Antinuclear antibody, rheumatoid factor, and cyclic-citrullinated peptide tests for evaluating musculoskeletal complaints in children

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Citation

Authors' objectives
To assess the test performance of antinuclear antibody (ANA), rheumatoid factor (RF), and cyclic-citrullinated peptide (CCP) tests in children and adolescents with undiagnosed musculoskeletal (MSK) pain or joint swelling, compared with clinical diagnoses of pediatric systemic lupus erythematosus (pSLE) and juvenile idiopathic arthritis (JIA). To explore differences in test performance for accuracy modifiers including age, sex, race or ethnicity, comorbidities, and recent infections. To evaluate the impact of test results on clinical decisionmaking and clinically important outcomes such as referrals, ordering of additional tests, clinical management, and anxiety experienced by children and parents.

Authors' conclusions
Most of the evidence from the 28 studies included in the review was not applicable to the population of interest as most studies examined children with known disease rather than with undiagnosed MSK pain. No studies provided a complete investigation on accuracy modifiers. No studies examined clinically important outcomes such as the impact of the test results on referrals, ordering of additional tests, patient management, and patient and parent anxiety levels. Because the Sn and Sp of these tests have yet to be verified, current evidence does not support their use as diagnostic tests for children with undiagnosed MSK pain. They have a potential application as an adjunct to a clinical assessment that suggests the presence of an inflammatory arthritis or connective tissue disease.

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