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GRAPPA 2023 Annual Meeting Report: Hot Topic Session on Measurement of Musculoskeletal Symptoms in Psoriatic Disease

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ABSTRACT. During the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) 2023 annual meeting, the International Dermatology Outcome Measures (IDEOM) psoriatic disease (PsD) workgroup presented an update on their efforts toward measurement of musculoskeletal (MSK) symptoms in patients with PsD. Dr. Joseph Merola initiated the presentation emphasizing the vital importance of assessing MSK symptoms in patients with psoriasis (PsO) regardless of whether they have been diagnosed with psoriatic arthritis (PsA). He also discussed existing challenges for evaluating MSK symptoms in patients with PsO without a PsA diagnosis. Dr. Lourdes Perez-Chada then presented their work on the development and validation of the IDEOM Musculoskeletal Questionnaire (MSK-Q), a patient-reported questionnaire developed by the IDEOM to capture the intensity and impact of MSK symptoms on quality of life in patients with PsO with or without PsA. Dr. Perez-Chada also introduced a set of ongoing studies employing the IDEOM MSK-Q, highlighting the potential effects of the data collected through this innovative tool.

Key Indexing Terms: GRAPPA, muscle manifestations, pain management, psoriasis, psoriatic arthritis

Background

Psoriasis (PsO) is a chronic inflammatory skin condition with clinically heterogeneous manifestations that precedes the development of psoriatic arthritis (PsA) in approximately 75% to 84% of PsA cases.[1] Psoriatic disease (PsD) experts have advocated for earlier detection and screening of musculoskeletal (MSK) symptoms in dermatology settings because there is evidence that earlier recognition and treatment of PsA reduces disease progression and improves long-term quality-of-life outcomes.[2,3] Unfortunately, it is estimated that 15.5% of patients with PsO have undiagnosed PsA, with estimates ranging from 4.2% to 33.6%.[1] Indeed, MSK complaints are common in patients with PsO even without PsA.[4] In some cases, such symptoms represent a prodromal period that precedes the development of true PsA.[5] A multistage model for the PsO-to-PsA transition has been proposed[6]; however, little is known still about the effects of treatment on PsO-to-PsA transition.

As part of the supplement series GRAPPA 2023, this report was reviewed internally and approved by the Guest Editors for integrity, accuracy, and consistency with scientific and ethical standards.

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Goals of the International Dermatology Outcome Measures PsD workgroup

International Dermatology Outcome Measures (IDEOM) is a nonprofit organization whose aim is to establish high-quality patient-centered outcome measures to enhance the research and treatment of dermatologic diseases.[7] The standardization of PsO outcome measures was one of their first initiatives. In 2018, members of IDEOM's PsO workgroup published a core domain set for PsO clinical trials that was developed through a multiround Delphi study. The measurement of PsA symptoms was included as one of these core domains.[8] Development of this core domain set was the first step in developing a core outcome set (COS) for PsO clinical studies as proposed by the Outcome Measures in Rheumatology (OMERACT) guidelines.[9] A COS is a consensus-driven set of outcomes that should be assessed and documented in every clinical trial for a particular medical condition under study; the resulting standardization allows for comparison of data across trials, reduces reporting bias, and improves interpretability of data for clinical use.[8,10]

Although measurement of PsA symptoms was determined to be a core domain for outcome measurement, IDEOM workgroup members soon realized that the measurement of PsA symptoms in the context of PsO clinical studies is challenging for several reasons. First, existing screening tools for PsA such as the Psoriasis Epidemiology Screening Tool (PEST) have limited sensitivity and specificity to detect cases of PsA (sensitivity range of 60-90% and specificity range of 66-78%).[11] Second, such screening tools have limited ability to capture changes in intensity or impact of symptoms over time. Third, access to rheumatologists to confirm a PsA diagnosis in the context of a clinical trial for PsO is limited. Finally, available instruments to measure PsA symptoms, such as the Psoriatic Arthritis Impact of Disease (PsAID-9), typically assume a diagnosis of PsA in its question stems. Therefore, individuals with PsO who do not have a known PsA diagnosis may need clarification on how to complete the questionnaire.

There was clearly a paucity of instruments designed to detect MSK symptoms in patients diagnosed with PsO without an existing PsA diagnosis. In the absence of such an instrument, clinical trials would have limited ability to measure and detect effects of treatment on the PsO-to-PsA transition. In response to this unmet need, the IDEOM PsD workgroup developed the IDEOM MSK-Q, a patient-reported outcome measure capable of detecting intensity of MSK symptoms and their impact on several constructs of health-related quality of life among patients with PsD. During the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) 2023 annual meeting, Drs. Lourdes Perez-Chada, Joseph Merola, and Alice Gottlieb presented their work on developing and validating the IDEOM MSK-Q, a summary of which is presented herein.

Development and validation of the IDEOM MSK-Q

Development of the IDEOM MSK-Q. Informed by a review of existing techniques for measuring MSK symptoms in the literature, a preliminary questionnaire was developed to ask patients with PsD about their MSK symptoms. This preliminary questionnaire with 8 questions was shared with a group comprising 15 IDEOM patient research partners who carried a diagnosis of either PsO only or PsA. Feedback was solicited from the group via an online survey about the relevance, comprehensiveness, and comprehensibility of the preliminary questionnaire. A discussion was held during the IDEOM 2020 annual meeting to identify potential changes needed for the survey. Based on this feedback, the questionnaire was revised, resulting in a 9-item instrument, called the IDEOM MSK-Q, consisting of 3 subscores: intensity of MSK symptoms, impact of MSK symptoms, and fatigue.

Content validity study. Three-step test interviews, the gold standard for pretesting self-completion questionnaires,[12] were conducted with 14 patients with PsO or PsA to assess the content validity of the IDEOM MSK-Q. Feedback from the 3-step test interview was presented at the IDEOM 2022 annual meeting and modifications were made to improve the comprehensibility of the IDEOM MSK-Q. The revised version of the IDEOM MSK-Q was subjected to a second round of 3-step test interviews with 5 patients, all of whom endorsed the IDEOM MSK-Q.

Construct validity and known-groups validity study. The IDEOM MSK-Q was distributed to 1453 patients with PsO through the National Psoriasis Foundation annual survey. A cross-sectional analysis was performed to assess its construct and known-groups validity. Respondents comprised patients with PsO only (47.9%), PsA only (4.4%), or both PsO and PsA (47.7%). Construct validity was confirmed by comparing IDEOM MSK-Q scores to other instrument scores, such as the PsAID-9, PEST, Psoriatic Arthritis Global Quality of Life, Dermatology Life Quality Index (DLQI), and 2-item Patient Health Questionnaire (PHQ-2). Known-groups validity was assessed by determining the ability of the IDEOM MSK-Q score to discriminate among different groups based on (1) disease status (patients with PsO only vs PsO with PEST ≥ 3 vs PsA), (2) PEST score (PEST < 3 vs PEST ≥ 3), and (3) impact of PsA (PsAID-9 < 4 vs PsAID ≥ 4). Overall, the IDEOM MSK-Q demonstrated optimal construct and known-groups validity. Full results of validation studies will be published separately.

Endorsement of the IDEOM MSK-Q by the IDEOM PsD workgroup. At the IDEOM 2023 annual meeting, a ratification exercise was conducted following the OMERACT filter for approving core outcome measure instruments. During this exercise, both nonpatient and patient stakeholders agreed that the IDEOM MSK-Q met standards for appropriate domain (truth) and feasibility.

Current uses

The IDEOM MSK-Q is currently being used in several clinical studies, including phase III/IV clinical trials, the Cohort for Psoriasis and Psoriatic Arthritis Registry (COPPAR), and the Preventing Arthritis in a Multicentre Psoriasis At-Risk Cohort (PAMPA) trial. Data from these studies are likely to provide valuable insight into the PsO-to-PsA transition.

Future directions

Parallel efforts are currently evaluating the IDEOM MSK-Q's

numerical and discriminatory validity. Additionally, efforts are underway to evaluate the IDEOM MSK-Q for potential adaptability for use in other settings, particularly for measuring MSK symptoms in patients with hidradenitis suppurativa.

DATA AVAILABILITY

The final version of the IDEOM MSK-Q is open access and can be used for free following the acceptance of a simple use agreement. Interested parties can contact amanda@dermoutcomes.com for more information about using the IDEOM MSK-Q.

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