

Infection of bone and joint

Surgery
Stage: 2

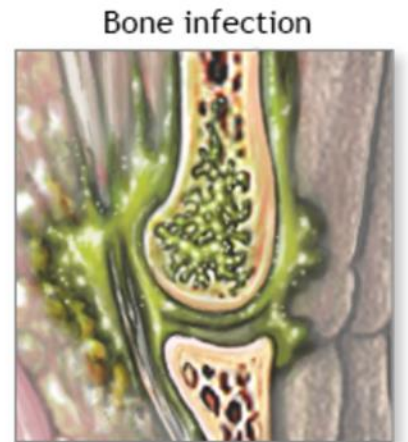
Learning objectives

To understand

- 1-Definition of osteomyelitis.
- 2-Risk factors of osteomyelitis
- 3-Causes of osteomyelitis
- 4-Treatment of osteomyelitis
- 5-Complications of osteomyelitis

Osteomyelitis

Is infection of bone and joint and is mainly caused by bacteria called *Staphylococcus aureus*.



Osteomyelitis



Causes and source of bacteria

Infection can spread to bone from:

- 1-Infected skin, tendon or muscles next to the bone.
- 2-Blood born(bacteremia) from infection in other part of the body.
- 3-After bone surgery especially when the surgery is performed after injury or inserting bone plates or metal rods in the bone.

Osteomyelitis

Risk factors

1. Diabetes.
2. Recent bone and joint injury.
3. Bone surgery.
4. Weakened immune system.

Osteomyelitis

Symptoms

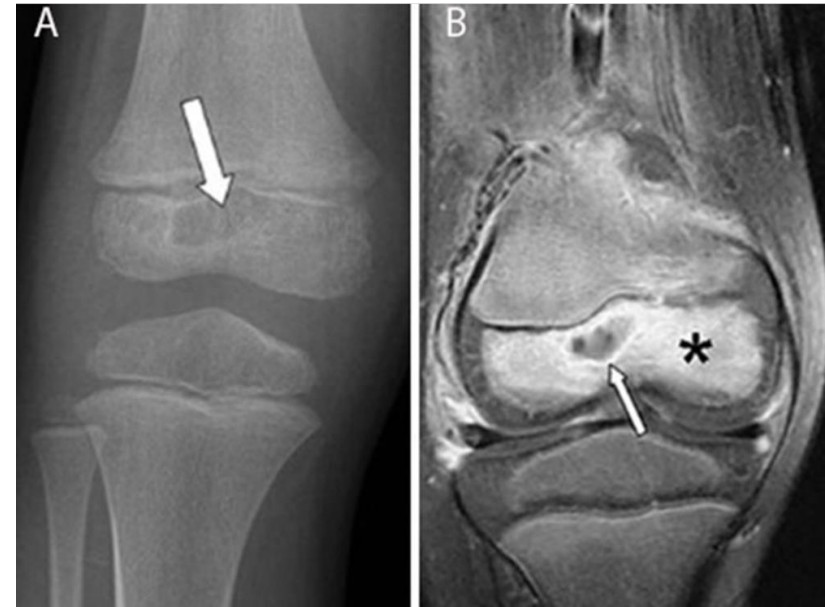
1. bone and joint pain.
2. local swelling, redness and warmth.
3. Pus sometimes in infected open wounds.
4. Fever and chills.
5. General discomfort and malaise.



Osteomyelitis

Investigations (Tests for diagnosis)

1. Biopsy of the bone for culture and sensitivity and histopathological confirmation.
2. X-ray of the bone.
3. MRI of the bone..



Osteomyelitis

Treatment

The goal of treatment is to:

A-Get rid of the infection.

B-Reduce damage to the bone and surrounding tissues.

1-Antibiotics:

A-Is the main way of treatment to destroy the bacteria.

B-The patient may receive **more than one type** of antibiotic at the same time.

C-Are given for at **least 4-6 weeks**.

D-Are often given at **home** through **intravenous I.V route**.

E-Common antibiotic used is methicillin.

Osteomyelitis

Treatment

2-Surgery

A-If antibiotics fail to treat the condition.

B-Is to remove the dead bone tissue resulted from infection.

C-The cavity(open space)left after removal of the dead bone tissue may be filled with bone graft or packing material(antibiotic cement spacer) to promote resolution of infection.



Osteomyelitis

Complication

1. Development of a serious form of staph known as methicillin-resistant *Staphylococcus aureus* (MRSA) causes infections that can be more severe and need special antibiotics to treat.
2. Spread of infection to the blood and other organs causing life-threatening illness.
3. Damage growth plates, bones and joints.
4. Cause chronic arthritis and bone fractures.