

P45 Trajectories of physical/social function in early rheumatoid arthritis using PROMIS symptom clusters

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Objective: Rheumatoid arthritis (RA) is characterized by multiple symptoms impacting HRQL. Symptom clusters, the co-occurrence of 2+ symptoms that are stable and independent of other clusters, may share underlying mechanisms and contribute to different disease outcomes, particularly if symptoms are under-identified and undertreated. We previously applied a person-centered approach to group adults newly diagnosed with RA based on PROMIS symptom clusters of varying pain, fatigue, depression, and anxiety levels. Here, we examine the relationship of symptom clusters to physical and social function over the first 6 months.

Methods: Data were from new RA patients in the Canadian Early Arthritis Cohort. Participants underwent standardized assessments and completed PROMIS29 at 0, 3, and 6 months. Latent class analysis yielded 4 symptom cluster groups: 1. Minimal; 2. Mild; 3. Moderate; and 4. Moderate-Severe symptoms. Multivariable mixed effects regression was used to estimate trajectories of physical function and social participation over the first 6-months across cluster groups, adjusting for age, sex, race, education, smoking, obesity, comorbidities, symptom duration, seropositivity, and RA treatments.

Results: Of 310 adults, 67% were women and 78% were White with a mean age of 56. At diagnosis, all had high disease activity; patients reporting the highest pain, fatigue, depression, and anxiety symptoms were significantly younger, more often had a history of depression, and had the highest mean disease activity (CDAI), Patient Global and stiffness scores, and greatest impairments in physical function and participation. All started similar first-line treatments, with no significant differences in dose or strategy across cluster groups.

Over the first 6 months of treatment, in adjusted regression models, RA control improved in all, but increasing symptom severity at diagnosis was associated with consistently worse physical function and social participation.

Conclusions: Pain, depression, anxiety and fatigue that persists even as RA is controlled appears to significantly impair physical and social function, making it harder to individuals to engage in daily activities, maintain relationships, and fulfill social and work responsibilities. These individuals may benefit from earlier, more aggressive pharmacologic and psychosocial interventions to better preserve QOL, autonomy, and workforce participation.