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Review

Measuring psoriatic disease in clinical practice. An expert opinion position paper

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ABSTRACT

Psoriasis is a common, immune-mediated chronic inflammatory disease with a primary involvement of skin and joints, affecting approximately 2% of the population worldwide. Up to one third of patients with psoriasis are diagnosed with psoriatic arthritis (PsA). Psoriasis and PsA are heterogeneous diseases whose severity depends on a number of clinical factors, such as areas affected and pattern of involvement, and are associated with a range of comorbid diseases and risk factors, including obesity, metabolic syndrome, cardiovascular disease and liver disease. Thus measuring the severity of psoriatic disease needs to take into account the multidimensional aspects of the disease. Subjective measures including the impairment in quality of life or in daily living activities as well as the presence of cardio-metabolic comorbidities, are important for the outcome and add further levels of complexity that, to a certain extent, need to be assessed. Because of the wide range of comorbid conditions associated with psoriasis, comprehensive screening and treatment must be implemented for a most effective managing of psoriasis patients. A joint dermatologist–rheumatologist roundtable discussion was convened to share evidence on the real-life use of methods for measuring psoriasis severity comprehensively. Our objective was to provide an expert position on which clinical variables are to be taken into account when considering patients affected by psoriasis and/or PsA globally and on the assessment tools more suitable for measuring disease activity and/or severity in clinical practice.

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1. Introduction

Psoriasis is a common, immune-mediated chronic inflammatory disease affecting primarily the skin and the joints [1]. Psoriatic arthritis (PsA) is affecting up to one third of patients with psoriasis [2]. Moreover, psoriasis and PsA are associated with a range of comorbid diseases and risk factors, including obesity, metabolic syndrome, hypertension and liver disease [3–5]. Psoriasis is also linked to an increased risk of incident cardiovascular disease (CVD) [6–8]. These risks may be directly related to disease severity and duration, although the strength of the association varies across studies [4,8]. Psoriasis patients with comorbidities are more likely to need urgent care or hospitalization, and incur greater total costs than those without comorbidities [9]. All these aspects led to the definition of psoriatic disease [10]. Therefore, the concept of psoriatic disease consists of skin psoriasis, psoriatic arthritis, psoriatic nail involvement and other manifestations not strictly articular and/or skin related.

Psoriasis is a heterogeneous disease whose severity depends on the total skin surface affected, the specific areas affected, and the severity of scaling and erythema. PsA may also be very heterogeneous according to the peripheral or axial involvement, the number of joints affected, the degree of pain, the presence of enthesitis and the functional impairment. Thus measuring the severity of psoriatic disease needs to take into account the multidimensional aspects of the disease [11–13]. Subjective measures including the impairment in quality of life or in daily living activities [14], as well as the presence of cardio-metabolic comorbidities, add further levels of complexity. Numerous assessment tools have been developed to measure skin and joint disease, each with positive and negative aspects. For instance, the Psoriasis Area and Severity Index (PASI) is considered the gold standard assessment tool for psoriasis severity, but PASI is limited by its complexity and insensitivity in people with mild psoriasis, and does not consider the relative impact of the skin regions affected.

A joint dermatologist–rheumatologist roundtable discussion was convened to share evidence on the real-life use of methods for measuring psoriasis severity comprehensively. Our objective was to provide an expert position on which clinical variables are to be taken into account when considering patients affected by psoriasis and/or PsA globally, and on the assessment tools more suitable for measuring disease activity and/or severity in clinical practice.

2. Skin and nails

Several tools have been tested and validated to measure the severity of skin psoriasis. In 2003 Naldi et al. identified more than 40 instruments of clinical evaluation proposed in the literature from 1977 to 2000, and in 2010 Bronsard et al. identified 21 questionnaires for quality of life assessment that were published from 1988 to 2009 [15,16].

The PASI, which is used for clinical evaluation, and the Dermatology Life Questionnaire Index (DLQI), for quality of life assessment, are the most cited and most often used tools due to their high degree of reliability, applicability and reproducibility [17].

The PASI is used primarily for cutaneous psoriasis but does not adequately measure nail disease activity. Therefore, the Nail Psoriasis Severity Index (NAPSI) was developed to objectively quantify the severity of nail disease in a reproducible manner [18].

2.1. PASI

The PASI is a measure of disease severity in chronic plaque psoriasis, widely used in guidelines and clinical trials, and has also been adopted by the National Institute for Health and Care Excellence (NICE). To assess the PASI, dermatologists have to estimate the proportion of involved area for each body district (head, trunk, upper and lower extremities). The area of psoriatic involvement for each of the four regions is then assigned a numerical value from 0 to 6 corresponding to 0% to 100% involvement. For each region, erythema, desquamation, and induration of the plaques are also rated according to a classical 5-point scale from 0 to 4. PASI scores are then calculated by investigators using electronic spreadsheets to implement the formulas originally proposed.

The PASI score can vary from 0 to 72, with higher scores indicating more severe conditions. It has been recently suggested that PASI < 7.0 should correspond to mild plaque psoriasis, PASI 7.0–12.0 corresponds to moderate disease, and PASI > 12.0 corresponds to severe disease [19].

The PASI is a valuable method but has some limitations: there is high interobserver variability in the calculation of the area involved and the