SLIPPED CAPITAL FEMORAL EPIPHYSIS

Slipped Capital Femoral Epiphysis (SCFE) is an acquired (usually insidious onset) disorder of the hip in adolescent and preadolescent children. It is characterized by a separation of the proximal femoral epiphysis from the remainder of the femur through a weakened growth plate (physis). This diagnosis is often missed or delayed due to its subtle presentation. So, always consider SCFE in any child age 10-16 with a limp, decreased hip ROM, and/or hip, thigh, or knee pain!

Risk Factors & Epidemiology

- 2-10 per 100,000 adolescents (U.S.)
- Higher prevalence in Pacific Islander and African-American children
- 25%-40% bilateral LE involvement
- Females age 10-13; Males age 12-16
- Male-to-Female Ratio: 2.5:1
- Obesity
- Period of rapid growth
- Prior radiation therapy
- Retroversion of acetabulum or femoral head

Cause

The true cause of SCFE is unknown; it is likely many interdependent factors are involved. Some of these factors include:

- Local Trauma
- Inflammatory Factors
- Endocrinologic Factors
- Familial or Environmental Factors
- Biomechanical Forces
 - Increased stress across the physis causes disruption through the physis' hypertrophic zone

Classifications

• Duration of Symptoms Magnitude of Slippage Acute: < 3 weeks

Mild: < 33%

Moderate: 33%-50%

Severe: > 50%

Stable vs Unstable Slipped Capital

Clinical Presentation

Acute on Chronic

Chronic: > 3 weeks

- Antalgic Gait w/hip ER
 - o Or inability to bear weight
- Pain in hip, groin, thigh, or knee
- Limited hip ROM
 - IR, ABD, and Flexion
- Drehmann Sign
 - Obligatory ER with passive hip flexion to 90°

Immediate Medical Referral

If you suspect SCFE, ensure patient is NWB immediately and refer to orthopedic surgeon for radiographic diagnosis. If SCFE is confirmed, patient will undergo surgical fixation to prevent further slipping and avoid complications such as AVN and chondrolysis. Early detection is key!

References:

- 1. Johns K, Mabrouk A, Tavarez MM. Slipped capital femoral epiphysis. In: StatPearls. StatPearls Publishing; 2022.
- 2. Hart ES, Grottkau BE, Albright MB. Slipped capital femoral epiphysis: don't miss this pediatric hip disorder. Nurse Pract. 2007;32(3):14, 16-18, 21. doi:10.1097/01.NPR.0000263076.88826.fa
- 3. Pellecchia GL, Lugo-Larcheveque N, Deluca PA. Differential diagnosis in physical therapy evaluation of thigh pain in an adolescent boy. J Orthop Sports Phys Ther. 1996;23(1):51-55. doi:10.2519/jospt.1996.23.1.51

Images:

- 1. https://slideplayer.com/16439333/96/images/slide_5.jpg
 2. https://www.eorthopod.com/images/ContentImages/child/c
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