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## **Perthes Disease**

Perthes disease usually is seen in children 2 to 12 years of age.

It is five times more common in boys than girls.

It was originally described nearly a century ago as a peculiar form of childhood arthritis of the hips.

It is a developmental condition of unknown cause

For some reason the head of the femur loses circulation temporarily

For majority of cases, only observation is required

### **What is Perthes' disease?**

Perthes is a condition characterized by a temporary loss of blood supply to the hip.

When the blood supply is diverted, the bone of the femoral head (the 'ball' of the 'ball and socket' joint of the hip) dies. Intense inflammation and irritation develop.

Perthes is a complex process in children. The stages and various forms of treatment may be confusing.

The long-term prognosis is good in most cases when it appears before 6 years of age.

After 18 months to two years of treatment, most children return to normal activities without major limitations.

### **How to recognise this condition?**

Limping and mild pain usually diagnose the condition.

The child may have had these symptoms intermittently over a period of weeks or even months.

Pain sometimes is caused by muscle spasms that result from hip irritation. The pain may be felt in other parts of the leg such as the groin, thigh or knee.

When the hip is moved, the pain worsens. Rest often relieves the pain.

X-rays: are diagnostic

Head of the femur appears dense [white]

Shape becomes flat [normal is spherical]

Head becomes fragmented



### **Treatment Options**

The child with Perthes' can expect to have several X-rays taken over the course of treatment, which may be two years or longer. The X-rays usually will look worse before gradual improvement is noted.

Girls tend to have more extensive involvement; therefore, they have a generally poorer prognosis than boys.

Usually, treatment for very young children (those 2 to 6 years of age) with minimal X-ray changes consists of observation.

For the older child [over 8 years], vigorous treatment is necessary to maintain the hip range of motion. There are three components of treatment:

**1.Reduce the swelling or inflammation in the hip joint**

Anti-inflammatory drug

Rest

Reduce activities

To help restore range of motion, physical therapy,

Ambulation with crutches, or bed rest in traction may be needed.

**2.Maintain hip position in the socket.[containment]**

If the range of motion (ROM) cannot be maintained, or if X-rays or MRI indicate a progressive deformity is developing, a brace or cast may be used to keep the femoral head (ball) contained within the acetabulum (socket). However, this treatment is rarely used nowadays.

Petrie casts are two long leg casts or Rite brace has been used; this is not popular these days.

**3. Surgical option is preferred than cast or brace when containment is required**

Surgical treatment realigns the bony structures so that the head of the femur is placed deep within the acetabulum.

One way is by osteotomise femur Fixation is maintained with screws and plates that will be removed at a later date. Otherwise: Redirect the acetabulum [socket] by dividing the pelvis.



After either procedure, the child is often placed in a cast from the chest to the toes for 6 to 8 weeks.

After the cast is removed the child will participate in physical therapy with protected weight bearing of the affected leg until X-rays reveal the final stages of the healing are under way.

**What is the long term?**

Outcome is good when it happens before 6 years

When it happens after 8 years: in some cases your surgeon may decide on surgical treatment

End result depends on extent of involvement of the head as well as age at which it appears. When head remains misshapen, early osteoarthritis [painful hip] may happen at 40 years requiring early total hip replacement