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Response: Are the Assessment of Spondyloarthritis International Society (ASAS) classification criteria useful in juvenile Spondyloarthritis?

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To the Editor

We thank Dr. Chogle for his comments on the article by Weiss et al. (3) examining the utility of the Assessment of Spondyloarthritis International Society (ASAS) criteria for Axial SpA in children with juvenile spondyloarthritis (JSpA).

There are no classification criteria for axial disease (sacroiliitis or spondylitis) in JSpA, an umbrella term that includes both enthesitis-related arthritis and psoriatic arthritis. Treatment recommendations for children with JSpA and peripheral arthritis only, versus those with accompanying sacroiliitis are distinct in the American College of Rheumatology (ACR) juvenile arthritis treatment guidelines (1). The children in the sacroiliitis category are described as having "clinical and imaging evidence of sacroiliitis". However, no definition of clinical and imaging evidence of sacroiliitis is provided in the ACR guidelines.

The International League of Associations for Rheumatology (ILAR) juvenile idiopathic arthritis classification criteria define sacroiliitis as the presence of tenderness on direct compression over the sacroiliac joint (2). The sensitivity and specificity for this definition of sacroiliitis for positive findings on MRI in our prospective cross-sectional study of 40 children with newly diagnosed JSpA (3) was 0.25 (IQR: 0, 0.55) and 0.53 (IQR: 0.36, 0.71). If imaging is not performed to confirm the diagnosis, the low positive predictive value of sacroiliitis using ILAR definition may lead to unnecessary treatment of children with biologics agents, assuming there is no other justification for their use.

In adults, SpA classification has shifted toward the use of criteria identifying individuals with back pain who have axial SpA versus those with peripheral disease only (4, 5). In our study of 40 children, the test properties of the ASAS axial SpA criteria, which require

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chronic back pain (≥ 3 months), were also low. Using positive findings of sacroiliitis on MRI as the reference standard the sensitivity and specificity of the ASAS axial criteria were 0.25 (IQR: 0–0.55) and 0.78 (IQR: 0.63–0.92), respectively. These results are in accordance with an ACR abstract by Katsicas and Russo (6), but our conclusions are different; while the ASAS peripheral SpA criteria may perform comparably to ESSG criteria, these findings also suggest that the ASAS axial SpA criteria do not perform well in children. In the absence of more accurate criteria children with axial disease will go unrecognized, and the opportunity to intervene early and to enroll these children in clinical trials at the earliest stage of axial involvement will be lost. It is also possible that the use of only clinical criteria to define sacroiliitis as in the ACR guidelines for JIA, will lead to unnecessary use of TNF inhibitors.

The test properties of the ILAR juvenile arthritis definition and ASAS axial SpA criteria for sacroiliitis using MRI as the reference standard are disappointing, highlighting the need for pediatric axial SpA classification criteria. Although we share Dr. Chogle's concerns about the cost of MRI (and HLA-B27 testing) that might limit the use of these criteria in certain locales, it may also be that the increased specificity in classification afforded by the use of these tests could be cost effective in the long run.

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