Migratory Arthritis? Rule Out Childhood Leukemia

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Physicians should rule out leukemia when evaluating children with migratory arthritis, David D. Sherry, M.D., reported at a symposium sponsored by the American College of Rheumatology.

Acute lymphatic leukemia is the most common childhood systemic malignancy associated with musculoskeletal pain and/or arthritis, and its clinical features can often mimic those of juvenile idiopathic arthritis.

In about 50% of cases, the correct diagnosis is delayed.

Patients with leukemia may have very painful arthritis or arthralgia that is usually migratory or episodic. It can occur in one or more joints, including the hip or joints such as the talus-cuboid joint, which is rarely involved in juvenile arthritis, he said.

Other symptoms include low-grade fever and body aches that are accentuated by weight bearing.

"These kids have to be carried, and you don't carry kids with RA generally," said Dr. Sherry, director of clinical rheumatology at the Children's Hospital of Philadelphia.

Systemic symptoms are present at or near onset of disease. But hematologic abnormalities may take time to develop. One early warning signal is an elevated erythrocyte sedimentation rate, which may be present without other inflammatory markers, he said.

In a case involving a 5-year-old boy, the white blood count was normal, but the erythrocyte sedimentation rate was 89 mm/hr—well above the normal range of 1 mm/hr to 13 mm/hr for males.

A plain radiograph of his swollen knee revealed a grey leukemic line. Metaphyseal bands may be present on x-ray, as well as osteopenia, cortical or periosteal lesions, and osteolytic reaction.

Physicians also should be watchful for leukemia in children with hip disease or Down syndrome, he said. ■

Osteogenesis Imperfecta Function Tied to BMD Levels

Bone mineral density is directly tied to functional outcome and ability in children with osteogenesis imperfecta, Robert Huang, M.D., reported at the annual meeting of the American Academy of Orthopaedic Surgeons.

The findings lend credence to a current focus in treatment on improving bone mineral density (BMD) in children who are afflicted with osteogenesis imperfecta.

"Bisphosphonates have come to the forefront of treatment for osteogenesis imperfecta, but [we haven't known] the relationship of BMD ultimately to function," said Dr. Huang of Houston Shriners Hospital.

Dr. Huang and his associates conducted a review of the records of 29 consecutive patients with osteogenesis imperfecta (ages 4-17) who underwent BMD assessment (mostly of the lumbar spine and wrist) using dual-energy x-ray absorptiometry (DXA). He and his coinvestigators then analyzed functional outcomes data that were collected using the Pediatric Outcomes Data Collection Instrument (PODCI).

Their analysis of scores obtained from parent PODCI forms revealed that there were significant relationships between lumbar spine BMD and upper extremity function. In addition, an analysis of scores that were obtained from the child PODCI scores (15 children were old enough to complete the child PODCI forms) revealed that there were significant relationships between wrist BMD and upper extremity function.

The investigators also found relationships between BMD and other functional domains within PODCI. "Certainly, BMD is an indicator of physical function," Dr. Huang said.

DXA scanning is increasingly being used as a means of obtaining baseline measurements and for monitoring patients with osteogenesis imperfecta, but more "BMD data for children with osteogenesis imperfecta will be required to establish specific guidelines for the treatment of children with [the disorder]," he said.

—Christine Kilgore