

SEPTIC ARTHRITIS

Septic arthritis is an infection in a joint. It occurs when an infection caused by a bacteria or virus spreads to a joint or the fluid surrounding the joint. This infection usually begins in another area of the body and spreads through the bloodstream to the joint tissue. The infection may also enter the body through surgery, open wounds or injections. It usually only occurs in one joint & affects a large joint such as the knee, hip, or shoulder. Other terms often used to describe the condition are pyogenic arthritis, infective arthritis or suppurative arthritis.

SYMPTOMS: The symptoms may include:

- Severe pain that worsens with movement
- Swelling of the joint
- Warmth and redness around the joint
- Fever
- Chills
- Fatigue
- Weakness
- Decreased appetite
- Irritability

AETIO-PATHOGENESIS:

-It is more common in children & male are more susceptible.

-**Staphylococcus** is the commonest causative organism. Other organisms are **Streptococcus, Pneumococcus & Gonococcus**. The organisms reach to the joint by one of the following routes:

1. Haematogenous: This is the commonest route.
2. Secondary to nearby osteomyelitis
3. Penetrating wounds
4. Iatrogenic route: This may occur following intra-articular steroid injection.

As the organism reaches the joint inflammation occurs in the synovium results in exudation of fluid within the joint. The joint cartilage is damaged due to inflammatory granulation tissues & lysosomal enzymes in the exudate. The outcome varies from complete healing to total destruction of the joint.

RISK FACTORS: Certain people are more likely to get infectious arthritis than others. The risk factors include:

- Having joint problems such as arthritis, gout, or lupus
- Having a history of joint surgery
- Having certain skin conditions
- Having open wounds
- Abusing illegal drugs or alcohol
- Taking drugs that suppress the immune system
- Having a weakened immune system
- Having cancer

DIAGNOSIS:

The knee is the commonest joint affected. Other joints commonly affected are hip, shoulder, elbow etc.

Presenting complain: In acute form there is severe throbbing pain, swelling, redness associated with high grade fever & malaise. In subacute form child does not allow any body to touch the joint, does not move the limbs & painful limp.

On examination: High temperature, tachycardia, swelling, tenderness, effusion & severe limitation of joint movement are present.

Investigation:

X-ray: Soft tissue shadow may be seen indicating distended capsule due to swelling of the joint. In later stage the joint space is narrowed & irregularity of joint margin.

Blood: It shows neutrophilic leukocytosis & elevated ESR. A blood culture may grow the causative organism.

Joint aspiration: This may show feature of acute septic inflammation & also provides a clue to the type of organism.

COMPLICATIONS;

- Deformity
- Stiffness
- Pathological dislocation
- Osteoarthritis

TREATMENT: It consists of;

Joint drainage: Removing the infected joint fluid is crucial. Drainage methods include:

Needle: In some cases the doctor can withdraw the infected fluid with a needle inserted into the joint space.

Scope procedure: In arthroscopy a flexible tube with a video camera at its tip is placed in the joint through a small incision. Suction and drainage tubes are then inserted through small incisions around the joint.

Open surgery: Some joints such as the hip are more difficult to drain with a needle or arthroscopy so an open surgical procedure might be necessary.

Antibiotics: Antibiotics are selected depending upon the microbe that causing infection. Antibiotics are usually given through a vein in arm at first. Later patient may be able to switch to oral antibiotics.

Removal of replacement joint: If an artificial joint is infected treatment often involves removing the joint and temporarily replacing it with a joint spacer — a device made with antibiotic cement. Several months later a new replacement joint is implanted.

PHYSICAL THERAPY:

The aims of physiotherapy will be;

- To increase the strength
- To improve range of movement
- To reduce pain
- To reduce stiffness
- To help you to return to your normal activities
- To increase cardiovascular fitness

Physiotherapy management may include:

- Cryotherapy
- Strengthening exercises
- Range of motion exercises
- Gentle joint mobilisations
- Cardiovascular activities
- Hydrotherapy
- Temporary splinting of joints to avoid unwanted movements
- Pain control modalities like TENS, IFT, UST etc.

References:

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2. <https://www.mayoclinic.org/diseases-conditions/bone-and-joint-infections/symptoms-causes>
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4. Mheshwari, (2000). Essential Orthopaedics, Interprint.