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AN OVERVIEW ON PSORIASIS DIAGNOSIS AND NEW THERAPEUTIC DEVELOPMENTS

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ABSTRACT

Over the past 100 years, psoriasis therapy was fortunately explored by coincidence and recommendation that greatly depended on narrations and anecdotes. However, nowadays psoriasis therapy tales are still valid as suggestions for trials and studies, but target therapies are always provided based on evidence and international guidelines. Diagnosing and evaluating psoriasis is mainly clinical. There are several clinical manifestations of psoriasis. Psoriatic lesion needs to be carefully differentiated from atypical presentations. Although psoriasis cure has not yet been discovered, the systemic and regional approach of the disease must depend on the latest and updated evidence-based practice. This review will highlight a wide range of clinical and therapeutic aspects regarding the diagnosis and latest drugs developments to help dermatologists in confirming and managing psoriasis. This review is a recommended evidence-based data that was formulated using PubMed and Google scholar electronic database and NICE.org website for recent clinical guidelines. Skin biopsy is essential in confirming the diagnosis, as psoriatic lesion needs to be carefully differentiated from atypical presentations. The management of psoriasis requires extensive patient education, screening for comorbidities, and monitoring the needed therapy depending on the changes.

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Introduction

Psoriasis is usually undertreated and underdiagnosed [1]. As multisystemic inflammatory disease psoriasis goes beyond skin lesions to joint involvement [2-4]. The prevalence of about 2% of the presented cases worldwide in dermatology clinics is psoriasis [5].

Over the past 100 years, psoriasis therapy was fortunately explored by coincidence and recommendation that greatly depended on narrations and anecdotes. However, nowadays psoriasis therapy tales are still valid as a suggestion for trials and studies, but target therapies are always provided based on evidence and international guidelines [3, 6]. Despite the existence of these target therapies that have shown great efficacy and response, psoriatic lesions are not to be cured permanently [7].

Although psoriasis cure has not yet been discovered, the systemic and regional approach of the disease must depend on the latest and updated evidence-based practice. This review will highlight a wide range of clinical and therapeutic aspects regarding the diagnosis and latest drugs developments to help dermatologists in confirming and managing psoriasis [8].

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Materials and Methods

This review is a recommended evidence-based data that was formulated using PubMed and Google scholar electronic database and NICE.org website for recent clinical guidelines. Published related controlled trials, systemic reviews, and observational studies were included in this review. The following keywords were combined on Mesh to provide these search terms: ((“Psoriasis” [Mesh] AND “Epidemiology” [Mesh] AND “Differential” [Mesh] “Manifestations” [Mesh] “Therapeutics” [Mesh] AND “Diagnosis” [Mesh])). Only issued English eligible published documents were retrieved and discussed in this comprehensive overview.

Review

Epidemiology

The prevalence of about 2% of the presented cases worldwide in dermatology clinics is psoriasis [5]. Psoriasis invests about 11% in the Scandinavian and Caucasian population and shows lower percentages in some African and Asian populations [7, 9]. Psoriasis chronic plaque-type affects about 90% of most of the psoriatic cases [7, 10].

Clinical Evaluation

Diagnosing and evaluating psoriasis is mainly clinical. There are several clinical manifestations of psoriasis. The hallmark of psoriatic lesions is often silvery-white scales, that are symmetrical, well-demarcated, and have erythematous plaques. These lesions often appear anywhere on the body **(Table 1)**. Psoriasis might also be experienced on the nails without any concomitant plaques [11, 12].

Table 1. Psoriasis identifications and clinical manifestations: [11, 12]

Clinical manifestation	Features
Chronic plaque psoriasis	• Single lesions that are well-demarcated, erythematous, slivery, scaly plaques more than 0.5cm in diameters • Usually classified and identified based on anatomical sites
Flexural	• Commonly named inverse psoriasis or intertriginous psoriasis • Localized on the skin folds of the genitals, axillary, inframammary, groin, natal cleft regions • Minimal plaque lesions that are well-demarcated thin and scaly.
Nail	• Nail onycholysis, nail pitting, subungual hyperkeratosis, splinter hemorrhages, oil drop sign, leukonychia, red lunula, crumbling • Presented without the involvement of skin plaques. • Nail psoriasis might indicate the presence of psoriatic arthritis
Scalp	• Involvement of the scalp are is very common. • Is often hard to treat
Palmoplantar	• Located on hands and feet soles • Reddish scaly no plaques visible to poorly defined scales or fissures on large plaque areas over the palms or soles
Guttate psoriasis	• Fine salmon pink scales following acute “dew-drop” eruption, with small papules on the extremities and the truck. • Is associated with a history of group A streptococcal pharyngeal infection or perianal dermatitis.
Pustular psoriasis	• Often appears on palms and soles • Are described as monomorphic pustules on inflamed skin.
Erythroderma	• Emergency and life-threatening situations. • Generalized acute or subacute onset of erythema covering 90% of the body with fewer presences of scales. • Is found to be associated with hypoalbuminemia, hypothermia, electrolyte imbalances, and high cardiac out failure
Annular	• Well circumcised reddish scaly plaques, that are clear at the center.

Differential Diagnosis

Psoriatic lesion needs to be carefully differentiated from atypical presentations. Psoriatic-like lesions variants are differentiated by the type of morphology. Skin biopsy is essential in confirming the diagnosis **(Table 2)** [12].

Table 2. Psoriasis differential Diagnosis: [12]

Differential Diagnoses	Clinical features
Atopic dermatitis	Pruritic symptoms predominately with typical distribution and morphology (Lichenification of the flexural sites in children, adults, and older adults; extensor papules and facial lesions, vesicular presentation in infancy).
Lichen planus	Frequent mucosal and violaceous lesions involvement.

Contact dermatitis	Angulated corners of plaques and papules, geometrical outlined and sharply marginated. These lesions depend on the type of exposure if it is an allergen or an irritant.
Secondary syphilis	Palms and soles covered with copper like-colored lesions
Tinea corporis	Annular configuration of lesions
Mycosis fungoides	Asymmetrical distribution of irregularly shaped with atrophic (wrinkled thin-like) skin.
Pityriasis rosea	Tannish-pink "Christmas tree-like" patches and papules, situated over the trunk with the sparing of extremities and face.

Management

In managing psoriasis, a dermatologist must be aware that it is more than recommending and prescribing medication. The management of psoriasis requires extensive patient education, screening for comorbidities, and monitoring the needed therapy depending on the changes [3, 6]. During the treatment process, it is important to detect any joint or systemic involvement to prevent any irreversible damages. It is also important to identify cardiovascular and mood disorder diseases, that are highly relevant in the psoriasis community [6, 13].

New Therapeutic Developments

Several oral and topical drugs are enlisted to undergo clinical trials shortly. Tofacitinib Janus kinase inhibitor interrupts the intracellular signaling that involves the psoriasis pathogenesis pathway. Janus kinase is favorable and safe as a topical treatment for psoriasis and has shown great efficiency upon other diseases like atopic dermatitis [6, 14]. On the other hand, Tyrosine Kinase 2 intracellular signaling inhibiting agent is valid for use in moderate to severe forms of psoriasis according to recent trials [6, 15]. However, both agents require more clinical trials with a larger portion of people to determine and confirm the safety and efficacy of these agents [6].

Conclusion

Psoriatic lesion needs to be carefully differentiated from atypical presentations. Psoriatic-like lesions variants are differentiated by the type of morphology. Skin biopsy is essential in confirming the diagnosis. The management of psoriasis requires extensive patient education, screening for comorbidities, and monitoring the needed therapy depending on the changes. New therapeutic agents require more clinical trials with a larger portion of people to determine and confirm the safety and efficacy of these agents.

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