Diagnosing Lyme arthritis of the hip in children

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by Daniel J. Cameron, MD, MPH

“The clinical presentation of Lyme arthritis (LA) of the hip can be similar to both acute bacterial septic arthritis (SA) and transient synovitis (TS),” explains Cruz and colleagues. [1] “Differentiating between SA, LA, and TS of the hip can be challenging, even for the most discerning clinician.”

But, accurately diagnosing these conditions is important since treatment of each is distinct, states Cruz. So in an effort to identify any unique features, Cruz and his team performed a systematic review of all published studies involving pediatric patients with LA.

Lyme arthritis of the hip in children can be difficult to diagnose.

They identified 88 patients diagnosed with Lyme arthritis of the hip. The average age was 7.5 years. The authors compared these cases with those involving children with transient arthritis and septic arthritis. Transient arthritis causes hip pain and limping and occurs after a viral infection.

According to Cruz and colleagues, children with Lyme arthritis of the hip were *more likely to bear weight*. Still, one-third (33%) refused to bear weight but this is compared with more than 60% of the SA and TS patients who refused to do so.

Furthermore, children with Lyme arthritis of the hip were *less likely* (23%) *to have fever*. Whereas more than half (53.8%) of the septic arthritis patients were febrile.

A review of laboratory data found neither the white blood count (WBC) nor the erythrocyte sedimentation rate (ESR) was a good marker for distinguishing Lyme arthritis of the hip from septic arthritis.

But, an ESR of at least 40 should prompt clinicians to obtain hip synovial fluid to evaluate for septic arthritis, Cruz says. Conversely, “an ESR less than 40 mm/hr could be worked up further with Lyme serology as LA or TS become more likely.”

A high synovial WBC of at least 65,000 cells/mm3 was proposed as a potential cutoff suggestive of bacterial septic arthritis. The synovial WBC was 47,533 - 64,242 cells/mm3 for Lyme arthritis. The synovial WBC was 105,432 - 260,214 cells/mm3 for septic arthritis.

Clinical judgment is still necessary when distinguishing these entities. And as Cruz suggests, “if significant hip irritability or other clinical signs of [septic arthritis] SA exist, then treatment for SA should be initiated.”

The authors did not discuss whether any of the children with transient arthritis might suffer from seronegative Lyme disease.

Related Articles:

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Case report: Lyme neuroborreliosis more common in children

12-year-old boy suffers cardiac arrest due to Lyme disease

References:

1. Cruz AI, Jr., Anari JB, Ramirez JM, Sankar WN, Baldwin KD. Distinguishing Pediatric Lyme Arthritis of the Hip from Transient Synovitis and Acute Bacterial Septic Arthritis: A Systematic Review and Meta-analysis. Cureus. 2018;10(1):e2112.
