

CONCISE COMMUNICATION

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Should quantitative assessment of rheumatoid arthritis include measures of joint damage and patient distress, in addition to measures of apparent inflammatory activity?

Recent controversies concerning patient global assessment (PATGL) in rheumatoid arthritis (RA) remission criteria (1,2) largely ignore issues that emerge when, as noted by Felson et al, “remission criteria designed and validated in clinical trials are applied to...help assess treatment ‘success’ in clinical practice...and could serve as a ‘treat-to-target’ goal” (1). All six RA core data measures and indices—including swollen joint count and tender joint count, as well as PATGL, Disease Activity Score in 28 (DAS 28) Joints, and other indices—are elevated significantly not only by inflammatory activity, but also by secondary osteoarthritis (3–5), depression (6), and/or fibromyalgia (FM) (7,8), regardless of levels of inflammatory activity (see Table 1 of representative reports). This phenomenon has limited impact in clinical trials, in which PATGL is as efficient as any measure (including swollen and tender joint counts)

to distinguish active from control treatments (9) in patient groups toward meeting regulatory requirements to market a new agent. However, only 5% to 30% of all patients with RA meet eligibility criteria for clinical trials (10,11), whereas more than 50% of patients seen in routine care have clinically important osteoarthritis, FM, and/or depression (3,5–8), which elevate all clinical RA measures, affecting a goal “low activity or remission” according to RA indices in individual patients (12). Furthermore, self-report measures of patients with RA are elevated in 35% to 60% of normal elderly people who do not report any arthritis (13).

Quantitative, pragmatic measures are available to assess joint damage and/or patient distress in order to better interpret whether elevated RA measures and indices result from these problems, rather than from—or in addition to— inflammatory activity. Joint damage may be quantitated as deformed and/or limited motion on a 28-joint count, as described in the initial report (14). Patient distress may be quantitated by disease-specific questionnaires for FM (15) and depression (16), and/or by indices for FM

Table 1. RA core data set measures in patients with RA in whom comorbid hand osteoarthritis, fibromyalgia, and/or depression is absent or present

Measure	Comorbidity								
	Osteoarthritis (3)			Depression (6)			Fibromyalgia (7)		
	Absent	Present	<i>P</i>	Absent	Present	<i>P</i>	Absent	Present	<i>P</i>
Tender joint count (0-28) ^a	0 (0-2)	1 (0-2.25)	0.08	5 (2-8)*	9 (4-19)*	0.001*	3.0 (0-8)*	10.0 (5-17)*	<0.001*
Swollen joint count (0-28) ^a	0 (0-0)*	3 (0-5)*	<0.001*	4 (2-7)*	7 (4-11)*	0.006*	2.4 (0-5)	3.9 (1.0-5.5)	0.122
Physician global assessment (0-100) ^a	10 (5-10)*	20 (10-38.5)*	0.002*	NA	NA	NA	NA	NA	NA
Erythrocyte sedimentation rate (1-150) ^b	33 (21-42)	28 (17-42.5)	0.09	27 (12-43)	39 (20-62)	0.08	26 (14-41)	28.5 (16-49)	0.335
C-reactive protein (0-20) ^b	0.7 (0.3-2.6)	0.6 (0.1-2.2)	0.28	12 (5-37)	22 (9-60)	0.045	NA	NA	NA
HAQ physical function (0-3) ^c	0.1 (0.1-1.0)*	0.82 (0.3-1.6)*	0.01*	NA	NA	NA	1.7 ± 0.8*	2.3 ± 0.5*	<0.001*
HAQ pain (0-100) ^c	30 (7-70)*	70 (35-81)*	0.003*	NA	NA	NA	NA	NA	NA
HAQ patient global assessment (0-100) ^c	15 (7-50)*	50 (20-76)*	0.003*	29 (17-45)	35 (22-62)	0.3	32 (14-52)*	57 (42-90)*	<0.001*
DAS28-ESR	2.88 (2.4-3.9) (L)*	3.89 (3.2-4.4) (M)*	0.001*	4.4 (3.5-5.3) (M)*	5.4 (4.4-6.7) (H)*	0.001*	3.9 ± 1.5 (M)*	5.3 ± 1.1 (H)*	<0.001*

Note: For osteoarthritis, data are median values (interquartile ranges) according to negative or positive findings of hand osteoarthritis (3). For depression, data are median values (interquartile ranges) according to negative or positive screen for depression by HADS-D (6). For fibromyalgia, data are median values (interquartile ranges) according to negative or positive screen for fibromyalgia by 1990 or 2011 criteria (7).

Abbreviations: DAS28-ESR, Disease Activity Score in 28 Joints–Erythrocyte Sedimentation Rate; H, High (DAS28 category); HADS-D, Hospital Anxiety and Depression Scale–Depression; HAQ, health assessment questionnaire; L, Low (DAS28 category); M, Medium (DAS28 category); NA, not available; RA, rheumatoid arthritis.

^aPhysician-reported measures.

^bLaboratory measures.

^cPatient-reported measures.


*Statistically significant differences with *P* < 0.05.

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and depression on a single multidimensional health assessment questionnaire (MDHAQ) which agree more than 80% with reference questionnaires (17,18). A RheuMetric checklist includes pragmatic 0-10 physician estimates for global status, inflammation, damage, and distress (19,20). Quantitative assessment of comorbid joint damage and patient distress may be informative even in clinical trials, eg, to explain in part why 30% to 40% of patients treated with powerful biological therapies do not meet American College of Rheumatology 20 (ACR 20) response criteria (21), a relatively low target. Quantitative measurement of joint damage and patient distress—in addition to inflammatory activity—in routine care, long-term databases, and even clinical trials may clarify RA management, outcomes, and possible new remission criteria.

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