The Clinical And Histopathological Co-Relation Of Psoriasiform Dermatoses

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Abstracts: Background: Psoriasiform dermatoses is a common presentation of a wide spectrum of underlying diseases from a relatively harmless disease like chronic dermatitis to a detrimental disease like mycosis fungoides. Psoriasiform reaction pattern is a commonly encountered denominator in a wide variety of unrelated disorders. They include several unrelated disorders of the integument, which either in the beginning or in the course of progression/resolution, exhibit lesions resembling psoriasis. Aims: This study was designed and conducted to enlist clinical parameters, histopathology and clinicohistopathological co-relation of psoriasiform disorders. Methodology: 100 cases of psoriasiform dermatoses over a period of two years were studied. Their history, age, sex as well as morphology, distribution and histopathology of skin lesions were analysed. Results: Psoriasis is the commonest of all psoriasiform dermatoses (31%) followed by lichen planus (23%),lichen nitidus(9%), pitryasis rosea (7%) , seborrheic dermatitis (6%). The remaining dermatoses like lichenoid drug eruptions ,parapsoriasis , Reiter's disease , mycosis fungoides , pitryriasis rubra pilaris and lichen striatus, lichen simplex chronic etc were uncommon. There was a slight male preponderance. (M: F: 1.3:1). Lesions were more common in limbs. There was a wide age variation for example lichen striatus was seen in 5 year male and mycosis fungoides in a 69 year old male. A good clinicopathological co-relation filled up the lacunae of both, the clinical approach as well as that of histopathology and helped in pinpointing the diagnosis (62 cases). In 10 cases, there was no co-relation between clinical and histopathological diagnosis. Conclusion: As the morbidity of these disorders ranges from a trifling affliction to a life threat, thorough clinico-pathological co-relation and prompt institution of specific treatment results in a better prognosis. [Rathod N et al NJIRM 2012; 3(3) : 52-56]

Key words: Psoriasiform dermatoses, Clinico histopathological co-relation

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Introduction: Dermatoses is a general term used to describe any skin defect or lesion on the skin. "Psoriasiform Dermatoses" refer to a group of disorders, which clinically and/or histologically, simulates psoriasis.[1] Psoriasiform means "like or in the shape of psoriasis"[2] They include several unrelated disorders of the integument, which either in the beginning or in the course of progression/resolution, exhibit lesions resembling psoriasis.[3] Psoriasiform eruptions can commonly be seen in seborrheic dermatitis, pityriasis rubra pilaris, pityriasis rosea, mycosis fungoides, Rieter's syndrome and others. Histopathologically, the psoriasiform reaction pattern is defined as the presence of epidermal hyperplasia with elongation of rete ridges in a regular manner.[4] The morphological concept as outlined by Pinkus and Mehregan,[2] is much broader than the pathogenetic one, they considered the principle features of the psoriasiform tissue reaction to be the formation of suprapaillary exudates with parakeratosis, secondary to intermittent release of serum and leukocytes from dilated blood vessels in the papillary dermis (the so-called squirting papilla). All the lesions to be discussed are characterized by easily identifiable parakeratosis, it is the parakeratosis which is responsible for the clinical scale which is in part, responsible for clinical appearance mimicking psoriasis.

Psoriasiform lesions appear morphologically similar to the prototypic classical psoriasis.[5] However, depending upon the disorder, the lesions may vary in size, shape, scaling, distribution and configuration. Reiter's syndrome may show classic rupioid/circinate lesions with keratoderma blennorrhagica, while pityriasis rubra pilaris reveals hyperkeratotic peri-follicular lesions with a halo of erythema. Similarly, pityriasis rosea may reveal oval plaques with a collarets of fine scaling. On the other hand, AIDS-associated psoriasiform

lesions may be more "angry"-looking with a prominent component of seborrhoeic dermatitis. Because these changes are non specific, a very strong clinic-pathologic correlation is often necessary in order to make a definitive diagnosis. The stages of development of the lesions is also an extremely significant fact to be taken into consideration.[6]

So as to compare the histopathological findings of psoriatiform diseases, its essential to know the histopathological features of a fully developed psoriatic lesion. These are characterized by parakeratosis, which is usually uniform, presence of Munro's micro abscess in the horny layer, absence of granular layer and elongation of rete ridges. Their lower portion is thickened, sometimes showing a camel foot like shape. Often they tend to coalesce.

Materials and Methods : This prospective study which was undertaken at the department of Pathology,with permission of the ethical committee and with the consent of the patients, in Pad. Dr. D. Y. Patil Medical College & research center Pimpri, Pune during the period of August 2009 to September 2011. A total of 100 cases presenting with psoriasiform skin lesions were selected. The consent was taken from the patients. The patients were presenting with papulo-squamous lesions and the biopsy of which showing a histological psoriasiform picture, were included in the study. Relevant clinical history, physical examination and investigation were noted and the active skin lesions were biopsied, processed and stained with hematoxylin and eosin.

Results : This prospective study was conducted from August 2009 to September 2011. 100 cases were studied prospectively. In our study 100 patients who were showing clinical presentation of psoriasiform and papulosquamous were biopsied and studied under light microscope. [Table 1-3]

Table 1- Changes of Psoriasiform disease seen in skin conditions

Psoriasiform dermatoses	Elongation of rete ridges	Epidermal hyperplasia	Epidermal infiltrates	Dermal infiltrates	Hypergranulosis	Parakeratosis
Psoriasis	26	31	-	29	-	28
Lichen planus	14	09	-	22	21	23
Pityriasis rubra pilaris	-	01	-	01	-	01
Pityriasis rosea	06	03	01	07	-	07
Reiter's syndrome	02	02	02	02	-	01
Parapsoriasis	02	-	01	01	-	02
Seborrheic dermatitis	04	06	-	06	-	06
Lichen striatus	03	03	-	04	-	02
Lichen nitidus	07	-	04	08	-	07
Mycosis fungoides	02	02	01	01	-	02
Lichen simplex chronicus	01	01	-	01	-	01

Discussion: Psoriasiform dermatoses refer to a group of disorders, which clinically and/or histologically, simulates psoriasis. Being one of the archetypal reaction patterns to skin damage, psoriasiform eruption is equally diverse in its genesis as in its significance. It may represent a feature of trifling affliction such as chronic dermatitis or it may as well as be a

Table 2- . Psoriasiform changes

Histopathological change	No of Patients	Percentage[%]
Elongation of rete ridges	77	77
Epidermal hyperplasia	67	67
Epidermal infiltrates	07	07
Dermal infiltrates	90	90
Hypergranulosis	31	31
Parakeratosis	82	82

Table 3 - Various sites involved

SITE	No of Patients	Percentage (%)
Scalp	09	09
Face	06	06
Neck	01	01
Abdomen	10	10
Buttock	02	02
Upper limb	35	35
Lower limb	05	05
Back	29	29
Penis	03	03
Total	100	100

Hallmark of a detrimental disease such as mycosis fungoides. This wide spectrum from relatively harmless to serious condition poses a challenge for the treatment modality and outcome for the patient. Therefore the dermatologist has to be extra careful before labeling the patient.

The 'major psoriasiform dermatoses' are psoriasis, pustular psoriasis, AIDS-associated psoriasiform dermatitis, Reiter's syndrome, pityriasis rubra pilaris, parapsoriasis and lichen simplex chronicus.[7]

There is large number of conditions which comes under the broad spectrum term Psoriasiform dermatoses. Therefore in addition to the biopsies of the classical psoriasiform lesions, we also selected other lesions which had a psoriasiform picture histopathologically.

For arriving at particular diagnosis the points taken into consideration were the history, age of the patient, the sex, the morphology of the skin lesions, definitive histopathological diagnosis and other associated lesions such as eye involvement, joint affection etc.

In our study we have tried to include the lesions which show major psoriasiform changes. In our study the major pasoriasiform changes are seen in like Elongation of rete ridges in 77% cases, hypergranulosis in 31% cases, epidermal hyperplasia in 67% , epidermal infiltratres in 07% cases and dermal infiltrates seen in 90% cases. Other accompaniments like parakeratosis seen in 82% cases. [Fig. 1, 2, 3, 4]

According to a study done by Sehgal VN, Dogra S, Srivastava G, Aggarwal AK revealed that classical histopathological pattern of psoriasiform dermatoses displays a uniform elongation of the rete ridges, papillomatosis and cellular infiltrate both in the epidermis and dermis. Hypergranulosis and parakeratosis may be other accompaniment as in concurrence to our study.[6]

Weedon D, Strutton G [8], Mihm MC [9] and Smotter BR [4] had noted similar findings in their study. The anatomical distribution pattern of the lesions revealed that the limbs in 35% of cases commonly, of back in 29% and abdomen in 10% was the most commonly involved site in our study. Forearms were also frequently involved in 21% of cases. Most of our cases of psoriasis were seen in the trunk. Most of our cases of lichen planus occurred on the limbs followed by the trunk and head, neck and face.

As compared to the anatomical distribution of lesion done by: D'Costa G, Bharambe BM[10] revealed that the limbs were involved in the maximum number of cases 67.79%, followed by the trunk 19.94% and head, neck and face 12.27%.

Amongst the psoriasiform group of lesions, psoriasis was the most frequent at 31% followed by , Lichen planus 23% lichen nitidus

9%, pitryiasis rosea 7%, seborheic dermatitis 6%, lichenoid drug eruption 3%, parapsoriasis 2 %, Reiter's disease 2% , mycosis fungoides 2% , Pitryriasis rubra pilaris 1%, lichen striatus 1% and lichen simplex chronicus 1% in our study.

Fig 1 - Psoriasiform dermatoses. Epidermal hyperplasia and elongated rete ridges. H/E stain low power view

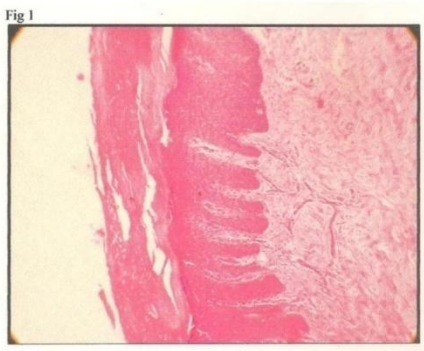
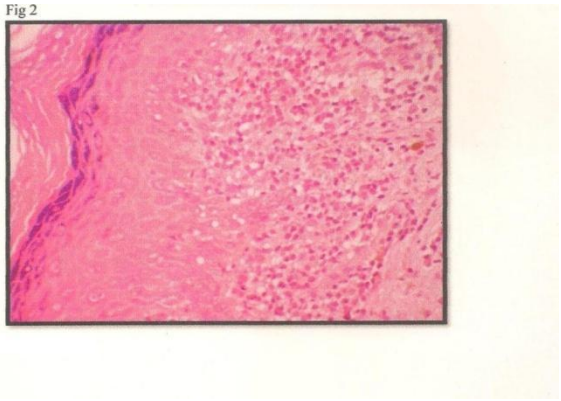


Fig2 - Psoriasiform dermatoses. Hypergranulosis, Dermal infiltrates. H/E stain high power view



As compare to study done byD'Costa G, Bharambe BM revealed that the most frequently encountered lesion was the lichenoid group - 46.57%, followed by psoriasiform lesion - 23.60%. Amongst the lichenoid group of lesions, lichen planus was the most frequent at 57.33%. The next category was of the psoriasiform lesions- 23.60% in which psoriasis vulgaris was the most frequent- 84.21%.

Fig 3 - Psoriasiform dermatoses. Parakeratosis H/E stain high power view

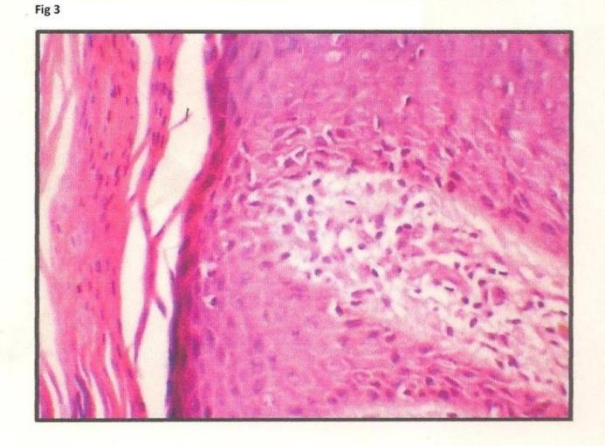
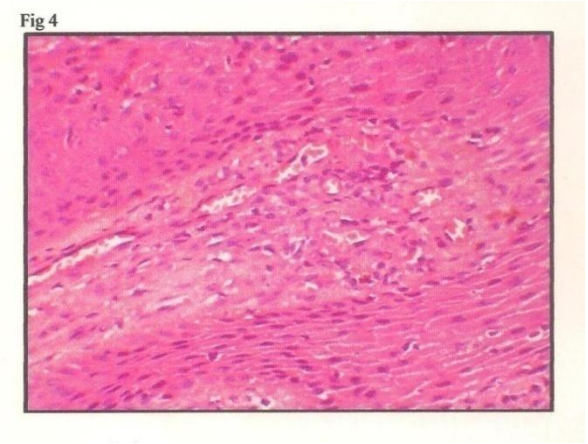


Fig 4 - Psoriasiform dermatoses . Squirting papilla H/E stain high power view



Conclusion: There are large numbers of conditions which come under the psoriasiform dermatoses. That is why it is very difficult to diagnose psoriasiform dermatoses. Histopathology is the gold standard for diagnosis. Psoriasis is the proteotype of psoriasiform dermatoses. So many times changes of psoriasiform dermatoses is labeled as psoriasis by mistake by pathologists. So there are chances of misdiagnoses. Therefore histopathological changes of psoriasiform dermatoses must be kept in mind while reporting skin biopsies. Clinical and histopathological co-relation will play important role in minimizing this problems.

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