Polyphenotypic Psoriasis: A Report from the GRAPPA 2016 Annual Meeting

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ABSTRACT. Recent groundbreaking therapies for psoriasis target specific pathways that drive this systemic inflammatory disease. However, patients with nonplaque psoriasis phenotypes often do not qualify for these therapies and are currently undertreated because of the criteria used during the development of novel agents. We propose use of the phrase "polyphenotypic psoriasis" to describe both plaque and nonplaque subtypes, as well as single and multiple phenotype involvement in individual patients. The goal of using the phrase "polyphenotypic psoriasis" is to remind clinicians about the heterogeneous manifestations of psoriasis in addition to chronic plaque psoriasis. (J Rheumatol 2017;44:695–6; doi:10.3899/jrheum.170149)

Key Indexing Terms:
PLAQUE PSORIASIS NONPLAQUE PSORIASIS PALMOPLANTAR
NAIL INVERSE PSORIATIC ARTHRITIS

Although plaque psoriasis, marked by scaly lesions on extensor skin surfaces, is considered the most common presentation in chronic psoriasis, a large portion of affected patients demonstrate multiple or alternate phenotypes, including inverse/intertriginous, palmoplantar, scalp, genital, and nail disease[1,2]. Data from the Health Professionals' Follow-up Study, Nurses' Health Study (NHS), and NHS II have shown that up to 56% of psoriatic patients have scalp involvement, 14% have palmoplantar involvement, 27% have nail involvement, and 30% have inverse involvement[2]. We propose the phrase "polyphenotypic psoriasis" to describe both plaque and nonplaque subtypes of psoriasis involvement, which appear to be more prevalent than previously recognized. The goal of using the phrase "polyphenotypic psoriasis" is to remind clinicians about the heterogeneous manifestations of psoriasis.

Despite the considerable proportion of patients affected by these nonplaque phenotypes, polyphenotypic psoriasis has not been adequately assessed in observational and interventional studies[3]. The Psoriasis Area Severity Index (PASI) is the standard measure for assessment of psoriasis severity in clinical trials. Notably, polyphenotypic psoriasis is insufficiently identified by the PASI "moderate to severe" criteria[3]. As a result, these patients do not meet the PASI criteria to qualify for many novel therapies[4].

The limited scope of the PASI has spurred the development of disease severity measures such as the Comprehensive Assessment of the Psoriasis Patient (CAPP)[3]. Derived from the physician's global assessment to give weight to nonplaque psoriasis phenotypes, the CAPP integrates patient-reported outcomes in its assessment[3]. The CAPP supports a more inclusive approach to psoriasis classification with questions that specifically grade scalp, nail, palmoplantar, inverse, and genital psoriasis, as well as chronic plaque psoriasis[3,4]. This approach allows redefinition of the spectrum of moderate-severe involvement, identifying a greater proportion of patients with debilitating disease.

All psoriasis phenotypes have been associated with decreased quality of life[1,2,5]. The Dermatology Life Quality Index (DLQI) scores have demonstrated worse quality of life for patients with nail psoriasis compared with those without nail involvement[2]. Other studies have shown that those with palmoplantar psoriasis have a decreased quality of life compared with patients with only plaque disease[2]. Further, palmoplantar disease has been shown to damage mental health more than plaque psoriasis alone[2]. Even inverse psoriasis has been shown to have a substantial negative effect on quality of life[1]. Cohen, *et al* found that a majority of patients with inverse psoriasis complained of pain (87.5%), depressed mood or anxiety (81.3%), and negative body self-image (93.8%)[1]. DLQI scores revealed that patients with the inverse psoriasis phenotype had a lower quality of life than those with plaque psoriasis[1].

Polyphenotypic psoriasis is also associated with an increased risk of psoriatic arthritis (PsA), a chronic inflammatory arthritis that affects 10%–30% of patients with

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psoriasis[5]. Increased skin inflammation may trigger PsA through increased systemic inflammation[5]. Nail disease, scalp involvement, and intergluteal/perianal disease have all been linked to an increased risk of PsA[2,5,6,7]. In an observational study, Patrizi, *et al* found that 83% of patients with nail and scalp psoriasis, 40% of patients with intergluteal/perianal involvement, and 37% of patients with exclusive scalp involvement were affected by PsA[7]. Although nail psoriasis is a known risk factor for joint involvement, some suspect nail disease may be an early phase of PsA[6]. One study found ultrasound evidence of nail bed inflammation in almost all patients with PsA, despite the absence of clinically evident nail disease[6]. Therefore, early identification of polyphenotypic psoriasis may identify patients at higher risk for the development of PsA[5].

Polyphenotypic psoriasis encompasses a range of psoriasis subtypes, including plaque psoriasis, which are associated with a diminished quality of life and increased risk of PsA. New measures such as the CAPP may be more effective than the conventional PASI at identifying severe disease in polyphenotypic psoriasis. Use of a more inclusive measure such as the CAPP would promote needed investigation into the potential for therapeutic response to certain therapies for all psoriasis subtypes.

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