Juvenile Idiopathic Arthritis

Juvenile idiopathic arthritis (JIA) is a group of arthritis diseases of unknown cause occurring in children younger than 16 years. These diseases are sometimes called juvenile chronic arthritis. The name was changed from juvenile rheumatoid arthritis to avoid confusion with adult rheumatoid arthritis. In JIA, the immune system attacks synovium (tissue lining the joint). The synovium becomes inflamed, causing swelling, pain, and stiffness. This process can spread to surrounding tissues, damaging cartilage and bone. There are currently about 300,000 children with JIA in the United States. The April 7, 2010, issue of JAMA includes an article about JIA.

SYMPTOMS
Children with any type of JIA can have morning stiffness; pain, swelling, and tenderness in joints; limping; fever; rash; weight loss; fatigue or irritability; and eye redness, pain, or blurred vision. Chronic eye inflammation occurs in 10% to 20% of all patients; of these, 30% to 40% have a severe loss of vision.

DIAGNOSIS
There are no specific tests for JIA. Patients should undergo a complete physical examination. X-rays and lab tests can help determine the kind of arthritis the patient has and rule out other problems.

COMPLICATIONS
If untreated, JIA complications can include lost or decreased vision, permanent joint damage, chronic arthritis and loss of function, interference with bones and growth, and inflammation of the membranes surrounding the heart or lungs.

TREATMENT
Treatment responses may vary. The goals are to relieve pain, reduce swelling, increase joint mobility and strength, and prevent joint damage. Exercise, physical therapy, and occupational therapy reduce pain, maintain muscle tone, improve function, and prevent permanent disability. Although new therapeutic options have been introduced, it is still not easy to predict the treatment response in children. Medications can include

- nonsteroidal anti-inflammatory drugs (NSAIDs), which provide pain relief and reduce swelling but do not affect the course of JIA.
- corticosteroids, which can be given orally or as an injection.
- disease-modifying antirheumatic drugs (DMARDs), which suppress the body’s immune system.
- biological-modifying agents, which are used to treat children with severe arthritis that is not responsive to other medications.

Sources: American College of Rheumatology, Arthritis Foundation

Huan J. Chang, MD, MPH, Writer
Alison E. Burke, MA, Illustrator
Richard M. Glass, MD, Editor