Slipped Capital Femoral Epiphysis

What is it?

Slipped Capital Femoral Epiphysis (or SCFE) is a hip issue affecting older children and younger teenagers. It is a fracture of the growth plate on the upper femur which causes the head of the femur to slip down and backwards relative to the rest of the thighbone. This results in hip pain, stiffness, and dysfunction of the affected leg.

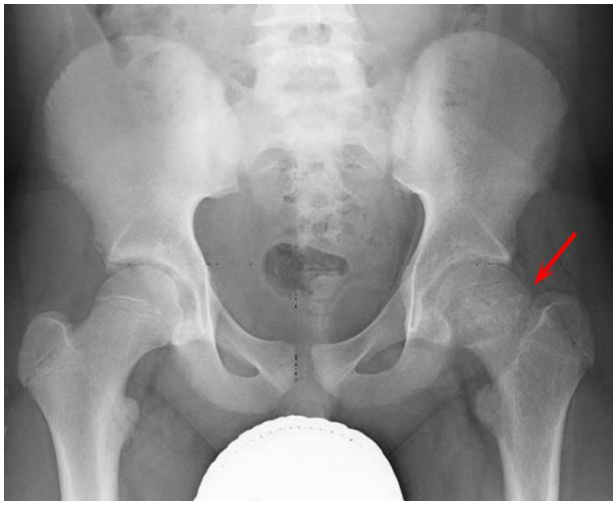
SCFE Types

There are two types of SCFE:

- Stable SCFE (the most common variety). In stable SCFE, the person is normally able to weight-bear with or without crutches
- Unstable SCFE. The person is unable to weight-bear and requires more urgent management to prevent further complication.
- Classification of SCFE is essential for prioritising management options, and to improve the outcome.

Causes

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The cause of SCFE is not really known. SCFE occurs at the growth plate of the neck of femur because of the relative weakness of the growth plate This is due to it being made of underdeveloped bone. It can occasionally occur after a minor fall or trauma but, often it is insidious in nature.

Risk factors to developing SCFE include:

- SCFE usually develops through puberty after periods of rapid growth. The common age ranges are 12 and 16 years in boys and between 10 and 14 years of age in girls.
- Carrying excessive weight/obesity is extremely common for patients with SCFE
- Boys experience SCFE more commonly than girls
- Family history of the injury
- An endocrine or metabolic disorder e.g. hyperthyroidism
- Having SCFE on one side will highly increase the likelihood of it occurring on the other side, with 40% usually experiencing SCFE on the opposite side within 18 months.

Diagnosis

A thorough subjective and physical examination combined with imaging will help to accurately diagnose SCFE in young people. Throughout the consult we will be looking for common signs and symptoms shown below. The physical examination by your physiotherapist of doctor will include assessing the gait of the patient and the hip joint range of motion, then collating that information with the rest of the history.

Common signs and symptoms of SCFE include:

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- Pain often localised around the hip or groin (possibly down thigh and knee)
- Limping whilst walking (often after period of activity)
- Inability to weight-bear (more severe cases)
- Externally rotated leg (turned out)
- Reduced leg length on the affected side



Imaging is a crucial stage to confirm the diagnosis and assess the severity of the slip of SCFE. A combination of radiographic techniques (including X-ray, CT and MRI scans) may be used to assess whether widening of the growth plate or avascular necrosis (the death of bone tissue due to lack of blood) is present, or to help with planning surgical techniques.

Blood tests should also be performed to rule out any endocrine issues, especially when the patient is in the high age-weight percentile.

What are the management options?

Once SCFE is confirmed through, the child will be non-weight bearing either on crutches or a wheelchair. Management of SCFE is aimed at preventing further slipping of the femoral head. This is done through corrective surgery (normally withing 24-48 hours). Internal fixation of the femoral head is achieved with pins/screws.

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After surgery, the child will be on crutches for several weeks until surgical review, then slowly wean into full weight-bearing. Physiotherapy will be undertaken to help build strength and mobility over the next months. Return to sports will be gradual and dependent on the healing of growth plates in the hip.

Early detection of SCFE is key to helping to prevent further complications and effectively stabilising the hip joint for the future. When treated early and effectively, you can expect excellent long-term hip outcomes.

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