

Challenge for timely diagnosis of juvenile idiopathic arthritis in children

A four-year-old girl was referred to the paediatric rheumatology clinic for evaluation of a limp. She was previously well until eight weeks before her initial presentation when her parents noted that she was limping, particularly in the morning. She seemed reluctant to walk down the stairs, became more whiny and frequently asked to be carried. Later in the day, she was seen running around the playground normally. She had no fever, rash or other constitutional symptoms.

On physical examination, the family doctor noted a large left knee effusion and referred the child to a local orthopaedic surgeon. The surgeon examined her two weeks later and offered a diagnosis of 'probable meniscal tear, no evidence of septic arthritis'. A magnetic resonance imaging (MRI) screen was ordered. Four weeks later, the MRI was performed, but it was incomplete because of the child's age and the decision not to use contrast media. The MRI report showed a joint effusion of the left knee, and the child was referred to a paediatric rheumatologist.

At the time of the evaluation in the paediatric rheumatology clinic (four months after symptom onset), the child had a large left knee effusion with a 30-degree flexion contracture. Her gait was antalgic and painful. She was diagnosed with oligoarticular juvenile idiopathic arthritis (JIA), and was also found to have bilateral anterior uveitis by the paediatric ophthalmologist.

LEARNING POINTS

- Chronic arthritis in children and adolescents, called JIA, is a long-term disorder, associated with serious disability for many affected children and can occur in children of any age.
- The most common presenting symptoms of JIA are joint swelling, stiffness or pain; however, JIA can also present in one joint or many joints (these may not be painful or red).
- There are seven subtypes of JIA – oligoarticular-persistent, oligoarticular-extended, polyarticular rheumatoid factor (RF)-positive, polyarticular RF-negative, systemic onset, psoriatic and enthesitis-related arthritis. They are differentiated by the number of joints involved, presence of fever or rash, psoriasis in the child or family members, enthesitis or RF.
- Asymptomatic anterior uveitis is a possible association seen in children with arthritis. Children with oligoarticular and psoriatic JIA are at highest risk. Guidelines suggest regular ophthalmology screening every three months initially for early detection and treatment.
- The diagnosis of JIA is made clinically, and an MRI should not be necessary to make the diagnosis in most cases. If an MRI is performed, contrast media should be administered to detect the extent of synovitis.
- Early consideration of JIA as the cause of a joint effusion in a child is important for early initiation of treatment and improved outcomes. Treatment of JIA in children should be aimed at rapid and complete control of joint inflammation to prevent joint damage and disability. Potential complications of delayed recognition of JIA include joint contractures, muscle wasting, localized or generalized growth disturbances, impaired functioning, undetected uveitis and possible sight loss.
- Children with JIA do not 'grow out of it'! More recent long-term studies show that approximately 60% to 70% of children with JIA will continue to either have active arthritis requiring treatment into adulthood, or have disability or functional difficulties related to their arthritis.
- Currently available incidence figures for JIA in Canada are biased because the data were collected in paediatric rheumatology referral clinics. A CPSP population-based surveillance will provide the opportunity to learn the true incidence of JIA, and to plan appropriate resources to care for these children.

The Canadian Paediatric Surveillance Program (CPSP) is a joint project of the Canadian Paediatric Society and the Public Health Agency of Canada, which undertakes the surveillance of rare diseases and conditions in children and youth. For more information, visit our Web site at <www.cps.ca/cpsp>.