Pediatric Joint Pain May Not Be Acute Arthritis

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AMELIA ISLAND, FLA. — Clinical acuity aids the differential diagnosis of acute arthritis in pediatrics, according to a presentation at a meeting on pediatrics for the primary care physician, sponsored by Nemours.

Dr. Carlos D. Rosé, chief of rheumatology, Alfred I. DuPont Hospital for Children, Wilmington, Del., offered tips for diagnosis of the following forms of pediatric arthritis:

► **Nonarticular disease.** Beware of reports of joint pain that are truly limb or marrow pain, Dr. Rosé said. "The patient will tell you [the] knee, elbow, etc. hurts, but you will determine by physical exam that it is not in the joint." Patients often describe limb pain as joint pain.

"Three to five times a year in my pediatric rheumatology practice I diagnose leukemia," Dr. Rosé said. Pain that is nocturnal, occurs when the patients move their arms or walk, and/or cannot be localized are among symptoms of marrow involvement. Because NSAIDs work for leukemic pain, patients might be taking ibuprofen around the clock, Dr. Rosé said. "If they stop and feel pain again at 4-6 hours, this is a red flag for bony pain."

Discomfort on limb compression, a "very abnormal" erythrocyte sedimentation rate (ESR), and absence of thrombocytosis are other signs of bony involvement, Dr. Rosé said.

► **Transient synovitis.** Transient synovitis can be severe and can signal the early phase of Legg-Calvé-Perthes disease, an idiopathic avascular necrosis of the femoral head. An ESR less than 40 mm/hr is diagnostic. Synovitis typically lasts 1-3 weeks and can be related to Legg-Calvé-Perthes disease or parvovirus.

Recurrent transient synovitis in some pediatric patients could be the onset of psoriasis or spondyloarthropathy, according to a multicenter study of 39 children with 102 episodes of transient synovitis (J. Rheumatol. 2006;33:810-11).

► **Intermittent monoarthritis.** Pediatric patients with intermittent arthritis often have a joint that gets swollen, the inflammation resolves in a few weeks, and then the joint gets swollen again. "Be patient with these patients. Just wait until the effusion goes away—most of the time it happens," Dr. Rosé said.

A big, bland effusion without a contracture is a presentation that is very suggestive of Lyme arthritis, he added.

► **Acute monoarthritis.** There are multiple etiologies for acute monoarthritis. Septic arthritis, while important, is overdiagnosed, Dr. Rosé said. Septic arthritis is usually monoarticular; exceptions are cases caused by gonococcus or tuberculosis and nontuberculosis mycobacterium.

Nonpyogenic infection, foreign bodies, pigmented villonodular synovitis, coagulopathy, and vascular abnormalities are other causes of monoarthritis. Trauma also can cause acute monoarthritis, especially among children who fall on their knees. The pain should not last more than 48 hours, Dr. Rosé said.

"Be careful—I had some children present for monoarthritis, and on physical examination I found other areas of inflammation, such as the toes or knees. Look for a second joint to get away from the idea that it is monoarticular," Dr. Rosé said.

► **Migratory arthritis.** This condition is an orderly involvement of primarily intermediate joints, approximately one per day, characterized by periarticular swelling. It is a sequential form of "polyarticular monoarthritis," Dr. Rosé said. Migratory arthritis often is very painful but responsive to NSAIDs. Etiology is overwhelmingly postinfectious, he added.

► **Acute polyarticular arthritis.** "This is very important to recognize. Here every joint is painful in 1 day, it is not sequential," Dr. Rosé said. Parvovirus infection is the most common cause. Approximately one-third present with an intense red rash in a symmetrical pattern on both hands and feet. Small epidemics often occur in springtime, he added. Common viral diseases such as Epstein-Barr virus, cytomegalovirus, hepatitis, and infections caused by *Clostridium difficile* can produce arthritis, Dr. Rosé said.

► **Rheumatic fever.** Diagnostic tips include a fever of 101.3° F daily and an ESR of greater than 50 mm/hr. The patient will look ill and a cardiac examination will demonstrate tachycardia, gallop, and murmurs. Order echocardiography within the first week for all cases of suspected rheumatic fever, Dr. Rosé suggested. ■