

Hip Transient Synovitis

OVERVIEW

Your child has been diagnosed with transient synovitis of the hip, which is sometimes called toxic synovitis. It is the most common cause of acute hip pain in young children 3-10 years old. The pain is due to a transient inflammation of the hip joint tissue. While transient synovitis is a mild self limiting condition, it can be similar to other more serious problems. If these serious conditions can be ruled out, then rest and anti-inflammatory medications will help to resolve the inflammation and pain of transient synovitis.



BACKGROUND

Transient synovitis is an acute inflammation of the joint synovial tissues. No definitive cause of is known, but most scientists believe that it is a delayed immune response to a recent viral illness, which may have been very mild and even unrecognized. One study found 67 of 80 patients had an increased viral antibody titers, suggesting a viral illness 2-3 weeks prior to the onset of transient synovitis. Other possibilities include trauma or a drug-mediated reaction. Transient synovitis is uncommon and occurs most frequently from age 3-10 years. It affects boys twice as often as girls.

DIAGNOSIS

Usually the child is brought for medical evaluation due to hip pain and limping, or sometimes refusing to walk. Often these symptoms have developed over a day or two. Parents can often recall a fall or other mild injury which preceded the symptoms. When symptoms do not resolve after a while, the child is brought for medical evaluation. There may be a history of an upper respiratory infection or an ear infection. Usually the temperature is normal or only mildly elevated.



The examination can be difficult as the child may be too young to cooperate. Usually, the pain can be localized, but other times a crying and fearful child will not cooperate. Most injured or inflamed joints will show swelling, redness, and tenderness. However, the hip is deep and superficial changes are usually not seen. The most consistent sign is pain with passive motion. Typically the hip is held flexed and abducted and it is not unusual for a child to appear comfortable if the joint remains in the position of comfort.

It is important to rule out other serious causes of hip pain in a child. A blood test is done to look for signs of infection and usually will show a normal white count and a near normal ESR. If there is a history of trauma, xrays may be done to rule out a fracture or dislocation.

Usually, the most important determination is to differentiate transient synovitis from a joint infection. One study identified 4 independent predictors, which are fever > 101.5 degrees, a true inability to bear weight, ESR > 40 mm/h, and WBC count $> 12,000$ /cc. The incidence of septic arthritis was $< 3\%$ if less than 1 predictor was present. If 2 or more predictors are present, than ultrasound is done to look at the joint space. If extra fluid is seen in the joint, then aspiration of the hip is done under image-intensifier control with sedation or anesthesia. A sample of joint fluid will be sent for cultures and gram stain to further rule out a joint space infection.



TREATMENT

Transient synovitis will resolve with time. Anti-inflammatory medications like ibuprofen help to reduce inflammation and sometimes lead to dramatic improvement in symptoms. Bed rest or decreased activity also helps to make the child more comfortable. The hip pain should resolve within a week to 10 days. If symptoms persist or worsen, or a fever develops, further medical evaluation is appropriate.

EXPECTED OUTCOMES

Toxic synovitis is a self-limited disease with no expected long-term complications. Controversy exists about a relationship with another hip condition called Perthes disease. One study showed a 1% incidence of prior transient synovitis in kids with Perthes disease.

MORE INFORMATION

Further information can be obtained on the internet. Your local public library can help you explore these sources if you are interested. Two good sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at www.aaos.org and the Pediatric Orthopedic Society of North America at www.orthokids.org.