

# An Abscess Can Delay Systemic JIA Diagnosis

BY SHERRY BOSCHERT  
San Francisco Bureau

SAN FRANCISCO — A child with fever of unexplained origin and an abscess in the right thigh ultimately was diagnosed with systemic juvenile idiopathic arthritis after tests showed the abscess was sterile, Sara Fitzpatrick said in a poster presentation at the annual meeting of the American Academy of Pediatrics.

The English medical literature contains no previous reports of systemic juvenile idiopathic arthritis (JIA) presenting with a sterile abscess, said Ms. Fitzpatrick, who worked on the report with Elizabeth C. Chalom, M.D., director of pediatric rheumatology, and other associates at St. Barnabas Medical Center, Livingston, N.J.

The most common cause of fever of unknown origin in childhood is infection, she noted, and the abscess and other findings initially misled clinicians into thinking that was the case with this child.

The 21-month-old boy entered the hospital with a 3-week history of spiking diurnal fevers ranging from 101.7° to 104.5° F. He was alert but irritable and refused to walk. His past history was unremarkable, he had not traveled, and his immunizations were up to date.

Physical exam findings were normal except for shoddy inguinal lymphadenopathy bilaterally, mild synovitis bilaterally in

the ankles, slightly decreased extension of the left wrist, and pain with motion of the left ankle or wrist. He had a faint macular rash over his chest.

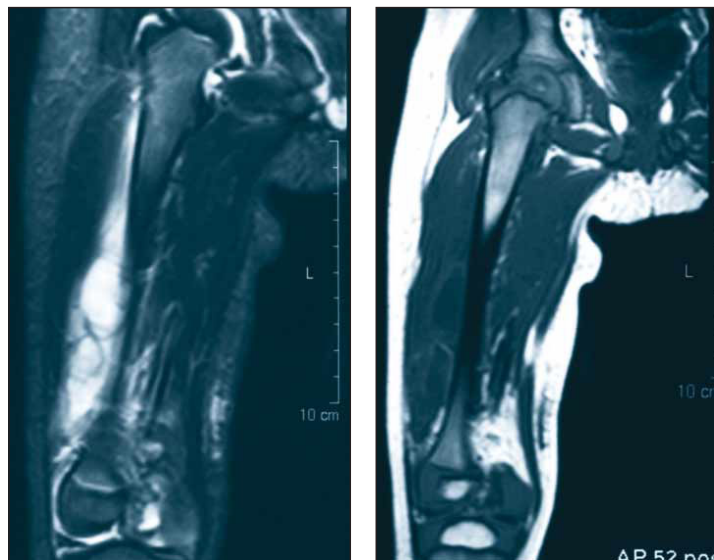
MRI of both ankles showed mild effusion with no significant synovial thickening. Bone marrow aspiration results suggested an acute inflammatory process. Clinicians could find no neoplastic lesions. A gallium scan showed increased uptake in the right distal thigh above the knee joint.

A multicystic, loculated lesion consistent with a formed abscess was seen on an MRI of the thigh. Physicians opened and drained the abscess, and the child was treated with antibiotics.

The abscess exudates were negative on Gram stain, culture, and acid-fast stain. The pathology specimen was consistent with a simple abscess and reactive inflammation in the muscle and periosteum. There was no direct evidence of infection in either the bone or muscle.

Despite extensive antibiotic therapy, the child continued to spike fevers up to 104°F. Viral studies and tuberculosis tests were negative. The persistent fevers, lack of an infectious process, and evidence of joint involvement led clinicians to consider systemic JIA more closely. The child's serum ferritin level increased from 500 ng/mL to 1,583 ng/mL; markedly elevated serum ferritin is a common finding in systemic JIA.

When physicians started the NSAID



MRI showed a multicystic, loculated lesion along the left side of the bone that was consistent with a formed abscess. The exudates were negative for infection.

naproxen (Naprosyn), the fevers decreased to around 101°F. Subsequent steroid treatment significantly reduced symptoms, and the fevers resolved. A repeat gallium scan showed mild residual uptake in the right thigh and periosteum, and symmetrical uptake in both ankles. Repeat sur-

gical exploration of the abscess found reaccumulation of purulent material.

The patient went home with a diagnosis of systemic JIA and a lower regimen of steroids, and the fevers returned. He currently is being treated with methotrexate and a weaning dose of prednisone. ■

## Chronic Fatigue Syndrome Burden Warrants More Research Funding

BY MARY ELLEN SCHNEIDER  
Senior Writer

WASHINGTON — The National Institutes of Health should increase its support for research into chronic fatigue syndrome in children to match the burden and impact of the illness, Peter Rowe, M.D., said at a meeting of the Health and Human Services Department's Chronic Fatigue Advisory Committee.

More philanthropic support is needed as well to advance the care of patients with chronic fatigue syndrome (CFS), said Dr. Rowe, a professor at Johns Hopkins Children's Center, Baltimore, and director of the center's chronic fatigue clinic.

Currently, just a few hospital or university-affiliated clinical centers are treating children with CFS. There are no training grants to attract new researchers, no university research centers, and only \$1 million annually in NIH funds targeted at children with CFS.

"This isn't enough to create a critical level of interest in bringing good people into the field, and it does not make CFS

seem like a viable option to the new pediatric researcher," Dr. Rowe said.

As a result, it's difficult for CFS patients to find physicians to care for them, Dr. Rowe said. CFS specialists are usually overburdened, and when families can't find timely treatment, they sometimes resort to seeing physicians who charge high rates for an evaluation.

Dr. Rowe said he knows of one place where a patient can be evaluated fairly quickly—but at a price tag of \$5,800. "I think we have a responsibility to protect children and young families from this kind of economic risk," he said.

To be diagnosed with CFS, patients generally must have severe chronic fatigue for 6 months or longer with other known medical conditions excluded by clinical diagnosis, and they must concurrently have four or more of the following symptoms: substantial impairment in short-term memory or concentration; sore throat; tender lymph nodes; muscle pain; multijoint pain without swelling or redness; headaches of a new type, pattern, or sever-

ity; unrefreshing sleep; and post-exertional malaise lasting more than 24 hours, according to the Centers for Disease Control and Prevention. The symptoms must have persisted or recurred during 6 or more consecutive months of illness and must not have predated the fatigue.

The heterogeneous nature of the illness itself makes it difficult to recognize and treat the disease, and it's difficult to control for just one variable in a randomized clinical trial on CFS because of the many overlapping and interacting pathophysiologic dysfunctions associated with the condition, he said.

Dr. Rowe proposes conducting randomized trials by withdrawing ostensibly effective therapies. For example, in an otherwise well-managed and clinically stable patient with CFS, the patient would be randomized to receive either a placebo or the active medication. Another option would be to incorporate a "run-in period" for studies during which other influences to symptoms are brought under good clinical control before examining the efficacy of a single agent. ■

## Cognitive-Behavioral Therapy Effective in Adolescent CFS

BY KATE JOHNSON  
Montreal Bureau

Adolescents with chronic fatigue syndrome show significant improvement with cognitive-behavioral therapy, according to the first randomized controlled trial involving this age group.

"These results endorse the findings of previous studies on the efficacy of CBT for adults with chronic fatigue syndrome [CFS]," reported Maja Stulemeijer and colleagues at University Medical Centre Nijmegen (the Netherlands).

Only one uncontrolled study in adolescents suggests that cognitive behavioral therapy can reduce chronic fatigue, according to the researchers (BMJ 2005;330:14).

The study followed 69 patients, aged 10-17 years, who met U.S. Centers for Disease Control and Prevention criteria for CFS and were randomized to either immediate therapy, or to remain on a waiting list for therapy. The intervention involved 10 individual sessions over 5 months, and therapy patients underwent one of two treatment protocols depending on whether they were considered active or passive patients.

Active patients were described as alternating between periods of ac-

tivity and periods of rest; passive patients were described as spending most of their time lying down and going out infrequently. For active patients, treatment started with teaching them to recognize and accept their fatigue and reduce their activity level accordingly. This was followed by a gradual increase in activity.

Passive patients started immediately with a systematic program of activity building.

Measures of fatigue and functional impairment decreased more significantly in the therapy group, compared with the untreated group. School attendance improved significantly more in the therapy group, with 58% of these patients returning to school full time, compared with 29% of patients on the waiting list for therapy.

Participants in the therapy group also reported significantly less muscle pain, headache, unrefreshing sleep, and impaired concentration. They were also less likely to feel ill after exercise, compared with patients on the waiting list.

There were no significant differences in outcomes between patients in the active or passive treatment protocols. The authors noted that patients in all arms of the study continued to report symptoms. ■