

SEPTIC ARTHRITIS



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OBJECTIVES

- **Diagnose septic arthritis**
 - **History**
 - **Clinical exam**
 - **Investigations**
- **How it will be treated.**

DISEASE

- Septic arthritis

RATING

- C3

Diagnose+refer

SKILLS TEST

- S3

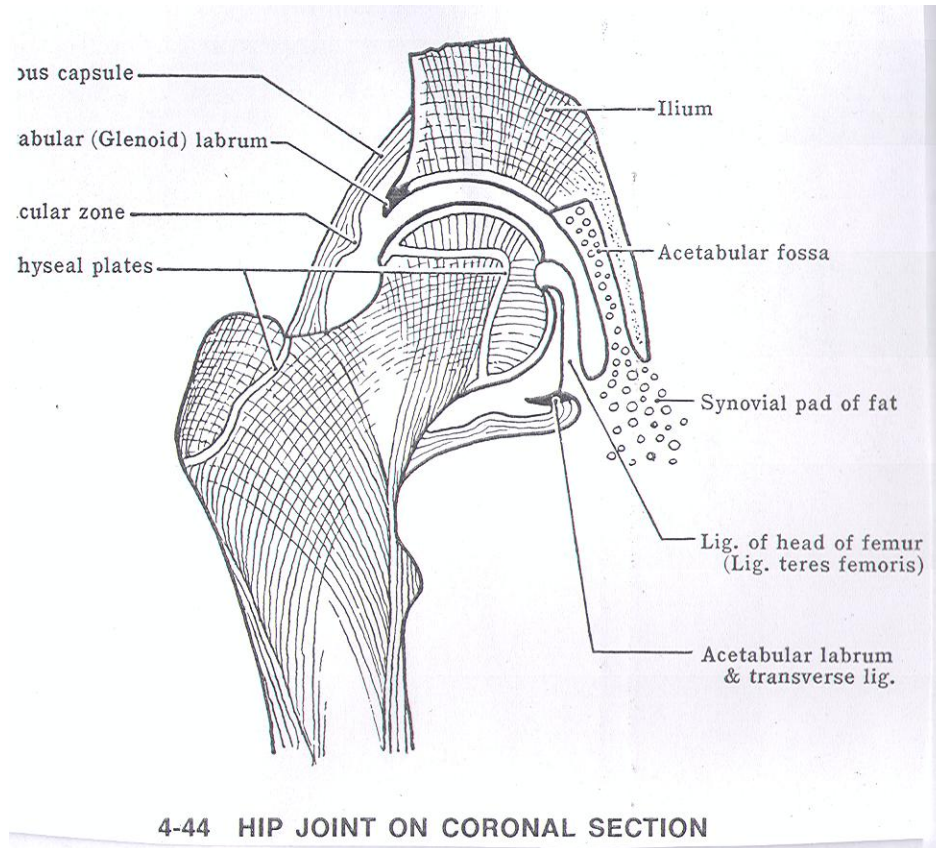
Clinical exam of infected joints for relevant signs

- **Anatomy**
- **Bacteriology**
- **Pathology**
- **Clinical presentation**
- **Investigation**
- **Treatment**
- **Complications**

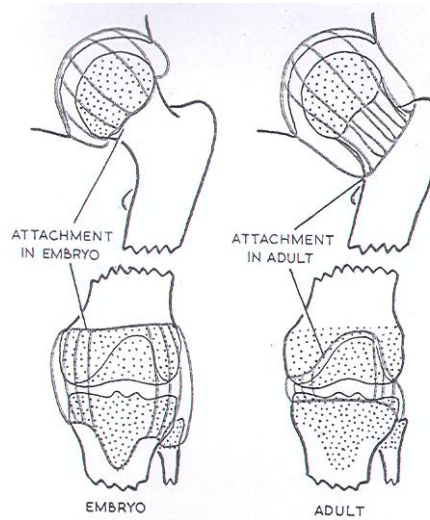
ACUTE SUPPURATIVE ARTHRITIS

- **Common in children**

ANATOMY OF A SYNOVIAL JOINT



ANATOMY OF A SYNOVIAL JOINT



MODE OF INFECTION

- **Blood spread from a distant site**
- **Local spread from osteitis**
- **Direct implantation from a wound**

BACTERIOLOGY

- **Causative organism**
 - **Staph. aureus**
 - **haemolytic strep**
 - **neisseria**

- **Diagnosis**
 - **isolation and culture**
 - **puss in the joint**
 - **wall of synovial membrane**
 - **blood**

PREDESPOSING FACTORS

- **Immunocompromised –diabetes**
 - HIV/Aids
 - steroids
- **Children**

JOINTS COMMONLY INVOLVED

- **Hip**
- **Knee**
- **Shoulder**

Pathology

Acute synovitis -Varies in severity depending on virulence of the organism and
-host defences

Synovium gets congested and oedematous

Infiltration by polymorphonuclear leucocytes (pus)

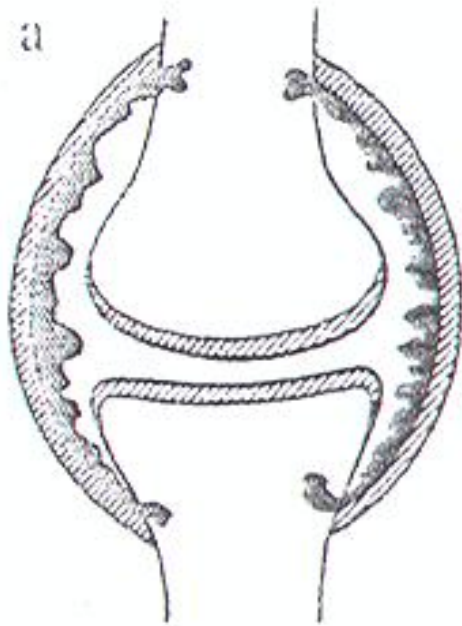
-Serum exudes into the joint (distension, and pain)

-Areas of vascular thrombosis - (note neonatal hip, TomSmith arthritis)

Capsule gets lax, leading to dislocation(child's septic dislocation)

PATHOLOGY (CONTD)

- **Healing in mild diseases is by resolution. Exudate gets resorbed**
- **Proteolytic enzymes from polymorphs- destruction of cartilage and bone erosion**
- **Repair by granulation tissue - fibrous ankylosis**
- **Capsule contracts ,stiff, inelastic -joint contracture**
- **Childs hip**



CLINICAL PRESENTATION

- **Child is ill**
- **high fever, pyrexial**
- **rapid pulse**
- **Severe throbbing pain**
worse on moving or weight bearing

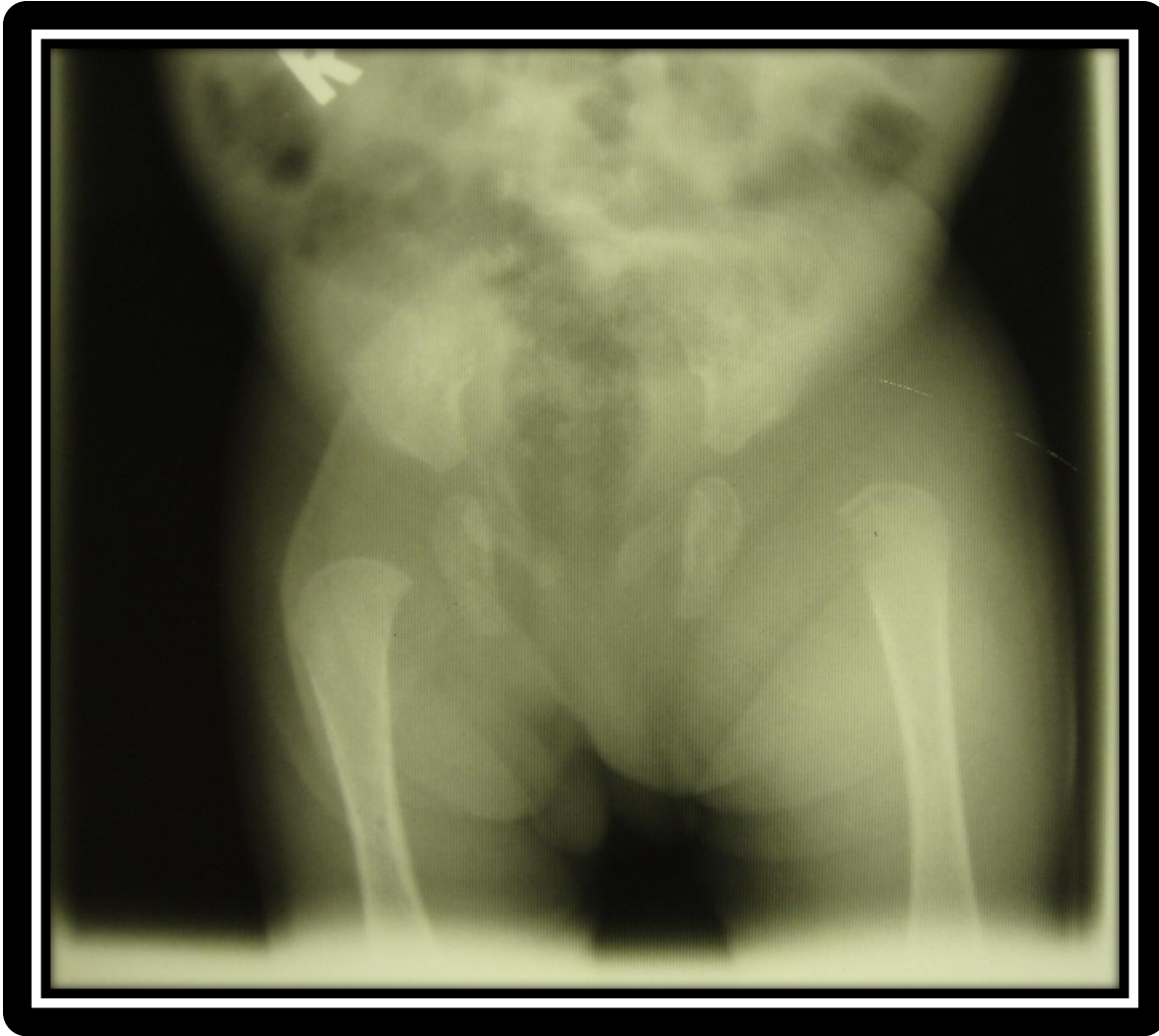
EXAMINATION

(Signs are difficult to see in deep-seated joints)

- LOOK skin is red
 joint is swollen
 joint is held in attitude of flexion

- FEEL warm
 effusion

- MOVE all movements are restricted by pain



SUPRATELLA POUCH

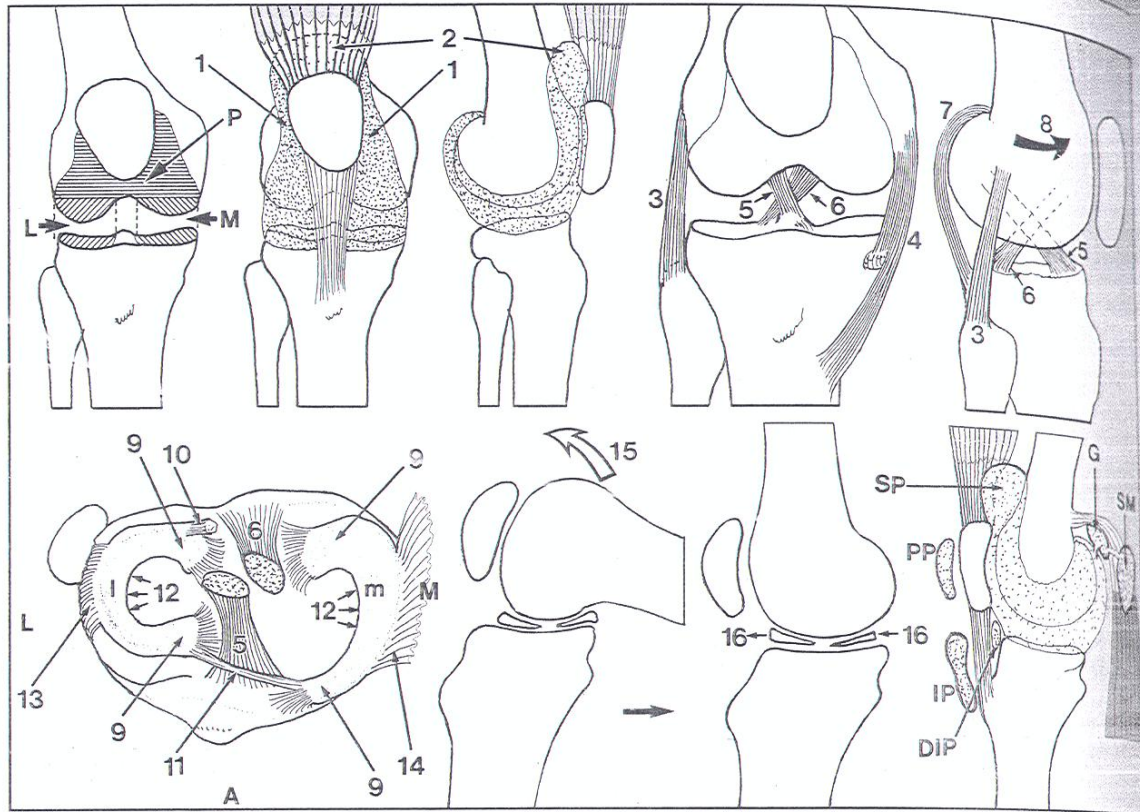
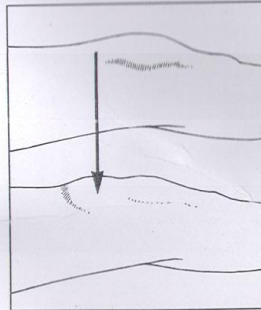
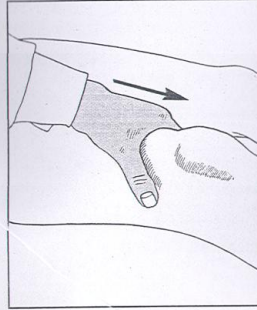


Fig. 10.A.



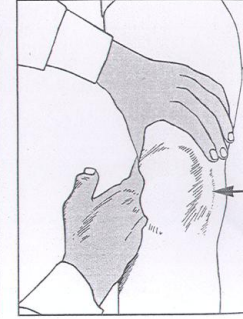
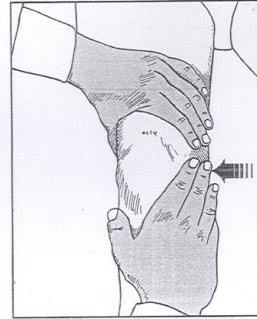
10.19. Effusion (2): With greater effusion into the knee the suprapatellar pouch becomes distended. Effusion indicates synovial irritation from trauma or inflammation.



10.20. Effusion (3): patellar tap test (ballottement test) (1): Squeeze any excess synovial fluid out of the suprapatellar pouch with the index and thumb, slid firmly distally from a point about 15 cm above the knee to the level of the upper border of the patella. This will also 'float' the patella away from the femoral condyles.



10.21. Effusion (4): patellar tap test (2): Place the tips of the thumb and three fingers of the free hand squarely on the patella, and jerk it quickly downwards towards the femur. A click as the patella strikes the condyles indicates the presence of effusion. Note that if the patella is not properly steadied as described it will tilt, giving a false negative. Note too that if the effusion is *slight* or *tense* the tap test will be *negative*.



INVESTIGATIONS

- **FBC**
- **ESR**
- **CRP**
- **Blood culture**
- **XR**

Kocher's criteria for diagnosis

- Pseudoparalysis
- ESR > 40
- Temp > 38.5 degrees
- WBC > 12

Differential diagnosis

- Trauma – fracture, haemarthrosis, traumatic synovitis, STI
- Tumours- periarticular neoplasms, acute leukaemia
- Infection – cellulitis, osteomyelitis ,TB
- Inflammation – transient synovitis,RA, gout
- Other – Perthe's, haemophilia

TREATMENT

- **Resuscitate patient**
- **Pain control**
- **Incision and Drainage -culture**
- **Antibiotics- cloxacillin**
- **THE SUN MUST NEVER SET ON PUS**

COMPLICATIONS

- **Acute** - Break through the skin
 - Joint dislocation
 - Systemic spread - pneumonia
 - Septicaemia
 - death
- **Late** - Joint contractures
 - Bone destruction
 - ankylosis

