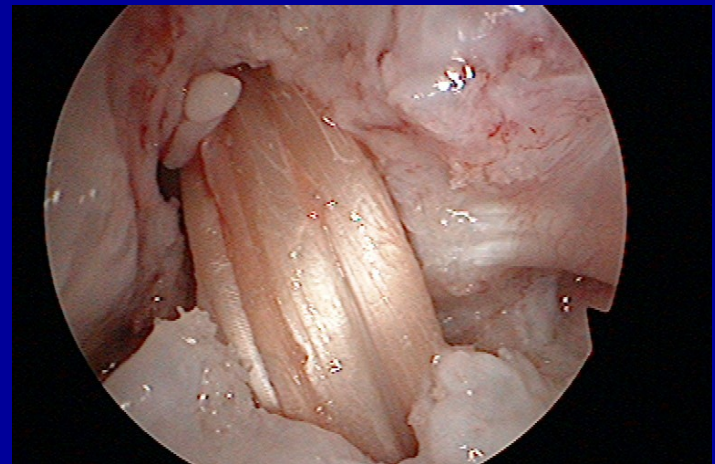
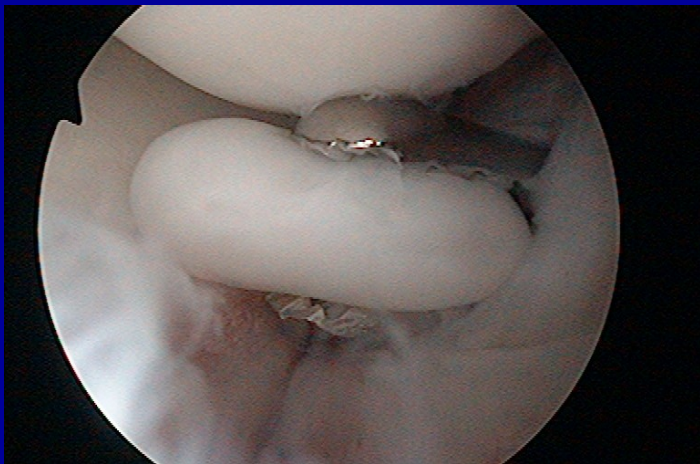
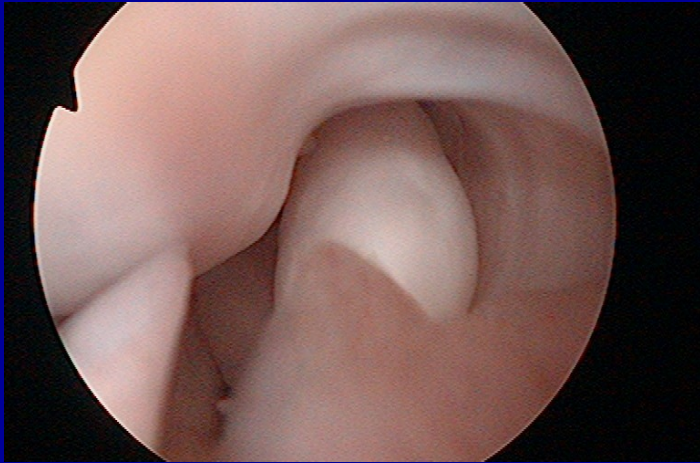
Arthroscopy in childhood



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Orthotics

