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Concise Report

Patient global assessment in psoriatic arthritis – what does it mean? An analysis of 223 patients from the Psoriatic arthritis impact of disease (PsAID) study

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ABSTRACT

Objective: Patient global assessment is a key outcome measure in psoriatic arthritis. To explore the meaning of patient global assessment in psoriatic arthritis by examining associations to domains of health assessed by the Psoriatic arthritis impact of disease score.

Methods: Post-hoc analysis of a multicentre cross-sectional study of patients with psoriatic arthritis. Data collection included patient global assessment, specific joint and skin global patient assessments, Psoriatic arthritis impact of disease questions covering physical (including joints and skin), psychological and social impact, and other comparator outcomes. Univariate analyses (Pearson correlation) and multivariate linear regression were performed to explain patient global assessment and the specific joint and skin global patient assessments.

Results: Among 223 patients (mean age: 51.0 [standard deviation, ±13.3] years; mean disease duration: 9.9 [±10.1] years; mean swollen joint count: 4.1 [±5.1]; 84.3% with current psoriasis [mainly of less than 5% body surface area]), 50.2% were females. Mean patient global assessment was 4.8 (±2.7), mean joint and skin patient assessments were respectively 5.6 (±2.5) and 4.1 (±3.0). Intraclass correlation between patient global assessment and joint or skin patient assessment was respectively 0.71 (95% confidence interval, 0.64–0.77) and 0.52 (95% confidence interval, 0.42–0.60). In multivariate analyses, patient global

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assessment was explained (R^2 of model: 0.754) by coping ($\beta = 0.287$); pain ($\beta = 0.240$); work and/or leisure activities ($\beta = 0.141$); and anxiety ($\beta = 0.109$).

Conclusions: Patient global assessment in psoriatic arthritis was explained mainly by physical, but also psychological aspects of the disease.

1. Introduction

Psoriatic arthritis (PsA) is a heterogeneous disease, which includes varying levels of peripheral joint involvement and skin manifestations. Evaluating its outcomes should reflect all these different aspects [1–5]. Outcome measures in rheumatology (OMERACT) and the Group of research and assessment of psoriasis and psoriatic arthritis (GRAPPA) have proposed six core domains to be measured in clinical trials and observational studies of PsA: peripheral joint activity, skin activity, pain, patient global assessment (PGA), physical function and health-related quality of life [1]. Furthermore, over the recent years, patient reported outcomes (PROs) have been increasingly recognized as important efficacy endpoints [6,7]. PGA is one of the most widely used PROs in PsA [8,9], however, we lack information on the concepts encompassed in PGA, from the patient's perspective. PGA may include physical aspects, e.g. of musculoskeletal disease, or skin or nail disease, or a composite of all these domains; but also psychological or social aspects [10].

Recently, the European league against rheumatism (EULAR) developed the Psoriatic arthritis impact of the disease (PsAID) questionnaire, a score reflecting the impact of PsA based on the patients' perspective [11]. The PsAID questionnaire assesses 12 domains of health, ranging from pain or physical activity to anxiety or embarrassment. The PsAID composite score was found to correlate strongly with PGA [11]. However, the specific relationships between PsAID questions reflecting different domains of health and PGA were not assessed [11].

GRAPPA has also suggested using other PGA questions, specific to joints and skin: the joint and skin patient assessments [8]. In an initial study, PGA appeared to be related to both of these patient assessments [8]. Variations in wording of patient assessment are relevant, as has been shown in rheumatoid arthritis [12]. Thus, the new wordings proposed by GRAPPA [8] should be further assessed.

The objectives of the present study were to explore the notion of PGA in PsA from the patients' perspective by describing its construct validity against the PsAID questions and other outcome measures in PsA. Furthermore, we explored the construct validity of the 2 specific (joint, skin) patient assessments proposed by GRAPPA [8].

2. Patients and methods

2.1. Study design

This was a post-hoc analysis of the cross-sectional part of the PsAID study performed in 2011–2012 in 13 countries across Europe [11].

2.2. Patients

Adult patients with definite PsA according to the rheumatologist opinion were recruited to the cross-sectional part of the PsAID study in the participating secondary or tertiary care centres in 13 countries [11]. In the present study, of the 474 patients included, only patients with PsA fulfilling the Classification criteria for psoriatic arthritis (CASPAR) criteria [13] and with data available for the patient assessment questions were analyzed.

2.3. Global assessments

The main outcome of interest for this analysis was PGA, assessed by the following question: "considering all the ways psoriatic arthritis has affected you during the last week, circle the number that best describes how you have been doing" [11,14]. Two specific (joint, skin) patient assessments were also measured as recommended by GRAPPA [8], respectively by the following questions: "considering all the ways, your joints have affected you during the last week, circle the number that best describes how you have been doing" and "considering all the ways psoriasis (skin disease) has affected you during the last week, circle the number that best describes how you have been doing" [11].

2.4. PsAID and other PROs

The 12 domains of PsAID were assessed by numerical rating scales (NRS, range 0–10, where higher results indicate higher impact) after translation (Table 1) [11]. Other PROs were assessed, including three scores for patient reported quality of life: Dermatology Life Quality Index (DLQI) [15], EuroQualityOfLife 5 dimensions questionnaire (EQ-5D) [16], SF-36 – Short Form 36 Health Survey Physical Component summary scores (PCS); and Mental component summary scores (MCS) [17], as well as the Health Assessment Questionnaire (HAQ) [18].

Physicians reported scores for global assessment, joints and skin disease (NRS, range 0–10, where higher results indicate higher impact) were evaluated. Physical assessment was done by the treating rheumatologist and included evaluation of the skin (body surface area with % skin lesions in categories: 0, < 6%, 6–20% and more than 20%) and joints (swollen and tender joint count, range 0–66 and 0–68) involvement were assessed and Disease activity score (DAS28) based on 28 joint counts and the erythrocyte sedimentation rate [19] and disease activity for psoriatic arthritis (DAPSA) [20] were calculated.

Table 1
Domains of health included in the PsAID questionnaire [11] and classification for this study into categories of impact.

Domains of health	Category of impact
Pain	Physical impact (predominantly related to joints)
Work and/or leisure activities	
Functional capacity	
Discomfort	
Skin problems	Impact related to skin
Embarrassment and/or shame	
Fatigue	Psychological and social impact
Sleep disturbance	
Coping	
Anxiety, fear and uncertainty	
Social participation	
Depression	

Each domain was assessed by a 0–10 numerical rating scale. The separation for domains into categories was performed by the authors; of note embarrassment and/or shame may be also related to joints.