**PYOGENIC ARTHRITIS {Acute Suppurative Arthritis}.**

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* **This is pyogenic infection of the joint. It can occur by:**
* **Direct invasion through a penetrating wound, intra-articular injection or arthroscopy.**
* **Direct spread from an adjacent bone abscess.**
* **Blood spread from a distant site.**

***The causative organism is usually staphylococcus aureus, however in children between 1and 4 years old Haemophilus influenza is an important pathogen. Occasionary other microbes such as streptococcus, Escherichia coli and proteus are encountered.***

***PREDISPOSING CONDITIONS ARE:***

* ***Rheumatoid arthritis***
* ***Chronic debilitating disorders***
* ***Intravenous drug abuse.***
* ***Immune suppressive drug therapy***
* ***Acquired immune deficiency syndrome[AIDS].***

***PATHOLOGY.***

***The usual trigger is a Haematogenous infection which settles in the synovial membrane. There is an acute inflammatory reaction with a serous or seropurulent exudate and an increase in synovial fluid. As pus appears in the joint, articular cartilage is eroded and destroyed. If the infection goes untreated it will spread to the underlying bone or burst out of the joint to form abscess and sinuses.***

***With healing there may be:***

***1.Complete resolution and return to normal.***

***2.Partial loss of articular cartilage and fibrosis of the joint.***

***3.Loss of articular cartilage and bone ankylosis.***

***4.Bone destruction and permanent deformity of the joint.***

***CLINICAL FEATURES:***

***Newborn infants.***

***>Emphasis is on septicaemia rather than joint pain.***

***>Baby is irritable and refuses to feed.***

***>Rapid pulse.***

***>Fever.***

***The joint should be carefully felt and moved to elicit the local signs of warmth, tenderness and resistant to movement. The umbilical cord should be examined for source of infection. An inflamed intravenous infusion site should always excite suspicion. The baby’s chest, spine and abdomen should be carefully examined to exclude other sites of infection.***

***Special care should be taken not to miss a concomitant osteomyelitis in an adjacent bone end.***

***Children.***

* ***Acute pain (hip or knee joints)***
* ***Reluctance to move the limb(Pseudo-paresis).***
* ***Child ill looking.***
* ***Rapid pulse.***
* ***Swinging fever.***
* ***Overlying skin looks red.***
* ***Obvious swollen joint.***
* ***Local warmth and marked tenderness.***
* ***All movements are restricted and often completely abolished by pain and spasm.***

***It is important to look for a source of infection, a septic toe, a boil, or a discharge from the ear.***

***Adults.***

* ***Pain of knee, wrist, a finger, ankle, or toe joints.***
* ***Swelling***
* ***Inflamed joint***
* ***Warmth and marked tenderness***
* ***Restriction of joint movements***
* ***Ask patient or examine for drug abuse or gonococcal infection.***
* ***Rheumatoid arthritis should be ruled out.***
* ***Every joint should be carefully examined.***

***INVESTIGATIONS.***

***Imaging>ultrasonography.***

***X-ray***

***MRI***

***White cell count and ESR***

***Blood cultures***

***Gram stain***

***DIFFERENTIAL DIAGNOSIS.***

***1.Acute osteomyelitis***

***2.Other types of infection.***

***3.Trauma.***

***4.Irritable joint.***

***5.Haemophilic bleed.***

***6.Rheumatic fever.***

***7.Juvenile rheumatoid arthritis***

***8.Sickle cell disease.***

***9.Gauchers disease.***

***10.Gout and Pseodogout.***

***TREATMENT.***

***The first priority is to aspirate the joint and examine the fluid. Treatment is then started without further delay and follow the same line of acute osteomyelitis.***

***COMPLICATIONS.***

1. ***Subluxation and dislocation of the hip or instability of the knee joints***
2. ***Damage to the cartilaginous physis or the epiphysis in the growing child.***
3. ***Retarted growth***
4. ***Partial or complete destruction of the epiphysis***
5. ***Deformity of the joint.***
6. ***Epiphyseal osteonecrosis.***
7. ***Acetabular dysplasia.***
8. ***Pseudo arthrosis of the hip.***
9. ***Articular cartilage erosion(Chondrolysis).***
10. ***Ankylosis of the joint.***