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Prevention of degenerative changes in the adolescent hip joint



Slipped capital femoral epiphysis (SCFE)

Occurs with a frequency of 3-5 patients per 100,000

Boy to girl ratio 2.4:1

- **Girls 10-14 years old**
- **Boys 14-16 years old**
- **It does not occur after menarche**

LEGG-CALVE-PERTHESA DISEASE

- ❑ Incidence 1 / 10 000
- ❑ Boy to girl ratio : 4,5:1
- ❑ AGE 4-8 years old

CLINICAL FEATURES – *SCFE & Perthes disease*

1. Pain (knee or hip)

- acute or chronic

2. LIMPING

3. DECREASE IN HIP RANGE OF MOTION –particular internal rotation less common adductor contracture

4. **DREHMAN SIGN (passive external rotation of the hip occurs when performing a hip flexion)**

5. LIMB SHORTENING

Classification – Loder SCFE

- **UNSTABLE:**

Weight bearing impossible due to pain

STABLE:

Weight bearing possible with or without crutches

Perthes Classification

- **IV PERIODS ACCORDING TO REIBERG**
- **EXTENT OF NECROSIS**
 - (CATTERALL TYPE)
 - (Harring type)

STUDY PURPOSE

- **DETERMINATION OF FREQUENCY AND LOCATION OF PAIN BEFORE RECOGNITION:**

SCFE & PERTHES DISEASE

ASSESSMENT OF SYMPTOMS SUGGESTING SCFE IN A X-RAY OF HIPS

MATERIAL

FROM 1982-2014

232 HIP JOINS WERE TREATED

SCFE –form:

- a) Acute: **29** hips
- b) Chronic **203** hips

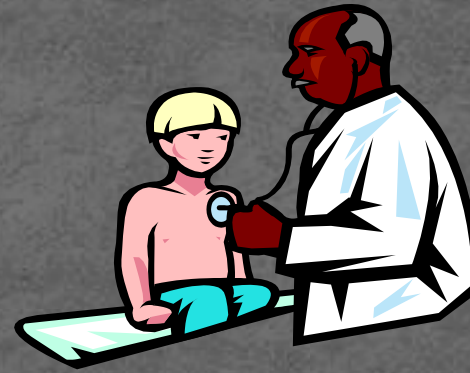
MATERIAL

FROM 1982-2014

**146 HIPS WERE TREATED
PATIENTS with Perthes' disease
FEMURE VARUS OSTEOTOMY PERFORMANCE**

INITIAL PAIN

AVERAGE 6.8 in *SCFE* 4.3 in *Perthes*
months before diagnosis



Radiation to the knee-71% in SCFE 63% in *.Perthes*

After exercise -65% in SCFE 59% in *Perthes*

At rest – rarely seen
100% in subgroup 29 patients with acute form



SIGNS *OF SCFE* IN RADIOLOGICAL TESTING

**Pelvic X-RAY in AP projection was
performed in 58 patients on average 4.7
months before diagnosis
KNEE X-ray in 96 PATIENTS !!!**

SYMPTOMS SUGGESTING SCFE IN THE RADIOLOGICAL TESTS

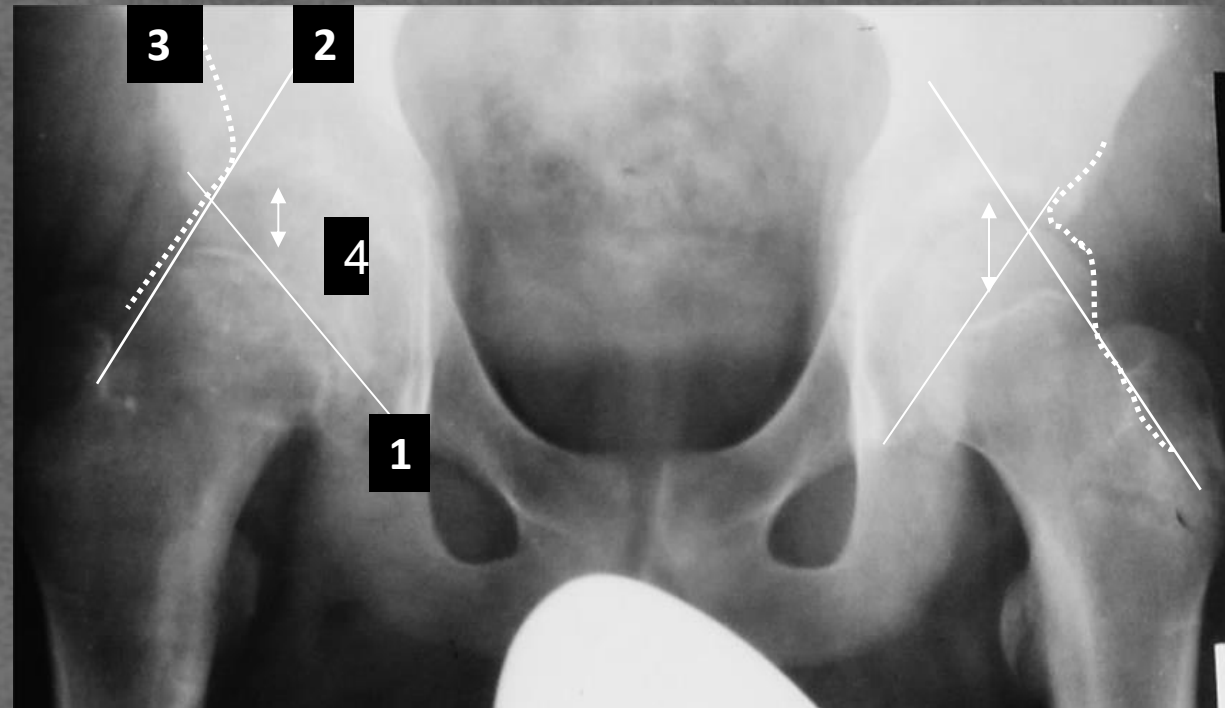
1. "lack of femoral neck in the acetabulum"

CAPENER-DURBIN SIGN)

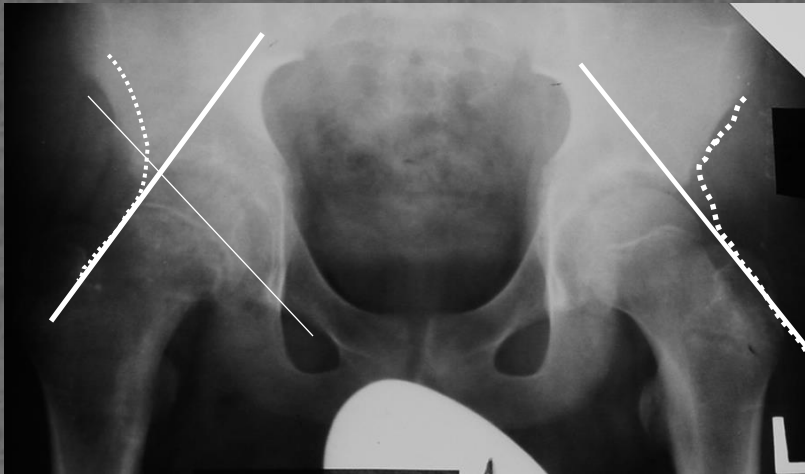
2. Klein-Trethowan line

3. Ilio-femoral line

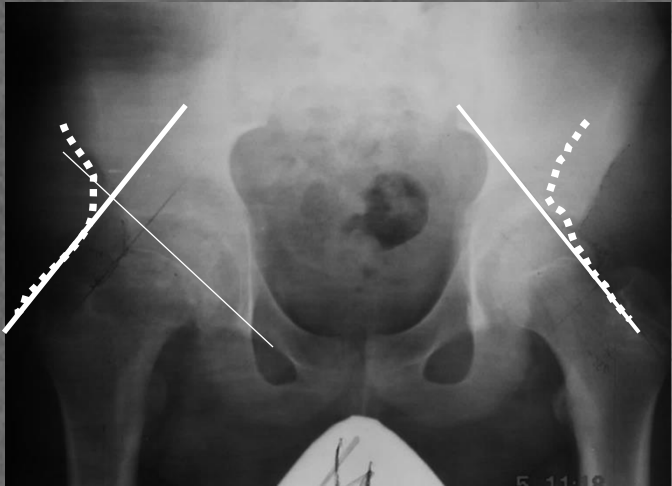
4. Decrease of epiphyseal height



SYMPTOMS SUGGESTING SCFE IN THE RADIOLOGICAL TESTS



03.2006



06.2006



12.2006

TREATMENT OUTCOME *SCFE AND PERTHES DISEASE*

Depends on:

- *Early and correct diagnosis*
- *The use of preventative treatment*
 - *further displacement of the femoral neck in SCFE*
 - *and destruction of the epiphysis in Perthes diseases*

CONCLUSIONS

- 1. At initial stage of the disease, pain is located mainly around the knee joint (70%)**
- 2. In pelvic radiograms in the AP projection, 87% patients had symptoms suggestive of SCFE, which should lead to a further diagnostic process to prevent deformation**

Thank you for your attention

