Ask the Expert

Dry Synovitis Complicates JIA Management

Juvenile idiopathic arthritis is a diagnosis of exclusion and as such can be difficult to make with certainty. The condition is defined as the inflammation of one or more joints for at least 3 months in a child or adolescent in whom other causes of joint pain have been excluded. While laboratory investigations may provide some insight, the diagnosis is essentially clinical and often not straightforward, considering that children commonly present with musculoskeletal concerns of unknown etiology—growing pains, for example, or pain resulting from an injury that they don't remember happening.

BY BARBARA E. OSTROV, M.D.

A finding of swollen, boggy joints is helpful for definitively diagnosing juvenile idiopathic arthritis (JIA), but such a finding is not a diagnostic prerequisite as it does not take into consideration the possibility of "dry" synovitis, according to pediatric rheumatologist Barbara E. Ostrov of Pennsylvania State University in Hershey.

Dry synovitis—joint inflammation with significant stiffness, flexion contractures, and pain but little in the way of discernable swelling—is neither well described nor well documented in the literature, despite the fact that it is not an infrequent finding in certain types of JIA, said Dr. Ostrov, who conducted a retrospective chart review of 50 JIA patients to gauge the incidence of the condition and to determine which subsets of patients are most likely to present with this disease variation.

For purposes of the review, Dr. Ostrov developed preliminary diagnostic criteria for dry synovitis, including joint pain and stiffness for at least 3 months plus minimal joint effusion and minimally palpable synovial tissue on examination, morning stiffness lasting for more than 1 hour, loss of range of motion (with or without contractures) of involved joints detected on physical examination, and improvement in the symptoms and physical findings with appropriate medical therapy. Based on these criteria, Dr. Ostrov determined that 17% of the patients in the review had dry synovitis.

In this month's column, Dr. Ostrov discusses the diagnostic and management implications of dry synovitis in juvenile arthritis patients.

Rheumatology News: How common a finding is dry synovitis with respect to certain subsets of JIA patients?

Dr. Ostrov: In my review of 50 patients, 30% of polyarticular and 14% of systemic patients were found to have dry synovitis, almost exclusively in hand joints. No child with oligoarticular JIA had evidence of dry synovitis.

RN: How does the finding of dry synovitis complicate diagnosis and/or management?

Dr. Ostrov: Because dry synovitis may be difficult to identify in some patients, diagnosis of JIA may be delayed if this is the main feature. Also, in patients with "wet" synovitis, changes in the synovitis allow accurate monitoring of treatment response. Obviously, this is not the case when there is no such change to monitor.

RN: Are the treatment options the same for wet and dry synovitis?

Dr. Ostrov: Although some polyarticular JIA patients may have some symptomatic response to NSAIDs, my patient review revealed that the dry synovitis did not seem to respond at all to NSAIDs. Additionally, it appears that dry synovitis does not respond as readily to other standard JIA therapies, such as methotrexate. In my experience, anti–tumor necrosis factor therapy may be more successful for treating these patients, but a prospective analysis should be undertaken to clarify this issue.

RN: What are the most important management considerations for these kids?

Dr. Ostrov: In addition to appropriate medication, occupational therapy should be an important component of treatment for patients with dry synovitis because the contractures are so prominent.

RN: How do wet and dry synovitis differ?

Dr. Ostrov: There is virtually no literature on this variant of arthritis in children. What is needed is a multicenter prospective database to collect information on diagnosis and treatment of these patients. Such a database would enable us to compare features of the variants and to assess different treatment responses. Such a database also would be useful in the design of research and drug therapy trials. Currently, the issue of dry synovitis is too much a matter of speculation and anecdotal opinion. ■

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Cost of Childhood-Onset SLE Is Thrice That of Adult Lupus

BY DOUG BRUNK
San Diego Bureau

The mean direct cost for treating childhood-onset systemic lupus erythematosus per patient is $14,944 a year, which is roughly three times higher than the cost of treating an adult with the condition, results from the first analysis of its kind demonstrated.

"Whether this difference in cost between adults and children is due to differences in health care delivery systems, adherence to therapies, or differences in disease severity remains to be determined," wrote the researchers, led by Dr. Hermine I. Brunner of the division of rheumatology at Cincinnati Children's Hospital Medical Center.

The researchers reviewed the clinical and administrative records of 119 patients with childhood-onset systemic lupus erythematosus (cSLE) who were diagnosed and treated at two large tertiary pediatric rheumatology centers in the United States between January 2001 and April 2004 (Arthritis & Rheum. 2006;55:184-8). They used health-related quality of life estimates for patients with cSLE as reported in the medical literature to calculate the direct cost per quality-adjusted life-year. These quality of life measures were based on the global health subscale of the Child Health Questionnaire.

Of the 119 patients, 87% were female. The mean duration of follow-up was 27 months, and the researchers reported on results of 3,184 patient-months of follow-up.

The cumulative cost of medical care during the study period was $3,965,048, which excluded the cost of outpatient medications. This translated into a mean per-patient monthly cost of $1,245, or $14,944 per year. In contrast, recent estimates of the per-patient annual cost of treating adult SLE put the figure at $4,170.

A breakdown of the direct costs revealed that most came from inpatient or day-patient care (28%), followed by laboratory testing (21%), inpatient or day-patient medication (13%), dialysis (11%), and outpatient clinic visits other than rheumatology outpatient visits (11%).

The researchers noted that only 3 of the 199 patients required dialysis, yet it was the fourth-largest cost entity. "Therefore, based on previous research in adults, dialysis expenses contribute to the direct cost of both SLE and cSLE in similar proportions," they wrote.

"This finding suggests that prevention and aggressive therapy of renal diseases are not only of utmost importance for avoiding patient damage but also appear to be relevant for containing the cost of care of cSLE," they noted.

The study was supported by the Robert Wood Johnson Foundation, the Arthritis Foundation of America, and the National Institute of Arthritis and Musculoskeletal and Skin Diseases. ■

Children Rate JIA Pain Lower Than Do Their Parents, Physicians

BY FRAN LOWRY
Orlando Bureau

Children with juvenile idiopathic arthritis rate the intensity of their pain lower than their parents or their physicians do. They also rate their overall sense of well-being as being much higher, according to Dr. Pablo Garcia-Munitis, formerly of the Università di Genova (Italy) and now of the Hospital de Ninos "Superiora Sor Maria Ludovica," La Plata, Argentina, and his associates.

The finding suggests that children may cope with their disease better than their parents realize, or that parents tend to be oversolicitous about their children's health problems, wrote Dr. Garcia-Munitis and his associates.

Observing the intensity of a child's pain plays an important role in determining therapy for children with juvenile idiopathic arthritis (JIA). Because the experience of pain is personal and subjective, children's self-reports are given preference whenever possible. Yet physicians usually rely on information obtained from the parents, most often from the mother. There is growing awareness that the sole use of parent proxy reports may fail to capture the fact that parents and children may differ in their perceptions of health, hence the need to understand the relationship between parent proxy reporting and patient self-reporting, said the researchers (Arthritis Rheum. 2006;55:177-83).

The researchers examined the level of agreement between children, parents, and physicians in rating JIA pain intensity. The study group comprised 94 children, aged 5-18 years, who attended an outpatient clinic accompanied by both parents.

The child, mother, and father independently rated the intensity of the child's present pain and of pain during the previous week according to a visual analog scale. They also completed the discomfort scale of the Childhood Health Assessment Questionnaire. Rather than being combined with the visual analog scale, the questionnaire was presented in a separate form to avoid possible confusion, the researchers said.

On average, the children rated their pain and disability as consistently lower, and their overall well-being as better, than did their mothers, fathers, and physicians. Mothers and fathers were similar in their mean ratings of their child's pain, disability, and well-being. Physicians gave the worst scores of all. With regard to the level of present pain, mothers and children had moderate agreement, whereas fathers and children and physicians and children had poor agreement. The parents and physicians had moderate agreement in rating present pain. ■