Transient synovitis

(التهاب سينوفي عابر)

Dr Ashraf Al Bayya

TRANSIENT SYNOVITIS OF THE HIP (⇒ most commonly involved)

- self-limiting condition in which there is an *inflammation* of the inner lining (the synovium) *of the capsule of the hip joint*.

- The term *irritable hip* refers to the syndrome of acute hip pain, joint stiffness, limp or non-weightbearing, indicative of an underlying condition such as transient synovitis or orthopedic infections (like septic arthritis or osteomyelitis).

- In everyday clinical practice however, irritable hip is commonly used as a synonym for transient synovitis.

- Transient synovitis usually affects children between *three and ten years old*.

(3-10)

- It is the most common cause of sudden hip pain and limp in young children.

(irritable hip)

- *Boys* are affected two to four times as often as girls .

- The exact cause is unknown. A recent *viral infection* (most commonly an upper respiratory tract infection) or a *trauma*have been postulated as precipitating events, although these are ٣٠% reported only in and ٥% of cases, respectively.

⇒ T.S. can occur after trauma بنسبة (30-50٪)

- Transient synovitis is a **DIAGNOSIS OF EXCLUSION**.

- The diagnosis can be made in the typical setting of pain or limp in a young child who is not generally unwell and has no recent trauma .

CLINICAL PICTURE

- *pain* in the hip, thigh, groin or knee on the affected side
- There may be a *limp* (or abnormal crawling in infants) with or without pain .
- unexplained *crying* .
- Some children may have a *slightly raised temperature*; high fever and general malaise point to other, more .serious conditions

⇐ طفل مشتكي انه تعولك ، اجريه ~ URTI وبعدها صار عنده limbing gait
(عرج)

→ T.S. is caused by inflam process in synovial membrane → irritation of cells secrety synovial fluid [inflam. process + excess syn. fluid]
with/out bacterial infection

⇐ عنديكو الحرارة slight fever.

EXAMINATION OF THE HIP

- ✓ During physical examination, hold the hip in *flexion with slight abduction and external rotation*.
- ✓ Examination of the individual with transient synovitis usually reveals *mild restriction of motion*, especially to flexion & abduction and internal rotation, although one third of patients with transient synovitis demonstrate no limitation of motion
- ✓ The hip may be *painful* even with passive movement.
- ✓ swelling, bruising if containing contusion.
- ✓ The hip may be *tender* to palpation.

(soft tissue & bony tenderness) (slight swelling)

✓The most sensitive test for transient synovitis is *the log roll, in which the patient lies supine and the examiner gently rolls the involved limb from side to side.* This may detect involuntary muscle guarding of one side when compared to the other side.

✓Any effusion or joint abnormality within the knee should suggest another disease process.

✓The lumbar spine, sacroiliac joint, knee, and abdomen should also be examined. A complete musculoskeletal examination to look for joint swelling should be performed if there is a history of inflammatory symptoms

⇒ by US ⇒ There's clear effusion, thick synovial fluid (septic مش hip)

⇒ by CBC ⇒ slight elevation in WBCs & ESR & CRP.

. slightly elevated or normal زي الي فوق

⇒ by aspiration ⇒ -ve culture, just synovitis.

DIFFERENTIAL DIAGNOSIS

1. *Septic arthritis* . (bacterial infection)
2. Osteomyelitis in proximal femur .
3. Bone fractures, such as a toddler's fracture (spiral fracture of the shin bone), child abuse fracture .
4. Soft tissue injuries (contusion / hematoma)
5. Muscle or ligament injuries .
6. Slipped capital femoral epiphysis . (SUFE) → seperation of femoral head in epiphyseal plate from proximal femur

7. Avascular necrosis of the femoral head (Legg-Calvé-Perthes disease) .

8. Neurological conditions (disc prolapse/ disc bulge/ discitis)

9. developmental dysplasia of the hip .(DDH)

(but pain isn't sudden)

10. diseases of the organs in the abdomen (such as a
11. psoas abscess) or by testicular disease.

11. rheumatic condition (juvenile idiopathic arthritis, Lyme arthritis, gonococcal arthritis, RA).

12. bone tumour. (osteosarcoma in proximal femur) .

DIAGNOSIS

→ hx of URTI / UTI.

- There are *no set standards for the diagnosis of suspected transient synovitis*, so the amount of investigations will depend on the need to exclude .other, more serious diseases

- Inflammatory parameters in the blood may be slightly raised (these include *erythrocyte sedimentation rate, C-reactive protein and white blood cell count*), but raised inflammatory markers are strong predictors of other more serious conditions such as *septic* arthritis.

- *X-ray imaging of the hip is most often unremarkable.*

- Subtle radiographic signs include an accentuated pericapsular shadow, widening of the medial joint space, lateral displacement of the femoral epiphyses with surface flattening (Waldenström sign), prominent obturator shadow, diminution of soft tissue planes around the hip joint or slight demineralisation of the proximal femur .

- The main reason for radiographic examination is to *exclude bony lesions* such as occult fractures, slipped upper femoral epiphysis or bone tumours (such as osteoid osteoma). An *anteroposterior and frog lateral* (Lauenstein) view of the pelvis and .both hips is advisable

- An *ultrasound scan* of the hip can easily demonstrate fluid inside the joint capsule (Fabella sign), although this is not always present in transient synovitis. However, *it cannot reliably distinguish between septic arthritis and transient synovitis.* If septic arthritis needs to be ruled out, *needle aspiration of the fluid* can be performed under ultrasound guidance. In transient synovitis, the joint fluid will be clear. In septic arthritis, there will be pus in the joint, which can be sent for bacterial culture and antibiotic sensitivity testing.

- More advanced imaging techniques can be used *if the clinical picture is unclear*; the exact role of different imaging modalities remains uncertain. *Some studies have demonstrated findings on magnetic resonance imaging (MRI scan) that can differentiate between septic arthritis and transient synovitis* (for example, signal intensity of adjacent bone marrow). *Skeletal scintigraphy* can be entirely normal in transient synovitis, and scintigraphic findings do not distinguish transient synovitis from other joint conditions in children. *CT scanning* does not appear helpful.

TREATMENT

1. rest .
2. non-weightbearing .
3. painkillers when needed.
4. A small study showed that the nonsteroidal anti-inflammatory drug ibuprofen could shorten the disease course (from ٤,٥ to ٢ days) and provide pain control with minimal side effects (mainly gastrointestinal disturbances).
- If fever occurs or the symptoms persist, other diagnoses need to be considered .

- if URTI → give antibiotics
- if congestion → drugs that improve venous return as daviton (Diosmin), ambezim, daflon.
- No role for skin traction ⟹ يزيد الضغط على الـ compression على joint capsule

- The condition usually clears by itself within seven to ten days, but a small group of patients will continue to have symptoms for several weeks .

(7-10)

- The recurrence rate is , most of which ١٧%–٤ is in the first six months .

نسبة recurrence in the same joint تقل ١٧٪

يمكن ترجع بالمفصل التاني .


Thank You!