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FPIN's Clinical Inquiries

Hip Pain in Preschool-Age Children

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Clinical Question

What are the most common causes of hip pain in preschool-age children?

Evidence-Based Answer

Evidence is lacking on the most common causes of hip pain in children because most data come from cohort studies and include referred patients. Based on these studies, transient synovitis is the most common cause of hip pain in preschool-age children, accounting for more than 80 percent of cases. (Strength of Recommendation [SOR] = B, based on fair-quality cohort studies performed in referred populations). Septic arthritis, Legg-Calvé-Perthes disease, and trauma are important but less common causes of hip pain in this age group. (SOR = B, based on fair-quality cohort studies performed in referred populations).

Evidence Summary

A large study of 500 children (10 months to four years of age) with hip pain or limp presenting for radiologic studies (radiography and ultrasonography) reported the diagnoses made, but did not describe the setting in which these patients presented, making it difficult to ascertain if there was any referral bias.¹ Transient synovitis was diagnosed in 471 patients (94 percent). Remaining diagnoses included Legg-Calvé-Perthes disease (n = 10), septic arthritis (n = 9), trauma (n = 4), brucellar arthritis (n = 2), osteoid osteoma (n = 2), rheumatoid arthritis (n = 1), and epiphysiolysis (n = 1). There were no cases of slipped capital femoral epiphysis, which is seen primarily in adolescents.

A prospective study of 45 children (three to 10 years of age) with acute hip pain presenting to the outpatient surgical department at Karl Franzens University and Medical School in Austria established final diagnoses through radiography, isotope bone scan, magnetic resonance imaging, and clinical follow-up.² Transient synovitis (n = 17), Legg-Calvé-Perthes disease (n = 13), and slipped capital femoral epiphysis (n = 2) accounted for 32 (71 percent) of the 45 cases. The children in this study presumably were referred because they had severe hip pain or because the diagnosis was in doubt. Therefore, they likely represent more serious causes of hip pain in children presenting to primary care practices, rather than a typical distribution of causes.

Canadian researchers conducted a retrospective review of 507 children of all ages hospitalized because of hip pain.³ Clinical data, radiography, and laboratory results contributed to the final diagnoses, most of which were established by the time of discharge. Overall, 426 patients (84 percent) were diagnosed with irritable hip (transient synovitis); 21 patients had a septic hip or pelvic joint; 23 patients had Legg-Calvé-Perthes disease; and 37 patients were diagnosed with slipped capital femoral epiphysis. Because these children were hospitalized, they probably had more severe pain than typical children presenting in the primary care setting.

Transient synovitis is a self-limited and benign condition. Most patients are neither referred nor hospitalized. The previously mentioned studies likely underestimated the true prevalence of transient synovitis in an outpatient setting, strengthening the conclusion that transient synovitis is the most common cause of hip pain in young children.

Recommendations from Others

We found no guidelines or professional society recommendations addressing the causes of hip pain in young children.

Clinical Commentary

In my practice, I see hip pain in children who are overweight or obese that is not transient synovitis (or any of the more serious conditions described previously). These children tend to be older, presenting with symptoms as they engage in more structured play and activities, typically as a result of starting school. Their lifestyles are otherwise dominated by watching television and other passive, sedentary activities. This lifestyle, which also contributed to their obesity, seems to cause them to have stiffness and pain, which is exacerbated by an increase in activity.

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Clinical Inquiries provides answers to questions submitted by practicing family physicians to the Family Physicians Inquiries Network (FPIN). Members of the network select questions based on their relevance to family medicine. Answers are drawn from an approved set of evidence-based resources and undergo peer review. The strength of recommendations and the level of evidence for individual studies are rated using criteria developed by the Evidence-Based Medicine Working Group (http://www.cebm.net/levels_of_evidence.asp).

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