

# Some Problems in Pediatric Orthopedics

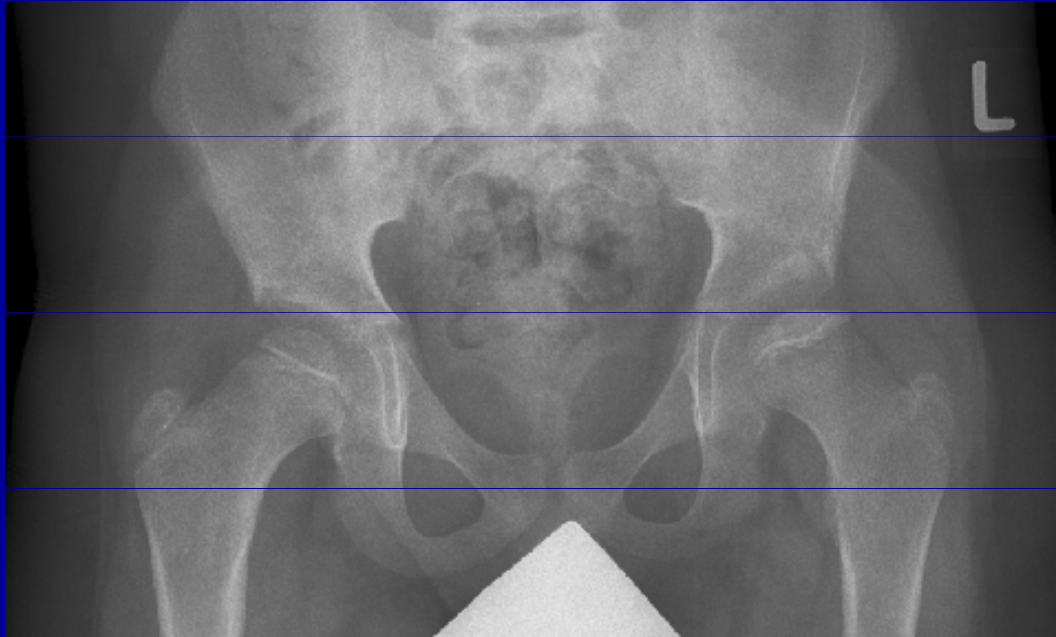
Jochymek J.

Dpt. of Pediatric Surgery, Orthopedics and  
Traumatology

Masaryk University and Faculty Hospital in  
Brno

# 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
  - redirection ot.- Salter, Steel
  - combination







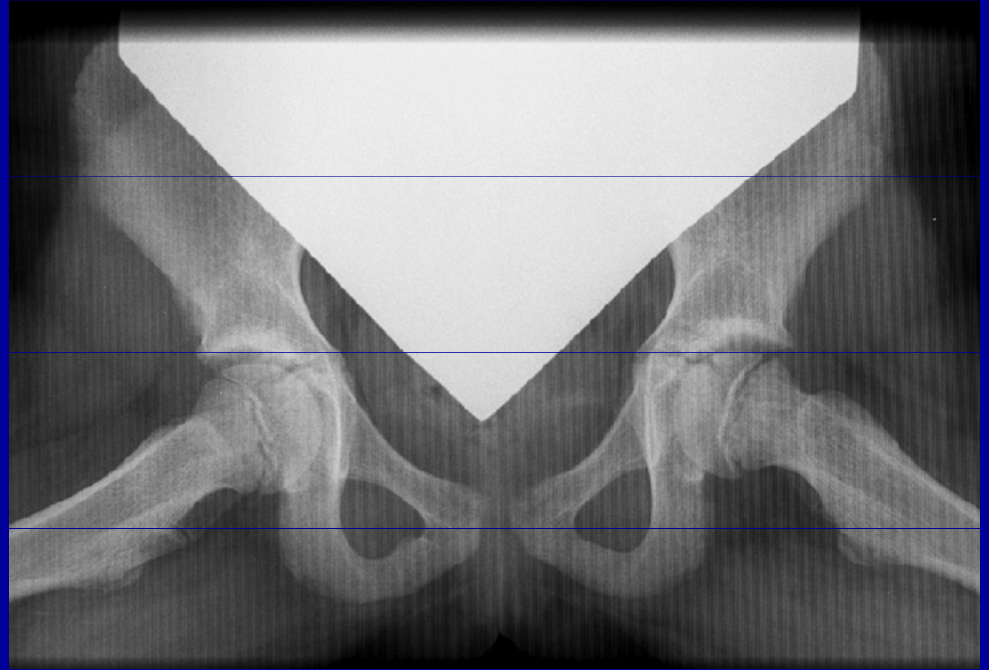
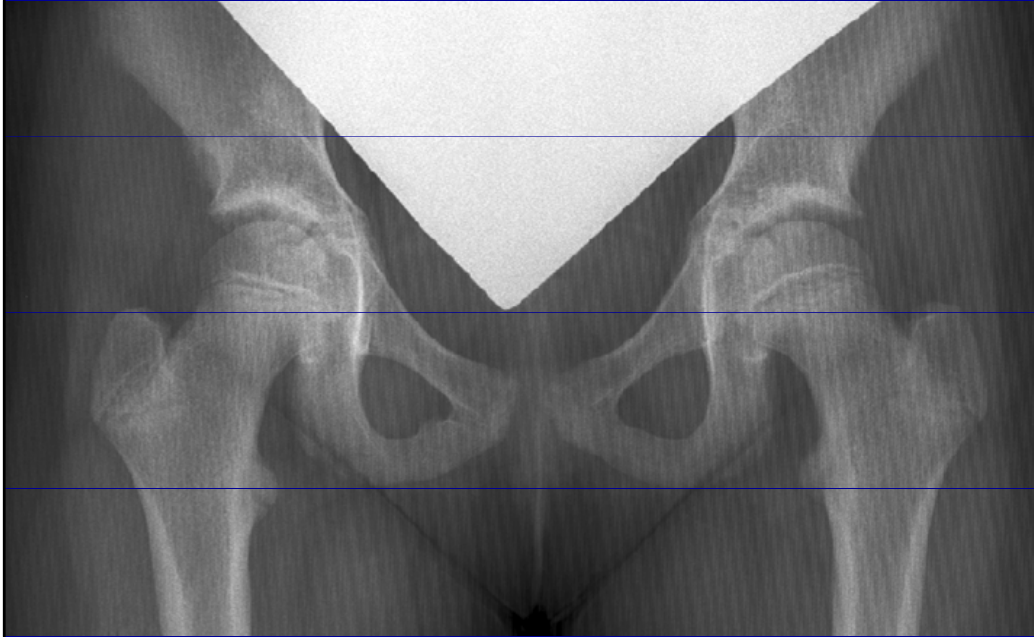
# Slipped Capital Femoral Epiphysis

- ..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

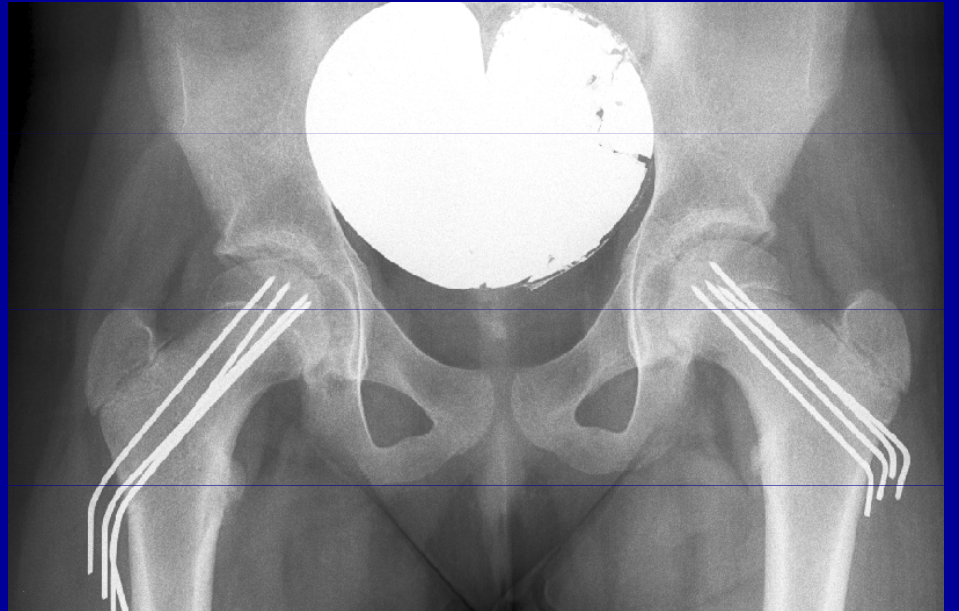
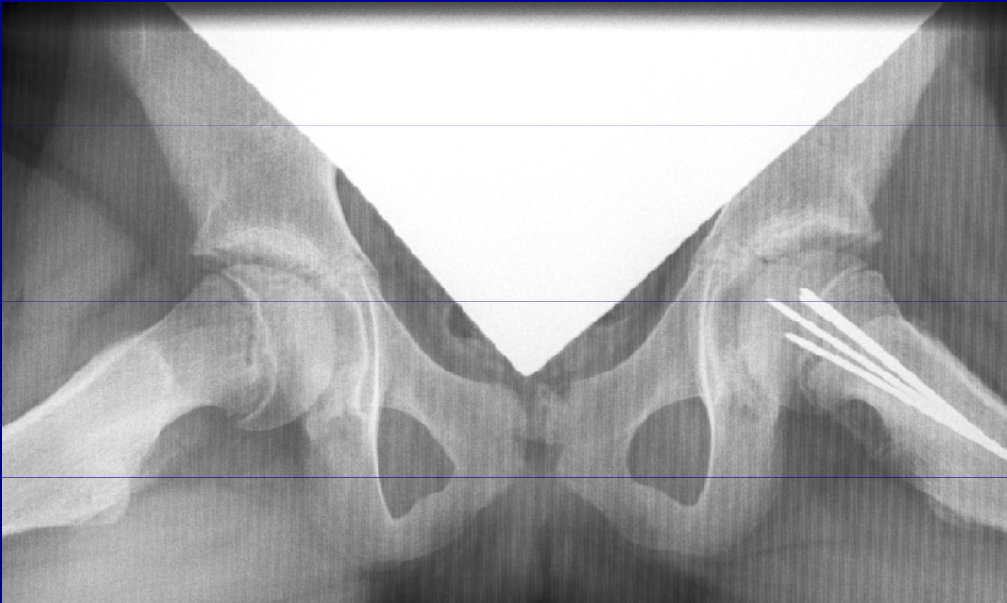
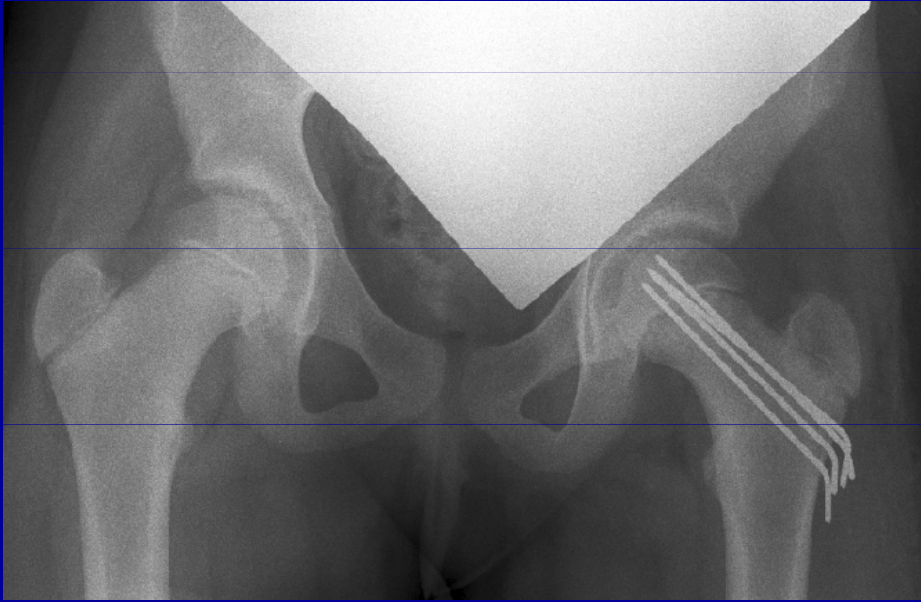
- Knee pain, loss of medial hip rotation, Drehman sign
- Radiography
- Bone scans
- CT scans



# 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

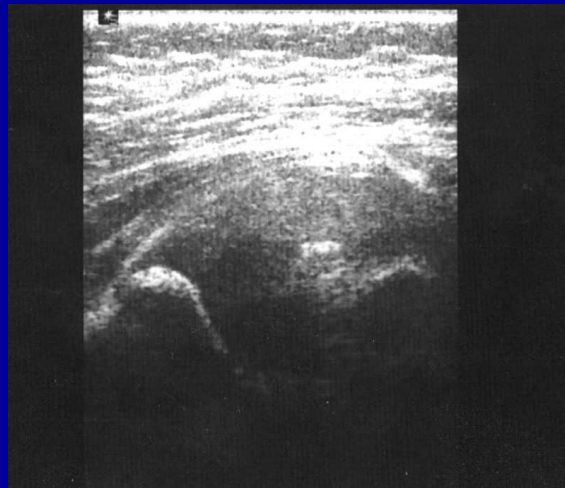
- DDH is a generic term describing a spectrum of anatomic abnormalities of the hip that may be congenital or develop during infancy or childhood
- Girls 6 : boys 1
- Incidence Czech Rep. 5%
- Etiology is multifactorial: genetic factor, intrauterine position, neonatal positioning, joint laxity, hormonal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

# DDH

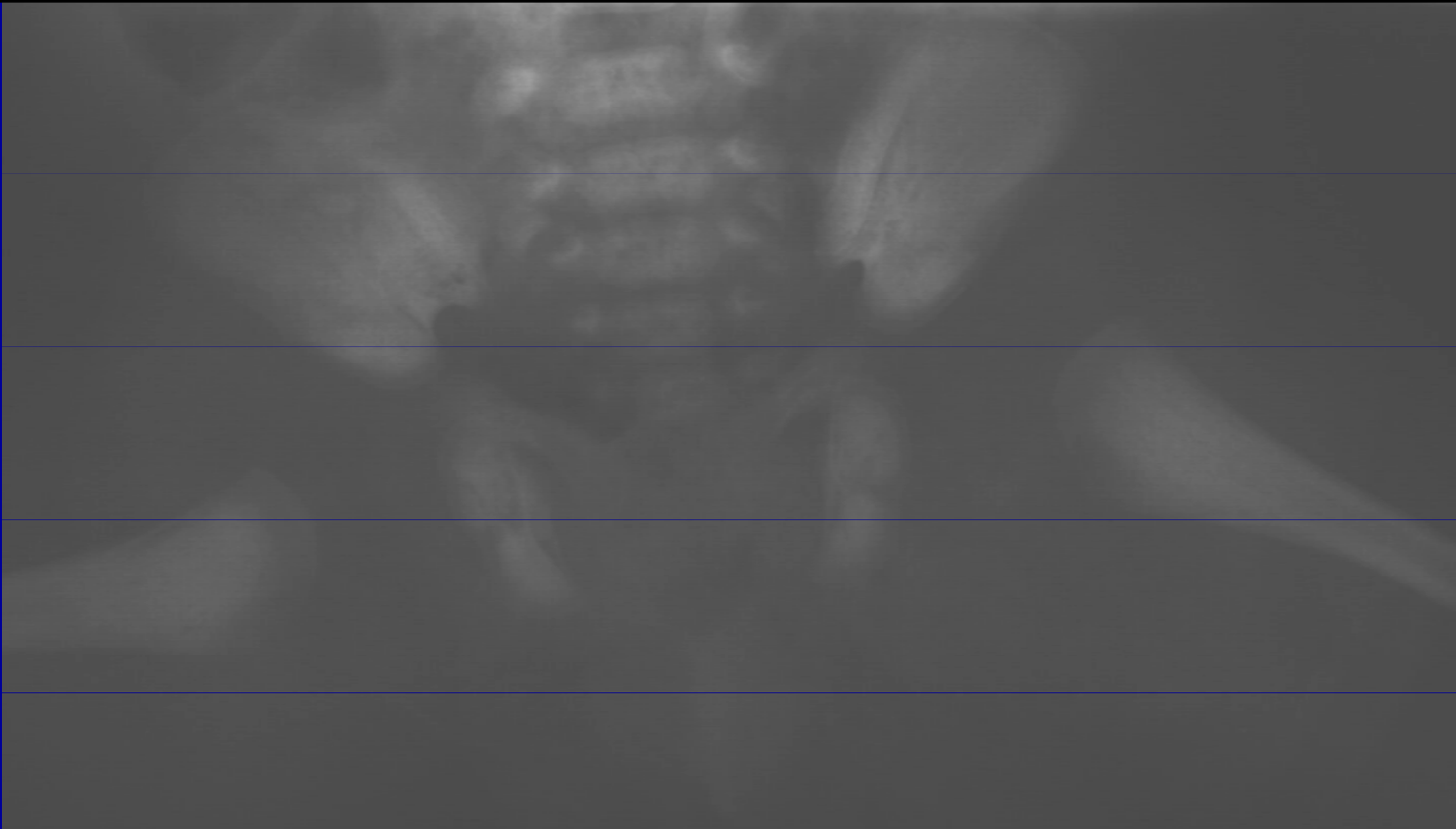
## Diagnosis

- 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









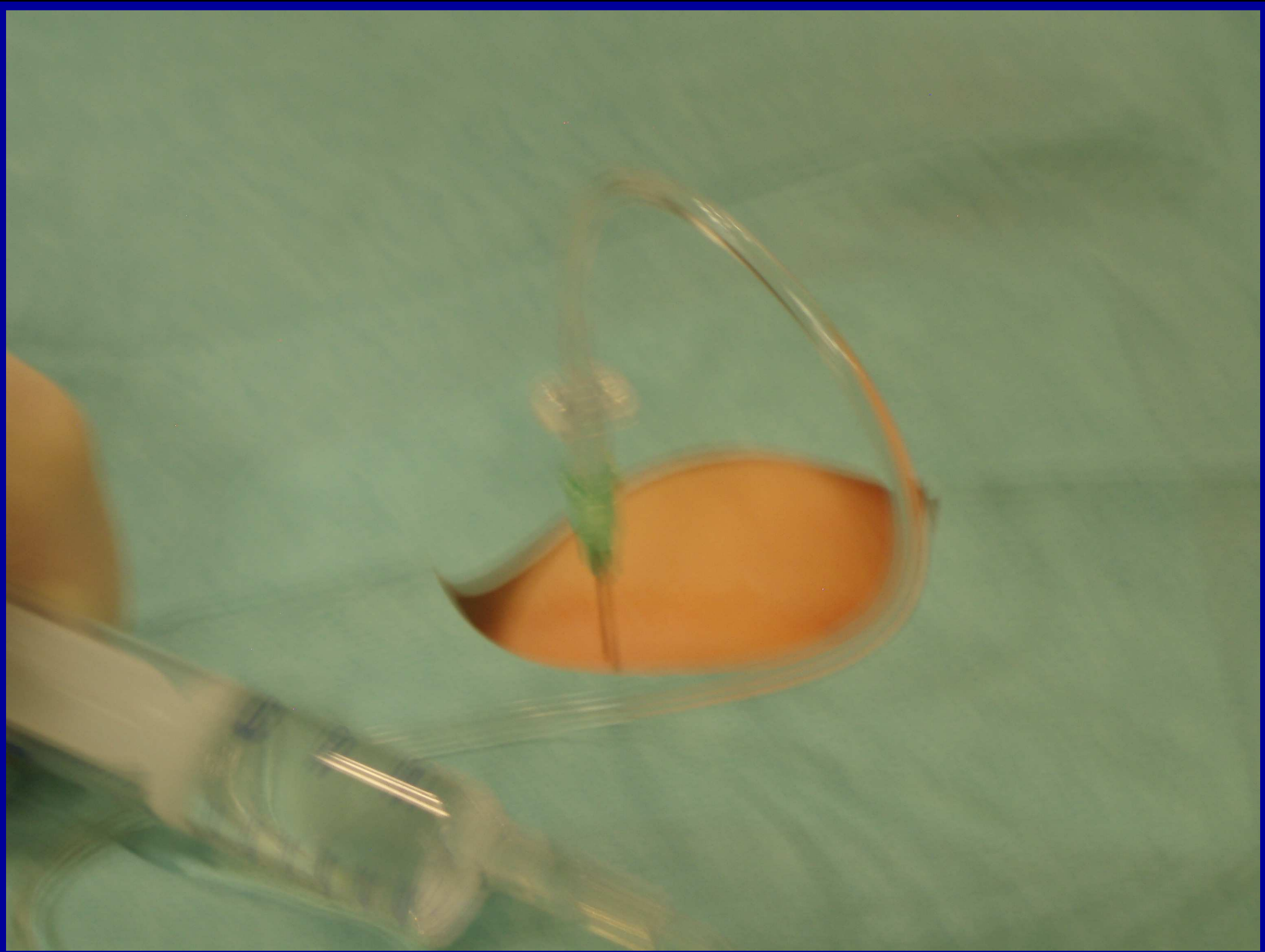






# DDH

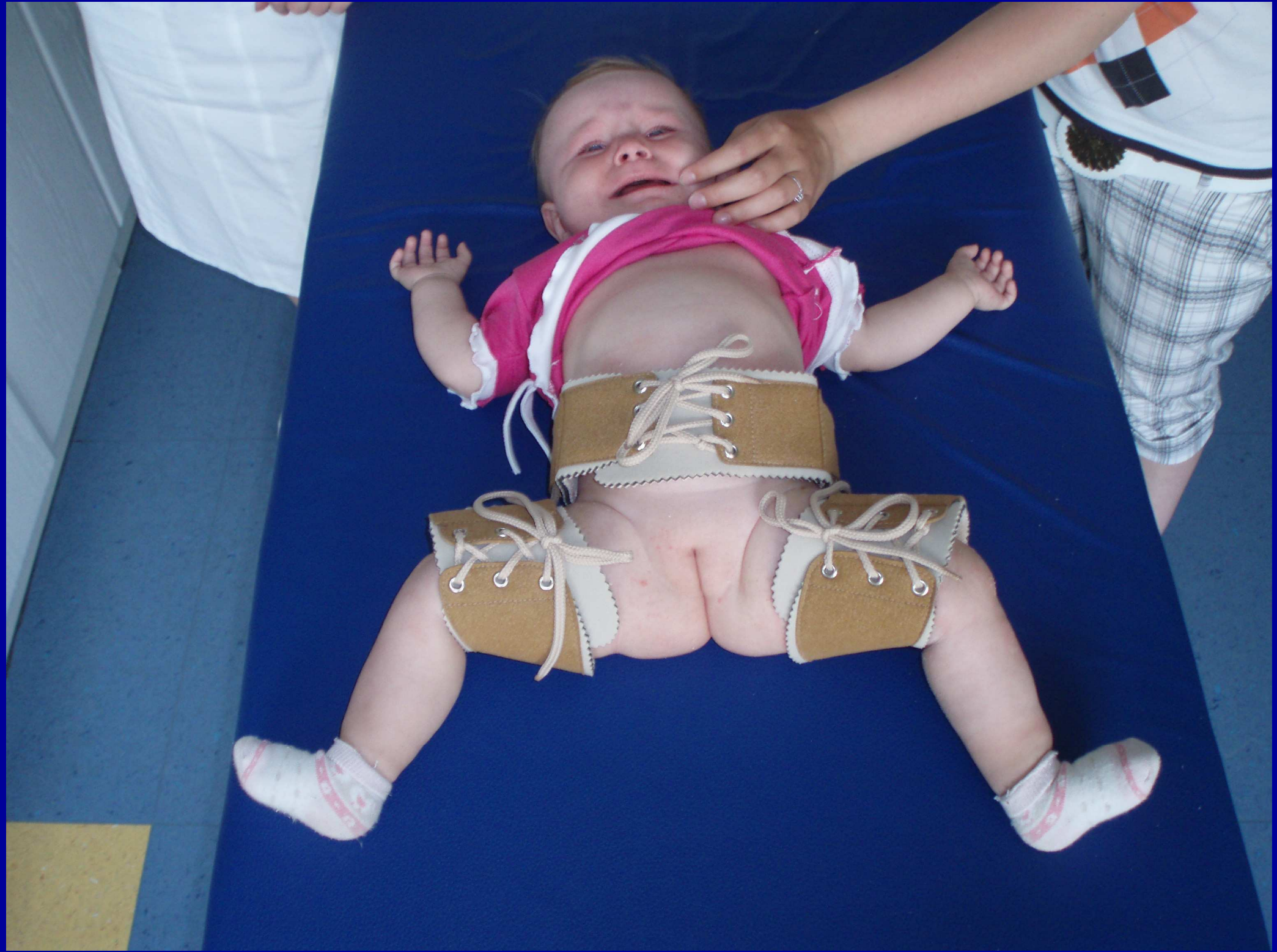
- Contrast arthrography – reduction, spica cast
- Obstructing limbus
- Lig. transversum
- Lig. teres - open reduction
- Pulvinar
- Tend. M. iliopsoas











# 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



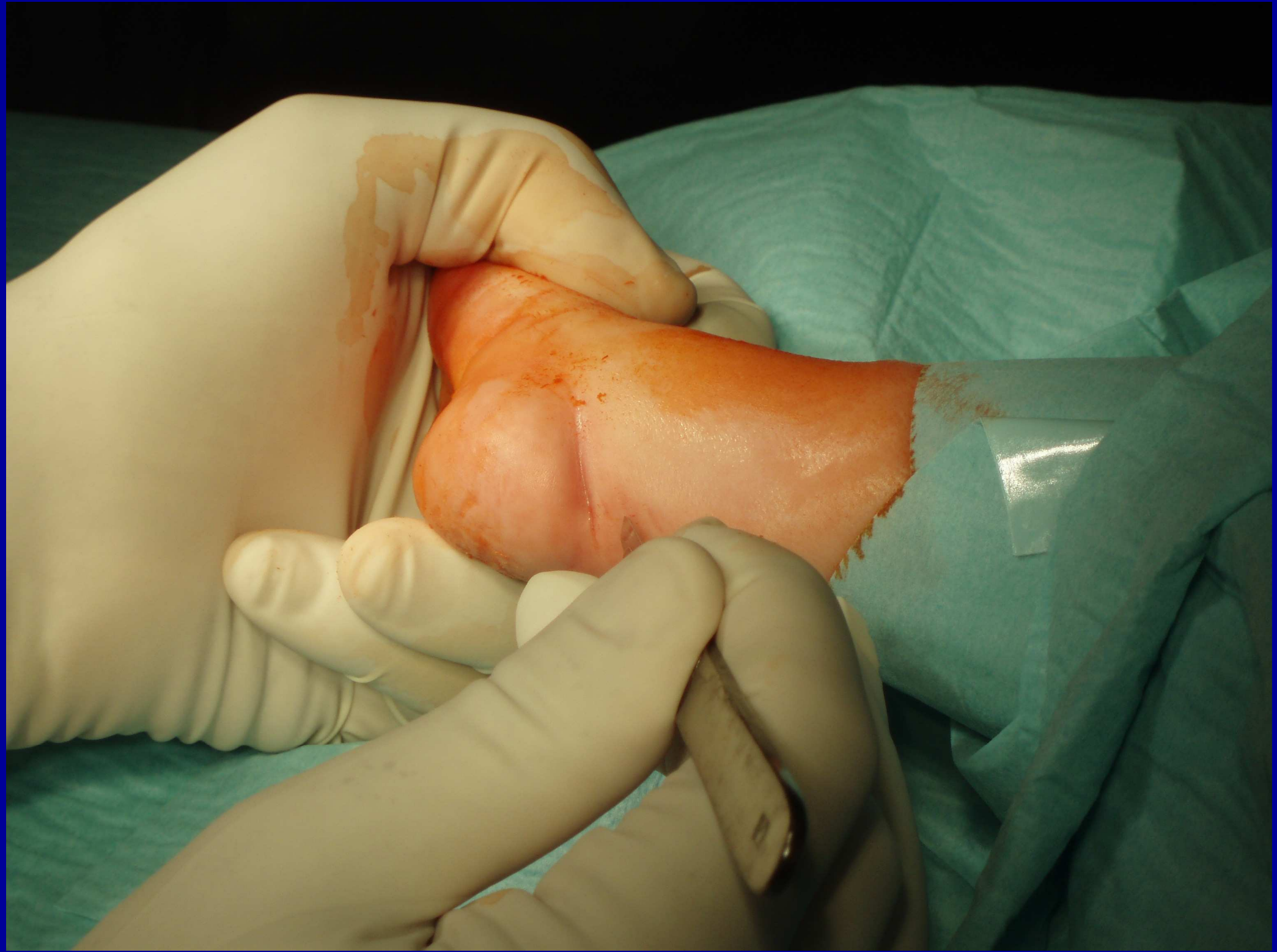




# Clubfoot

## 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

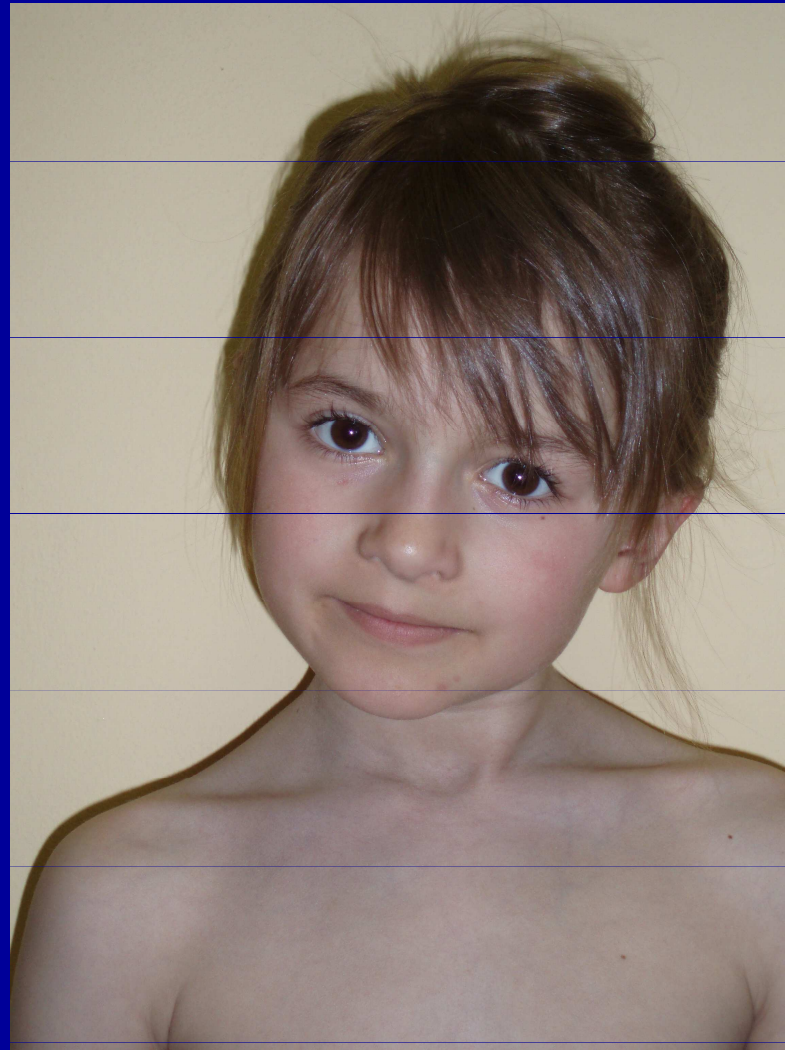


# Leg Length Inequality

- Femoral lengthening
- Ilizarov lengthening

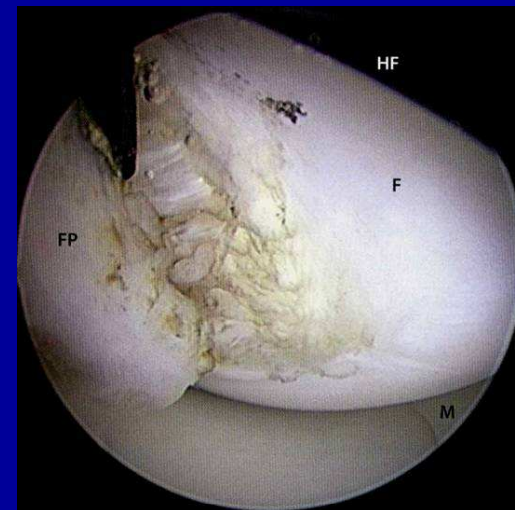
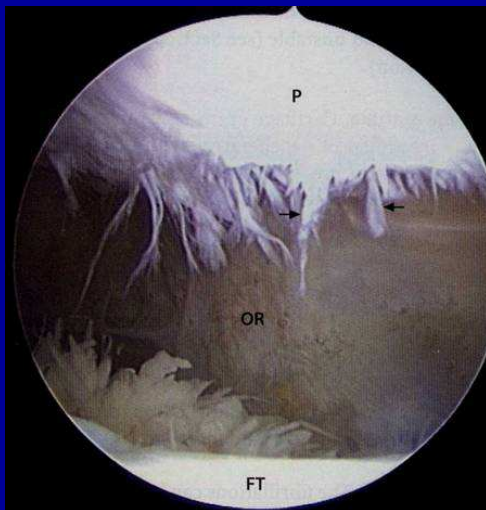
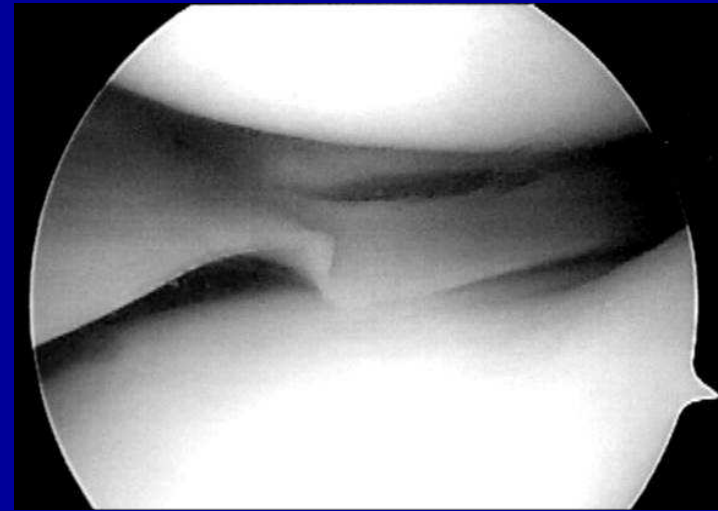


# Torticollis muscularis cong.

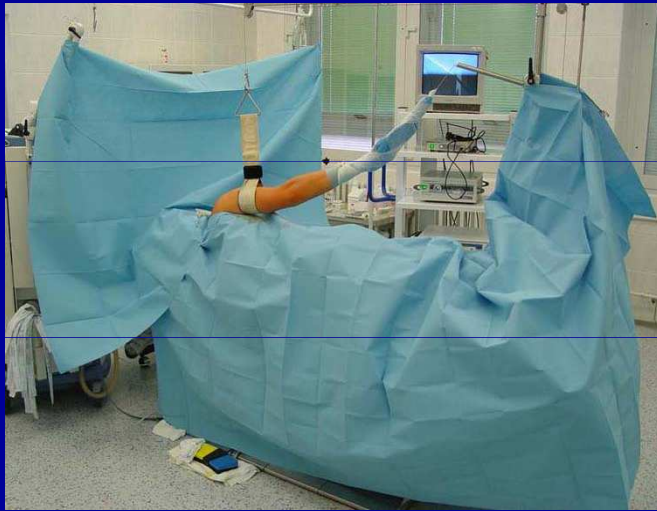




# Arthroscopy in childhood

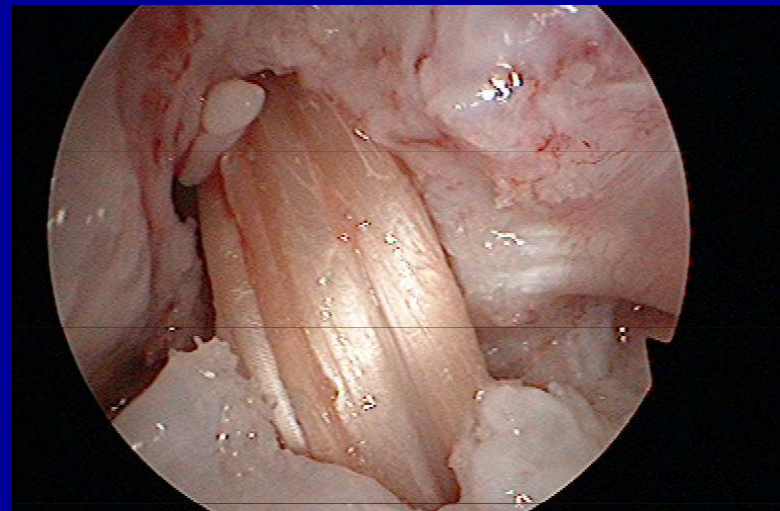
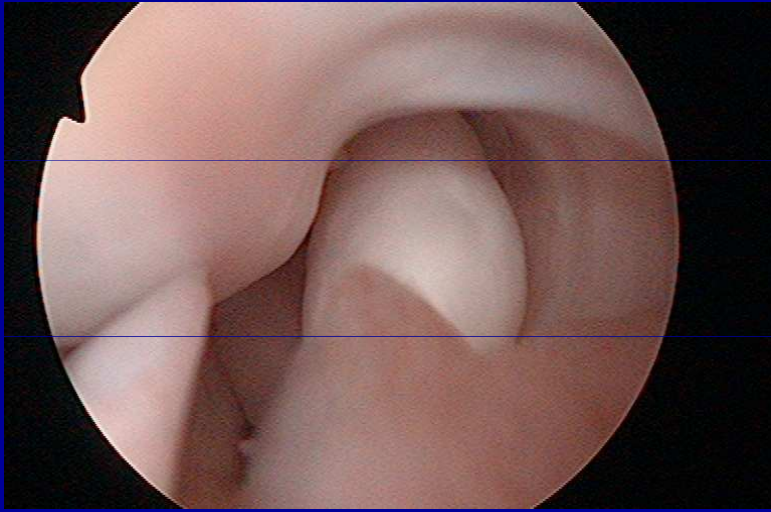


# Arthroscopy in childhood





# Arthroscopy in childhood





# Orthotics

