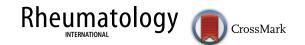
LETTER TO THE EDITOR - FOOD FOR THOUGHT



Subgrouping fibromyalgia patients according to response to therapeutic interventions: a new concept for a disease with low treatment-response rates

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Patients with fibromyalgia (FM) are usually difficult to treat, and new concepts are needed to improve patients' outcome. For example, it may be helpful to define subgroups of FM patients with similar symptom profiles, e.g., as done by using the OMERACT core symptom domains for FM [1]. Laboratory parameters are not available for FM, and for imaging assessment using ¹⁸fluoro-fluorodeoxyglucose-positron emission tomography (¹⁸F-FDG-PET), only preliminary data are available: An increase in limbic metabolism was noted with concomitant symptomatic improvement, suggesting that the limbic system attenuates FM symptoms [2]. Considering these principal issues, it could be anticipated that treatment approaches to FM patients are insufficient [3–5], as long as well-defined subgroups are not separately studied in interventional trials.

Only recently Mustafa and Diab [6] reported a promising therapeutic approach in patients with long-standing FM according to the ACR 1990 criteria and limited C1–C2 range of motion based on the flexion–rotation test. After stratification of patients primarily on pre-medication and age, the patients completed a 12-week multimodal program with education, cognitive behavior therapy and exercise. In addition to the multimodal program, patients in the experimental group also received upper cervical manipulative therapy as described by Maitland et al. [7] (after vertebral artery tests on both sites and gentle neck massage). Although outcome parameters were equally improved after 12 weeks of treatment, the long-term analysis showed on

It was certainly critical for the outcome of this study that Mustafa and Diab [6] included only FM patients with a limited C1-C2 range of motion based on the flexion-rotation test. The occurrence of severe FM after surgery had already been observed in 1991 [8], but the concept that surgery or trauma may initiate FM is still debated despite "weak to nonexisting evidence" [9], and the results of a 3-year follow-up study showed that whiplash injury and road accident trauma are not associated with an increased risk of FM [10]. The present criteria used for classification of FM may also result in high rates of diagnosis in whiplash patients because of persistent localized tenderness after motor vehicle collisions [11]. An even broader field of multidisciplinary symptoms will be presented by patients classified according to the (modified) preliminary American College of Rheumatology (ACR) 2010 diagnostic criteria [12], and in case of including "fibrofog" into consideration as recently reviewed by Kravitz and Katz [13]. Detection of effective interventions related to specific causes of FM may become even more difficult when using more general inclusion criteria like these (e.g., without tender points).

Already in 1997, Buskila et al. [14] reported FM following injury in 22 % of those with neck injury versus 2 % of the control patients with lower extremity fractures (P = 0.001), and Blunt et al. [15] observed improvement of patients' cervical ranges of motion together with improvement of pain levels after chiropractic management—although their study was not powered sufficiently. Only 14 years later in 2011, Castro-Sánchez et al. [16] reported a significant reduction in pain at 13 of the 18 tender points after 20 weeks of craniosacral therapy in the intervention group. So it seems that Mustafa and Diab added more specific information on possible effects of cervical

holding changes that favored the FM management outcomes of the experimental group.

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interventions in FM patients, as they focus on patients with a limited C1–C2 range of motion based on the flexion–rotation test with subsequent cervical manipulative therapy as described by Maitland et al.

To my opinion, it is an intriguing new concept of subgrouping FM according to specific findings responsive to a specific therapeutic intervention. Maybe more subgroups can thus be defined in the future. The field is open for discussion and further projects.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

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