ASK THE EXPERT

Juvenile Fibromyalgia Presents Challenges

Nonlocalized musculoskeletal aches, pains, and stiffness in children and adolescents can signal a range of potential conditions, from growing pains, trauma, and overuse injuries to more serious systemic disorders such as lupus or rheumatoid arthritis.

Another possibility that often doesn't make it onto the initial differential diagnosis is fibromyalgia. Although well recognized in adults, fibromyalgia is understudied and perhaps underappreciated in children, despite a prevalence rate approaching 8% in this population according to national estimates, as well as an association with substantial morbidity and disability.

BY YUKIKO KIMURA, M.D.

As in adults, the musculoskeletal symptoms of juvenile primary fibromyalgia syndrome (JPFS) are often accompanied by other symptoms, including fatigue, poor sleep, anxiety, stress, headaches, and paresthesias. The high levels of pain and disability can be especially devastating to adolescents, who are at a critical stage of social/emotional development and as such may face a greater risk for long-term social and occupational problems compared with adults. Exacerbating the problem is the fact that JPFS is often misdiagnosed, leading to treatment delays, as well as fear and frustration among afflicted youth and their families.

In this month's column, Dr. Yukiko Kimura, chief of pediatric rheumatology at Hackensack (N.J.) University Medical Center, discusses the diagnostic and management challenges associated with juvenile primary fibromyalgia syndrome, as well as optimal treatment protocol.

Rheumatology News: What are some of the obstacles to a timely diagnosis of juvenile primary fibromyalgia syndrome?

Dr. Kimura: Juvenile primary fibromyalgia syndrome is often an elusive diagnosis because many nonrheumatologists do not suspect it in children. Many patients have undergone multiple evaluations by many different specialists, including orthopedists, neurologists, psychologists, and gastroenterologists, because of their vague and myriad complaints. The symptoms are often confused with those of arthritis or other rheumatic diseases because of their similarities: stiffness, aching, and joint pain. Sometimes patients even describe joint swelling. Also, physical examination may show significant tenderness of the joints. However, usually no swelling or loss of motion can be detected, and there is often tenderness and pain in the muscles as well as the joints.

RN: How is JPFS diagnosed?

Dr. Kimura: In children, it is possible to diagnose JPFS with less than the required 11 tender points if other symptoms of fibromyalgia are present, such as sleep disturbances, fatigue, and headaches, using the Yunus and Masi criteria. One complicating factor is that patients may develop fibromyalgia in addition to a rheumatic disease such as juvenile idiopathic arthritis or lupus. Rheumatologists need to be aware of this possibility and suspect coexisting juvenile primary fibromyalgia syndrome in a patient with a known rheumatic disease who develops increasing pain and fatigue when there is no apparent flare in their disease.

RN: What are some of the management obstacles?

Dr. Kimura: Management is always a challenge in JPFS. There has not been one standard treatment that has been shown to be effective in all patients with the condition, and there are no large clinical trials in children. Another issue in patients with coexisting juvenile primary fibromyalgia syndrome and rheumatic disease is the need to sort out which disorder is causing the pain, as the treatment will be quite different depending on the cause.

RN: What are the most important components of an effective intervention for juvenile primary fibromyalgia?

Dr. Kimura: A multidisciplinary approach to treatment is the most successful and should include nonpharmaceutical interventions such as cognitive-behavioral therapy, physical therapy, and exercise, as well as pharmaceutical interventions. Some patients may need psychotherapy. In addition, it is important to validate the patient's complaints, reassure the patient and family, and help them understand that the goal is not to eliminate pain and fatigue, but to minimize it and to be able to cope with the symptoms to enable the child to participate as much as possible in normal childhood activities. Regular school attendance is extremely important and should be emphasized as a priority. The focus should always be on improving function.

RN: What therapies are currently available?

Dr. Kimura: Cognitive-behavioral therapy by an experienced therapist, gradual but regular aerobic exercise training, and physical therapy are extremely important. Pharmacologic interventions include low-dose tricyclic antidepressants, cyclobenzaprine, selective serotonin reuptake inhibitors, and balanced serotonin norepinephrine reuptake inhibitors. Caution must be exercised in using SSRIs and SNRIs in children and adolescents because of possible increased suicidal ideation and behaviors. There is some evidence to suggest that tramadol (alone or in combination with acetaminophen) may provide some relief. There is little evidence that nonsteroidal antiinflammatory drugs and opioids are helpful.

RN: Are there any promising therapies on the horizon?

Dr. Kimura: Although no clinical trials have been done in children, there is evidence in the adult literature that the SNRIs as well as combination SSRI and tricyclic antidepressants, and new alpha-2 delta ligands, which have been helpful in neuropathic pain, may be helpful.

RN: What is the long-term outlook for children and adolescents with juvenile primary fibromyalgia syndrome?

Dr. Kimura: Unfortunately, fibromyalgia that began in childhood continues into adulthood in many patients, although there have been some studies that suggest the prognosis in children in terms of eventual resolution of symptoms is better than in adults. Consequences of long-term treatment depend on the therapies that are used, but in general, with regular professional monitoring, there should be little in the way of concern. ■

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Effectiveness of Etanercept in JRA Sustained Over 4 Years

BY DEEANNA FRANKLIN
Associate Editor

Etanercept provided 4-year clinical efficacy in patients with polyarticular-course juvenile rheumatoid arthritis, and was well tolerated without an increase in the rate of serious infection, reported Dr. Daniel J. Lovell and colleagues.

The researchers had previously conducted a randomized, open-label trial that found that clinical efficacy could be sustained for at least 2 years. From this initial group of 69 patients, Dr. Lovell and colleagues enrolled 58 patients in a multicenter, open-label extension study to assess etanercept's long-term efficacy and safety (Arthritis Rheum. 2006;54:1987-94).

The study group had a mean age of 10 years, of which 39 (67%) were female. Five participants (9%) had pauciarticular JRA, 34 (59%) had polyarticular JRA, and 19 (33%) had systemic JRA. The mean duration of their disease was 5.9 years; 100% had previously used methotrexate (MTX), 97% had used NSAIDs, and 38% had previously used corticosteroids with a mean dose of 5.7 mg/day. At year 4, 32 of the 58 patients remained, with a similar demographic composition, disease history, and previous use of JRA therapies.

Dr. Lovell, of Cincinnati Children's Hospital Medical Center, and his colleagues calculated infection safety data from all 69 patients enrolled in the original study and the long-term extension. Results showed that eight patients (12%) "had serious infections, for a rate of 0.04 infections per patient-year. The exposure-adjusted rates of serious infection did not increase over time with continuing etanercept treatment," the researchers reported.

ACR Pediatric 30 scores at year 1 lasted through year 4 of etanercept therapy. Adding MTX to the regimen may have contributed to sustained improvement.

When it came to long-term efficacy, data from the 58 patients in the extension study were assessed. Patient assessment of pain, on a 0-10 scale, was a median of 3.6 at baseline, 0.3 at 1 year, and 0.9 by the 4th year. The physician's global assessment on a 0-10 scale was a median 6.5 at baseline, 2.0 at 1 year, and 1.0 at year 4.

For total joints with active disease, the median at baseline was 28.5, 2.5 at 1 year, and 2.0 at 4 years. When participants scored the number of joints experiencing limitation of motion and painful/tender joints, it was a median of 9 at baseline, and 0 at both the 1-year and 4-year marks. The articular severity score for participants was a median 88 at baseline, 25 at year 1, and 18 at year 4.

By the second year of the extension study, 8 (17%) of the 47 remaining patients were receiving MTX at a mean dose of 13.4 mg/week, and by the 4th year 13 of 38 patients (34%) were receiving MTX at a mean dose of 15.8 mg/week. According to the researchers, 23 (40%) of the 58 patients were taking low-dose steroids at the start of the extension study, but 70% of these patients discontinued steroid use, while another 4 participants decreased their dosages. From the original 58 participants in the extension study, 6 withdrew due to lack of efficacy.

"Patients with JRA showed sustained improvements in disease activity measures in this extension study. ACR Pediatric 30 scores observed at year 1 were sustained through year 4 of treatment with etanercept," said Dr. Lovell. Adding MTX to the treatment regimen may have contributed to the sustained improvements.

"Overall, etanercept offers significant clinical benefit with an acceptable safety profile," the investigators concluded. ■