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Musculoskeletal ultrasound for enhancing pediatric rheumatology: Comment on the article by mcalindon et al

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Reply

To the Editor:

We read the comments by Navarrete-Navarrete et al regarding our article investigating how self-efficacy for pain control and pain catastrophizing are related to pain, stiffness, fatigue, and psychological distress in patients with SLE. Navarrete-Navarrete et al directed readers to their important study regarding the role of high levels of chronic stress experienced by SLE patients in relevant SLE outcomes (1) as well as an interesting intervention trial in SLE patients (2).

Navarrete-Navarrete et al conducted a study suggesting that high levels of daily stress, although not stressful life events, were associated with an exacerbation of SLE symptoms (1). Subsequently, the authors carried out a randomized controlled trial examining the efficacy of CBT for coping with chronic stress in patients with SLE (2). In this trial, 45 patients with SLE and high levels of daily stress were randomized to either a group receiving 10 consecutive weekly sessions of CBT for coping with chronic stress or a control group. The authors examined posttreatment outcomes over the next year and found that participants in the CBT intervention group reported decreased levels of depression, anxiety, and daily stress compared to participants in the control group. Participants in the CBT stress coping intervention group also demonstrated significant improvements in QOL and somatic symptoms including pain compared to the control group. No differences between the groups were found for immunologic measures.

Our study specifically examined how the pain coping cognitions (i.e., self-efficacy for pain control and pain catastrophizing) of the SLE patients were related to physical symptoms and psychological distress in patients with SLE. We found that pain coping cognitions were related to pain, stiffness, fatigue, and mood even after controlling for age, race, and disease activity. In our article, we suggested that shifting the treatment of SLE patients from a traditional approach with medication (e.g., immunosuppressive therapy) to a multidisciplinary approach that includes treatments addressing pain cognitions may have an important and positive impact on SLE outcomes. The application of a tailored pain coping skills training (PCST) (3) protocol that aims to increase self-efficacy for pain control and decrease pain catastrophizing may be particularly beneficial for these patients.

A PCST protocol tailored for SLE patients would focus on enhancing the ability of these patients to manage their pain and decrease their negative pain coping strategies (i.e., pain catastrophizing). We hypothesize that such a PCST protocol would result in increased self-efficacy for pain control, decreased pain catastrophizing, decreased pain, and increased physical and psychological functioning. The CBT stress coping protocol that targeted decreases in daily stress that Navarrete-Navarrete et al tested produced significant reductions in pain, depression, anxiety, and daily stress as well as somatic symptoms.

It would be interesting to compare the efficacy of a

tailored PCST protocol to the CBT-based chronic stress coping protocol proposed by Navarrete-Navarrete et al (4) in patients with SLE. Both protocols may be effective for treating certain physical symptoms and psychological distress, although the degree of improvement may vary; it remains unknown whether the CBT-based chronic stress coping protocol would impact important pain coping cognitions. Another important aim of future work would be to examine how pretreatment individual factors (e.g., age, disease severity, pain levels, and daily stressors) moderate the impact of such intervention protocols on important outcomes. For instance, SLE patients who have high levels of pain and/or pain catastrophizing but limited levels of daily stress may benefit most from a PCST protocol, while SLE patients with low levels of pain catastrophizing but high levels of daily stress may benefit from a CBT-based protocol focused on coping with chronic stress. In another instance, patients with moderate levels of both pain catastrophizing and daily stress may benefit from a combination of these intervention protocols.

We appreciate the interest by Navarrete-Navarrete et al in our work and their comments. We plan to move forward by examining CBT-based pain interventions in patients with SLE and will certainly use their findings to inform and advance our future work.

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Musculoskeletal ultrasound for enhancing pediatric rheumatology: comment on the article by McAlindon et al

To the Editor:

We read with great interest the article by McAlindon et al published recently in *Arthritis Care & Research* (1). The use of musculoskeletal ultrasound (US) has tremendously

enhanced the field of rheumatology in the past 2 decades (1). Particularly, musculoskeletal US is paramount for the early diagnosis of various rheumatic diseases and for the close followup of patients (mainly as an objective means of outcome assessment) during their lengthy treatment periods (2). Furthermore, musculoskeletal US has even been included in the diagnostic criteria for rheumatoid arthritis, ankylosing spondylitis, and polymyalgia rheumatica (3–5).

Musculoskeletal US has some very well-known advantages; it is convenient and inexpensive, it does not contain radiation, and it readily provides comparative and dynamic imaging with great comfort for the patient and the physician alike. Additionally, with techniques such as sonopalpation or sonoauscultation, the role of musculoskeletal US as an extension of the physical examination (its use in musculoskeletal assessment is much like how the stethoscope is used in a physical examination) has also been noted (6–8). Also noteworthy is that musculoskeletal US can provide immediate guidance once the need for any type of intervention (aspiration/injection) has been determined (9).

In this regard, especially when considering its advantages in terms of radiation exposure (there is none) and dynamic imaging (the extra procedures required for magnetic resonance imaging in pediatric patients are unnecessary), one would expect musculoskeletal US to be much more commonly used in pediatric rheumatology; however, pertinent studies in the literature suggest the contrary (10–12). In general, the 2 important barriers against the use of musculoskeletal US by nonradiologists seem to be the lack of a device to administer musculoskeletal US and the lack of education on how to perform it (13). However, based on our experience organizing the musculoskeletal US workshops in the previous 2 PRES (Pediatric Rheumatology European Society) fellowship courses in 2009 and 2011, we believe that the former barrier outweighs the latter. Yet, parallel courses (for pediatric rheumatologists) are organized in several meetings because we are aware that, although the use of musculoskeletal US in pediatric rheumatology resembles that in adult rheumatology, there are particular differences/challenges pertaining to pediatric patients.

In short, we recommend that pediatric rheumatologists (and possibly of the whole field as well) should focus their attention on the need to expedite the use of musculoskeletal US in pediatric rheumatology. Aside from initial attempts to supply US machines to individual centers, the immediate agenda should also comprise setting up standardized international approaches to musculoskeletal US training and assessment for pediatric rheumatologist sonographers. If the immediate agenda is implemented this way, we foresee that musculoskeletal US will soon enhance the actual clinical practice of pediatric rheumatology, from the perspective of both patients and physicians alike.

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