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How to evaluate vitiligo activity?

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Abstract
Vitiligo is a persistent skin disorder primarily mediated by the immune system, affecting both the innate and adaptive immune responses. It is characterized by well-defined white macules and patches due to the gradual loss of melanocytes in the skin and hair. The global prevalence ranges from 0.06% to 2.28%, and the condition is recognized as an autoimmune disorder influenced by oxidative stress, genetic, and environmental factors. Vitiligo can be classified into two main types: non-segmental and segmental. Identifying active vitiligo is crucial for implementing appropriate treatment strategies. Clinical markers such as inflammatory borders, Koebner phenomenon, and depigmentation resembling confetti help assess disease activity. The dermoscopic score (BPLeFoSK) and reflectance confocal microscopy (RCM) score provide additional methods to evaluate vitiligo activity and stability.

Keywords: Vitiligo, immune-mediated disorder, melanocytes, non-segmental vitiligo, segmental vitiligo, Koebner phenomenon

Introduction
The most prevalent skin depigmenting condition, vitiligo, is typified by a gradual loss of functioning melanocytes in the affected epidermis. It mostly affects the skin and hair, where it manifests as well-defined white macules and patches. Between 0.06 and 2.28% of the global general population is affected by it [1, 2].

Vitiligo
Vitiligo is characterised by well-circumscribed, depigmented macules and patches, a depigmenting skin condition that results from the selective death of melanocytes [3].
These days, vitiligo is unmistakably identified as an autoimmune disease, linked to anomalies in cell detachment, metabolism, oxidative stress, and hereditary and environmental factors [2].

Vitiligo can be divided into two major classes
- The more prevalent non-segmental vitiligo (NSV), which can take many different forms, such as acrofacial, mucosal, generalised, universal, mixed, and uncommon.
- Vitiligo segmentalis (SV) [4].

The long-term course of vitiligo cannot be predicted, and there are currently no trustworthy biochemical indicators of activity. Conversely, there have been observations of clinical markers of disease activity, including inflammatory borders, the Koebner phenomenon, and depigmentation that resembles confetti.
Finding active types of vitiligo is crucial since a treatment plan to prevent flare-ups needs to be started right away [5].
If any of the following four conditions were present, it may be concluded that vitiligo was active: 1) clinical indicators, such poorly defined borders; 2) Koebner phenomena throughout the last year; 3) poorly defined boundaries linked to hypomelanotic edging or a bigger hypochromia region than visible area in a Wood's light examination; 4) Inflammatory symptoms, including erythema and pruritus, trichromatic vitiligo, depigmentation that resembles confetti, and hypopigmentation; and 4) the 1–4 VIDA score. individuals with evident progression (≥1% BSA) or clear activity signs were assessed as having very active

vitiligo, or VIDA score = 4; those who were mildly to moderately active showed only slight improvement (<1% BSA), or VIDA score 1 to 3 [6].

Referred to as "BPLeFoSK," the dermoscopic score was determined by adding together the following factors: the micro-Koebnerization (−2), satellite lesions (−1.5), perilesional pigmentation (+1), perifollicular pigmentation (+1), the sharp border (+1), and the absent/reticulate pigment network (+1). A total score of less than 1.5 is considered stable [7].

The criteria for the reflectance confocal microscopy (RCM) score were as follows: +1 for any surviving pigment in the lesion, and −1 for no pigment at all. A fuzzy boundary, +1, and a definite border, −1. Dendritic melanocytes emerged in the vitiligo lesion, − 1, and inflammatory cell infiltration was seen along the lesion's margin, +1. The following was the grading scheme: A total score of <1 indicated a stable stage, ≥1 an active stage, and ≥2 a quickly active stage [8].

Conflict of Interest
Not available

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