

Overview on Osteomyelitis

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Description

Osteomyelitis

Osteomyelitis is an infection in a bone. Infections can reach a bone by traveling through the bloodstream or spreading from nearby tissue. Infections can also begin in the bone itself if an injury exposes the bone to germs.

Symptoms may include pain in a specific bone with overlying redness, fever, and weakness. The long bones of the arms and legs are most commonly involved in children, while the feet, spine, and hips are most commonly involved in adults.

Smokers and people with chronic health conditions, such as diabetes or kidney failure, are more at risk of developing osteomyelitis. People who have diabetes may develop osteomyelitis in their feet if they have foot ulcers.

Although once considered incurable, osteomyelitis can now be successfully treated. Most people need surgery to remove areas of the bone that have died. After surgery, strong intravenous antibiotics are typically needed.

The cause is usually a bacterial infection, but rarely can be a fungal infection. It may occur by spread from the blood or from surrounding tissue. Risks for developing osteomyelitis include diabetes, intravenous drug use, prior removal of the spleen, and trauma to the area. Diagnosis is typically suspected based on symptoms. This is then supported by blood tests, medical imaging, or bone biopsy.

Symptoms

Signs and symptoms of osteomyelitis includes Fever, Swelling, warmth, and redness over the area of the infection, Pain in the infection, Fatigue.

Sometimes osteomyelitis causes no signs and symptoms, or the signs and symptoms are hard to distinguish from other problems. This may be especially true for infants, older adults, and people whose immune systems are compromised.

Causes

Most cases of osteomyelitis are caused by staphylococcus bacteria, types of germs commonly found on the skin or in the nose of even healthy individuals.

Germs can enter a bone in a variety of ways, including:

Blood stream: Germs in other parts of your body—for example, in the lungs from pneumonia or in the bladder from a urinary tract infection—can travel through your bloodstream to a weakened spot in a bone.

Injuries: Severe puncture wounds can carry germs deep inside your body. If such an injury becomes infected, the germs can spread into a nearby bone. Germs can also enter the body if you have broken a bone so severely that part of it is sticking out through your skin.

Surgery: The direct contamination with germs can occur during the surgeries to replace joints or repair fractures.

Diagnosis

Your doctor may feel the area around the affected bone for any tenderness, swelling or warmth. If you have a foot ulcer, your doctor may use a dull probe to determine the proximity of the underlying bone.

Your doctor may order a combination of tests and procedures to diagnose osteomyelitis and to determine which germ is causing the infection. Tests may include:

Blood tests: Blood tests may reveal elevated levels of white blood cells and other factors that may indicate that your body is fighting an infection. If osteomyelitis is caused by an infection in the blood, tests may reveal which germs are to blame.

No blood test can tell your doctor whether you do or do not have osteomyelitis. However, blood tests can give clues to help your doctor decide what additional tests and procedures you may need.

Imaging tests: X-rays can reveal damage to your bone. However, damage may not be visible until osteomyelitis has been present for several weeks. More-detailed imaging tests may be necessary if your osteomyelitis has developed more recently. The Magnetic Resonance imaging MRI radio waves and a strong magnetic field, shows MRI scans can produce exceptionally detailed images of bones and the soft tissues that surround them. Computed Tomography short form CT scan combines X-ray images taken from many different angles, creating detailed cross-sectional views of a person's internal structures. CT scans are usually done only if someone cannot have an MRI.