

Retrospective 10 years review of 100 patients with psoriasis in the Kingdom of Saudi Arabia (KSA)

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Abstract

Background: This study focuses on evaluating clinical, epidemiologic and histopathologic parameters on psoriatic patients from the Kingdom of Saudi Arabia (KSA).

Methods: This is a ten years retrospective study done on patients with psoriasis recruited from one tertiary center in KSA. One hundred biopsies of psoriasis have been studied for One hundred patients.

Results: The mean age of disease onset is 31 years with slight male predominance. 69% of patients presented with plaques, 8 % with papules (guttate psoriasis), 3% with patches, 5 % with pustules (pustular psoriasis),3% were linear distribution (linear psoriasis), 2 % were erythrodermic psoriasis and 2% in annular fashion. The most common body site of involvement was lower extremity (42%), followed by upper extremity (27%). Back was involved in 22%, abdomen on 18%, palm and sole in 20 %, genital area in 9 %, axilla in 8 %, scalp in 8 %, face in 5 %, buttock in 4 %, submammary area in 5 %, umbilicus in 3 %, and nail involvement in 2 %.

Conclusion: Based on the data presented here, the clinical and histopathological features in Saudi patient are almost similar to the previous series outside and inside Saudi Arabia.

Keywords: Psoriasis, Clinical features, pathological findings, epidemiology, Saudi Arabia

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Introduction

Psoriasis is a chronic, relapsing, papulosquamous dermatitis characterized by abnormal hyperproliferation of the epidermis. It affects approximately 1.5% to 2% of the population in the western countries. Is relatively common disease in Saudi Arabia; but there is no epidemiological research in this subject. We studied 100 cases of psoriasis and we focused on their clinicopathological features.

Methods

We performed a retrospective review of all the diagnosed cases of psoriasis at one major tertiary center in the Kingdom of Saudi Arabia (KSA) from the period of 2000 to 2010. The material consists of a series of one hundred biopsies collected from one hundred patients with provided clinical information (e.g. patient age, gender, clinical signs and distribution of lesions). These cases were retrieved from the electronic data base. All cases that are not confirmed by histopathology report were excluded. Patients diagnosed with suggestive of psoriasis or psoriasiform dermatitis were exempted from the study. The diagnosis of psoriasis in these cases was based on clinical suspicion and histological features. The data retrieved and highlighted in this research include: patient's age, gender, and clinical signs. The retrieved slides have been examined for the following histological features: such as regular psoriasiform epidermal hyperplasia, Munro microabcess loss of granular cell layer dilated blood vessels in papillary dermis. These features have been expressed as either present or absent in the provided biopsies.

Results

The selected cases of psoriasis were diagnosed on the basis of clinical, histological findings.

Epidemiology: Based on the inclusion criteria mentioned above, a total of 100 patients were identified. There were 53 male and 47 female. The age of onset of disease ranged between 6 and 83 years with a mean of 31.5 years and a median of 33 years.

Clinical findings: 69% of patients presented with plaques, 8 % with papules (guttate psoriasis), 3% with patches, 5 % with pustules(pustular psoriasis),3% were linear distribution (linear psoriasis), 2 % were erythrodermic psoriasis and 2% in annular fashion. One patient presented with hypopigmented lesion and another one with scarring alopecia. One patient present with arthritis and another showed positive ANA serology.

Distribution of the lesion: the most common body site of involvement was lower extremity (42%), followed by upper extremity (27%). Back was involved in 22%, abdomen on 18%, palm and sole in 20 %, genital area in 9 %, axilla in 8 %, scalp in 8 %, face in 5 %, buttock in 4 %, submammary area in 5 %, umbilicus in 3 %, and nail involvement in 2 %.

Pathologic findings: regular psoriasiform epidermal hyperplasia was evident in 75 % of the biopsies (figure 1). Collection of neutrophils in corny layer (Munro microabcess) was seen in 70% of the biopsies (figure 2). 62% of the biopsies showed papillary dermal edema and dilated blood vessels (figure 3). 40% revealed loss of granular cell layer (figure 3). The biopsies from erythrodermic patient showed diminished and exfoliated keratin layer while the biopsies from pustular showed subcorneal pustules only.

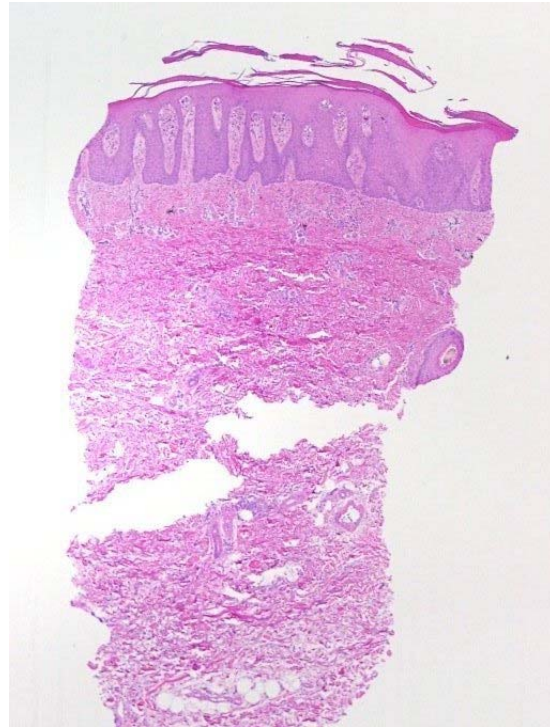


Figure 1: low power microscopic view shows regular psoriasiform epidermal hyperplasia (H/E stain, X40).

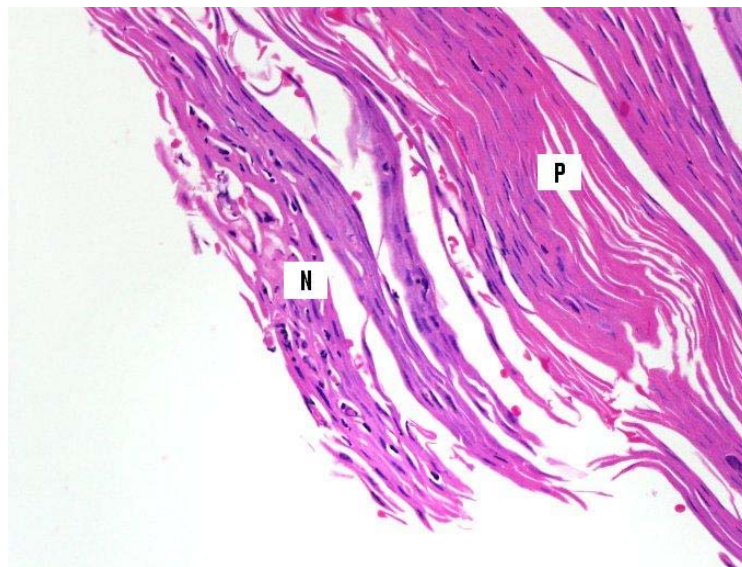


Figure 2: High power microscopic view reveals dry parakeratosis (P) and neutrophilic collection (N) in keratin layer.



Figure 3: high power microscopic view shows edema and dilated tortuous blood vessels(V) in papillary dermis.

Discussion

Psoriasis may be divided into psoriasis vulgaris, generalized pustular psoriasis, and localized pustular psoriasis. Psoriasis vulgaris is a common chronic inflammatory skin disorder that affects approximately 1.5% to 2% of the population in Western countries. The extensor surfaces of the extremities are commonly involved, although in some patients the flexural and intertriginous areas are mainly affected (inverse psoriasis). An acute variant, guttate or eruptive psoriasis, is often seen in younger patients and is characterized by an abrupt eruption of small lesions (papules) associated with acute group A beta hemolytic streptococcal infections (1,2). Involvement of the nails is

common; the most frequent alteration of the nail plate surface is the presence of pits (3). In severe cases, the disease may affect the entire skin and present as generalized erythrodermic psoriasis.

Generalized pustular psoriasis includes (a) acute generalized pustular psoriasis ; (b) generalized pustular psoriasis of pregnancy (impetigo herpetiformis); (c) infantile and juvenile pustular psoriasis; and (d) subacute annular or circinate pustular psoriasis (4) This cutaneous eruption is characterized by the presence of variable numbers of sterile pustules appearing in erythematous and scaly lesions associated with moderate to severe constitutional symptoms (5)

There are three types of localized pustular psoriasis: (a) psoriasis with pustules; (b) localized acrodermatitis continua of Hallopeau, which occasionally evolves into generalized acrodermatitis continua; and (c) pustular psoriasis of the palms and soles. (6)

The association between psoriasis and HIV infection is commonly seen. The prevalence of psoriasis is reported to be 1.3% to 2.5% in the HIV-positive population. Clinically, psoriasis may have a more severe course with sudden exacerbations and may be refractile to treatment (7)

The histologic picture of psoriasis vulgaris varies considerably with the stage of the lesion and usually is diagnostic only in early scaling papules and near the margin of advancing plaques. In the fully developed lesions of psoriasis, as best seen at the margin of enlarging plaques, the histologic picture is characterized by (a) acanthosis with regular elongation of the rete ridges with thickening in their lower portion; (b) thinning of the suprapapillary epidermis with the occasional presence of small spongiform pustules; (c) pallor of the upper layers of the epidermis; (d) diminished to absent granular layer; (e) confluent parakeratosis; (f) presence of Munro microabscesses; (g) elongation and edema of the dermal papillae; and (h) dilated and tortuous capillaries. (1)

In this study we assessed the clinical and pathological aspects of 100 patients with psoriasis in KSA. With regard to the epidemiological data, our data showed almost

similar findings to the ones reported outside KSA. The clinical signs in our series showed that the most common clinical presentation for psoriasis is plaques, followed by papules and pustules. The most common sites of involvement are extremities as confirmed by our series. Rheumatoid arthritis is seen in one of our patient.

Among the histological features of psoriasis, the regular psoriasiform epidermal hyperplasia is the most common feature which is seen in 75 % of our series. Collection of neutrophils in corny layer (Munro microabcess) was seen in 70% of the biopsies. 62% of the biopsies showed papillary dermal edema and dilated blood vessels. Only 40% revealed loss of granular cell layer probably because of previous treatment.

Conclusion

Clinicopathological correlation is still the gold standard tool for the diagnosis of psoriasis. Based on the data presented here, the clinical and histopathological features in Saudi patient are almost similar to the previous series outside and inside Saudi Arabia.

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