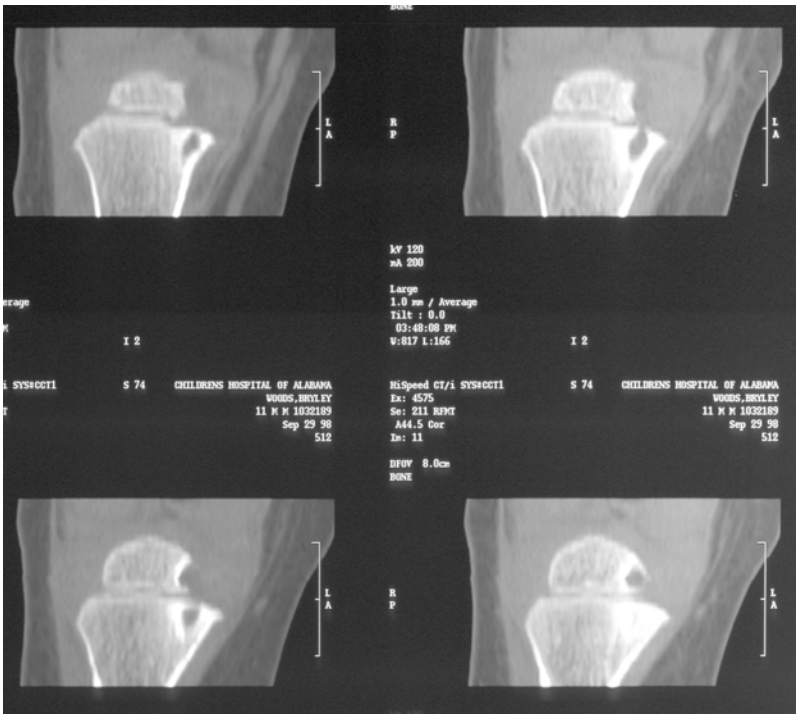
Orthopedic Infections in Children

Children are much more likely than adults to have infections of the bones and joints for reasons that are not fully understood. Infections of the bones and joints often occur spontaneously in an otherwise healthy child. This is probably related to the structure of the blood vessels in growing bones and a relative lack of the cells that fight infection near the growth center of the bone. A single bone or joint infection in an otherwise normal child is not an indication of systemic disease or abnormal immune system.



Osteomyelitis is an infection of the bone. It can occur in any bone and at any age. The child or parents may recall an injury to the involved area some time prior to the onset of symptoms of infection. It is unknown whether injury predisposes children to bone infections or if this is a purely coincidental relationship.

Symptoms of osteomyelitis include pain, tenderness, swelling and redness in the area of the infected bone. There may be a refusal to use the involved arm or leg. Blood tests will show an increase in the indicators of inflammation and infection. X-rays may be normal, particularly when the infection is early, or may show some damage to the bone in late presenting cases. Other special tests such as a bone scan or MRI can help to identify the location and extent of the infection. Depending on the bone involved and the certainty of the diagnosis a biopsy may be performed. Tissue obtained from a biopsy can be used to confirm the presence of infection and identify the bacteria involved. In some cases of osteomyelitis the bacteria is never identified in the laboratory. In all cases the child is treated with antibiotics based on age, susceptibility to certain bacteria or positive

identification by the laboratory. Antibiotics are given intravenously initially and may be followed by antibiotics taken by mouth. The duration of antibiotic treatment is dependent on the type of bacteria present and the child's response to treatment. The average length of antibiotic treatment is three to six weeks.

Septic arthritis is infection of a joint. It can be associated with osteomyelitis of the adjacent bone or occur independently. It is most common in young children, typically under fiveyears of age. In addition to pain and swelling, the child will have limited motion in the affected joint due to muscle spasms. Blood tests, x-rays, ultrasound and analysis of fluid drawn from the joint are all used to diagnose a joint infection. In most cases, once the diagnosis of an infected joint is made, the joint should be washed out under sterile conditions in the operating room. After the joint is cleaned surgically, the child is treated with intravenous antibiotics. Duration of treatment depends on the type of bacteria present and the child's response to treatment. Total antibiotic treatment may last for three to six weeks.

Children with osteomyelitis or septic arthritis usually recover completely without any lasting damage to the joint if diagnosis and treatment is initiated early. However, a joint that is infected for more than seven to ten days before treatment is likely to suffer permanent damage and stiffness. Long standing osteomyelitis may lead to a bone growth problem such as a short or crooked bone. Long term follow-up after treatment is recommended.

OK Orthopedics for Kids
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