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Challenges in the Diagnosis and Assessment of Psoriatic Arthritis

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ABSTRACT. Each year, the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) holds a trainee symposium adjacent to the GRAPPA annual meeting. The target audience for this meeting includes trainees in rheumatology, dermatology, and related fields. The 2021 GRAPPA Trainee Symposium focused on challenges in the diagnosis and assessment of psoriatic arthritis (PsA). During the meeting, speakers focused on identification of psoriasis (PsO), the differential diagnosis for both PsO and PsA, diagnostic errors and pitfalls, physical examination in PsA, patient-reported outcomes and composite measures in the assessment of PsA, and the patient perspective on diagnosis and assessment, followed by a panel discussion. This paper summarizes the content discussed at the meeting.

Key Indexing Terms: GRAPPA, psoriasis, psoriatic arthritis

Introduction

Psoriatic arthritis (PsA) and psoriasis (PsO) can be challenging conditions to diagnose for several reasons, including intermittent symptoms and the number of conditions that can masquerade as PsO or PsA.[1] The objective of the 2021 Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) Trainee Symposium was to summarize the process and pitfalls in the diagnosis and assessment of PsO and PsA.

As part of the supplement series GRAPPA 2021, 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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The Patient's Perspective

Christine Lindsay, a patient research partner (PRP), described the difficult journey from symptom onset to diagnosis and the challenges patients experience in medical management of the disease. The symptoms of PsA can develop slowly and may not raise suspicion of PsO (for example, general joint pain). The GRAPPA PRPs shared their need for resources to learn about their disease, possible disease progression, and complications. Patients and clinicians often have different priorities or concerns about psoriatic disease that may be overlooked.[2] Patients reported several issues that are often not discussed, including heel pain, Achilles enthesitis, fatigue, morning stiffness, and depression.[3,4] Shared decision making is critically important for the patient to be confident about initiating an effective treatment plan.

Diagnosis of PsO and PsA

Diagnosis of PsO. Whereas PsO can sometimes be easy to diagnose, at other times it can be difficult to separate from several masqueraders. Dr. Kristina Callis Duffin discussed some ways to identify "classic" PsO and methods for differential diagnoses from other similar conditions. For example, up to 80% of patients with PsO may have nail disease at some point, including pitting, thickening of the nail plate with subungual hyperkeratosis, onycholysis, oil spots, or salmon patch dyschromia. However, eczema and other conditions can also cause nail pitting.

PsO is a common skin condition classically described as erythematous, indurated, well-demarcated plaques with scaling. Generally, the scale is uniform across the lesion (although it can be different between lesions) and the plaque is well demarcated

and classically occurs in a symmetric distribution on extensor surface, scalp, sacrum, and in body folds, but there are different presentations and phenotypes. Skin biopsy can often help differentiate PsO from other conditions. Another challenge is that the inflammatory components and mechanical disease may oscillate and overlap.

Diagnosis of PsA. Dr. Stefan Siebert discussed identifying patients who need rheumatology assessment and diagnostic issues. PsA remains a clinical diagnosis, as there are no specific tests for PsA. Diagnosis requires a comprehensive patient history (inflammatory symptoms including back and heel pain, extraarticular manifestations, family history) and physical examination (joints, entheseal sites, skin, and nails). C-reactive protein levels, imaging, and the ClASsification for Psoriatic ARthritis (CASPAR) criteria can be helpful in guiding PsA diagnosis.[5,6]

A number of screening tools have been developed for patients with PsO who may have PsA.[7,8,9,10] All have relatively low specificity in real-world settings (as opposed to the study settings in which they were developed) and, at best, moderate sensitivity. However, these questionnaires are still helpful in identifying which patients should be considered for referral to rheumatology specialists.[5,11,12]

Assessing PsA

Physical examination. Dr. Philip Mease presented the key features of PsA examination. In PsA, the 66/68-joint count is used to assess for tenderness and swelling.[13] This includes the feet (as opposed to the 28-joint count used in assessment of rheumatoid arthritis [RA]). Hips are not assessed for swelling. The distal interphalangeal joints of the fingers are assessed, but not the toes. In assessing joint tenderness, we aim to standardize the amount of pressure applied across patients. Enough pressure is placed at the joint to cause whitening of the tip (20%) of the examiner's fingernail bed. This is approximately 4 kg/cm pressure.

Enthesitis (inflammation where a tendon ligament or joint capsule inserts onto the bone) is assessed at insertion sites but may be difficult to detect.[14] Four kg/cm pressure is applied at each site to elicit tenderness (a positive test) or not. Different enthesitis indices are more commonly used in PsA, including the Spondyloarthritis Research Consortium of Canada Enthesitis Index and the Leeds Enthesitis Index. The Maastricht Ankylosing Spondylitis Enthesitis Score is more commonly used in axial spondyloarthritis studies because it has primarily axial locations, but it is not commonly used in PsA.

Dactylitis is swelling of the whole digit (fingers or toes). The most commonly used measure for dactylitis is the dactylitis count, scored 0–20 for the number of digits involved. The dactylitis severity score is another measure that ascribes severity from 0 to 3 for each digit (range 0–60). Finally, the Leeds Dactylitis Index is the most quantitative tool (includes circumference of the digit measured by a dactylometer and tenderness).

Patient-reported outcomes. Monitoring response to therapy is important for achieving the goals of the patient and the clinician. Dr. Alexis Ogdie presented the assessment of PsA using patient-reported outcomes (PROs).[14] Two questionnaires were reviewed: the Routine Assessment of Patient Index Data 3 (RAPID-3) and PsA Impact of Disease (PsAID) questionnaire. RAPID-3 is a PRO developed for RA but has been tested in several studies in PsA, and it appears to be valid for use in PsA.[15,16,17,18] PsAID was specifically developed for PsA by patients with PsA. It has 12 items (there is a 9-item version for trials) and is scored 0–10 with weighting.[19]

The goal of treatment is generally remission or low disease activity (LDA). While ideally, we would get everyone to remission, achieving this is unfortunately relatively uncommon (< 30%).[20] Thus, most often, we aim for LDA, which can be measured (with some modifications) either with the minimal disease activity or the Disease Activity Index for Psoriatic Arthritis.[14,21,22]

Conclusion

In general, PsO and PsA can often be challenging to diagnose. We hope that this session provided trainees with a framework for considering the diagnosis of PsO and PsA, as well as the differential diagnoses, common masqueraders, and how to best assess the patient at each visit.

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