

SKIN LESIONS (NON NEOPLASTIC AND NON HANSEN DISEASE) IN JABALPUR AREA

A clinicopathological study

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Summary

The paper deals with 588 cases of skin diseases studied histopathologically between 1968 and 1974. Neoplastic and Hansen's diseases have not been included in this study. The diseases have been studied with emphasis on their incidence, types and clinicopathological features. Psoriasis, lichen planus, vitiligo, chronic dermatitis, eczema, lupus vulgaris, molluscum contagiosum etc., are reported in this paper. The results are presented and discussed.

Skin is a highly complex functional, intercommunicating and inter-relating medium which indicates an intimate relationship of the body with its environment. A large number of patients from Jabalpur and surrounding areas with various dermatological ailments attend the skin outpatient department of Medical College Hospital. A study was planned to determine the incidence and analyse the clinicopathological features of various skin disorders seen in our institution. Neoplastic diseases and leprosy were excluded from this study.

Material and methods

During the period of 7 years, from 1968 to 1974, skin biopsies from 588

cases suffering from various skin diseases excluding those of Hansen's or skin neoplasms were received in this department from the department of skin, VD and leprosy of this college for diagnostic purposes. Skin biopsies approximately 1 cm. long were done under local anaesthesia, in all these 588 cases. The tissues thus obtained were processed, paraffin sections cut and stained by H & E technique, as per standard laboratory procedures. A.F.B., PAS and Masson's trichrome stains were employed as and when indicated¹.

These cases have been analysed with respect to the frequency of various lesions and their incidence in different age groups and the two sexes.

Observations :

Our observations are summarised in tables 1 to 5

Incidence of various skin lesions (Table No. 1)

Psoriasis and lichen planus constituted more than half of the cases,

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TABLE 1

Showing various diagnoses in 588 biopsies by number and percentage

Skin lesions	Number of cases.	Percent
Psoriasis	182	30.95
Lichen planus	166	28.23
Eczematous dermatitis	33	5.66
Mycotic dermatitis	12	2.22
Lupus vulgaris	9	1.52
Tuberculosis verrucosa cutis	15	2.55
Pemphigus	6	1.02
Vitiligo	21	3.62
Nonspecific chronic dermatitis	126	21.34
Other lesions	18	3.06
Total	588	100.17

forming 30.95 and 28.23 percent of the cases respectively. Nonspecific chronic dermatitis was observed in 21.34 per cent of the cases. Other conditions like lupus vulgaris, eczematous dermatitis, tuberculosis verrucosa cutis, pemphigus and vitiligo were diagnosed in a small proportion of cases varying from 1-6 per cent. Miscellaneous conditions which formed 3.06 per cent of the cases included diseases like scleroderma; pityriasis rosea, etc.

Sex incidence (Table No. 2)

Generally, males were seen to be more affected than females, the M : F ratio being 2 : 1. This trend is maintained in almost all the conditions except in mycotic dermatitis, tuberculosis cutis, pemphigus and vitiligo where an almost equal or slightly higher incidence is observed in females.

Age incidence (Table No. 3)

Skin lesions have been noted in all age groups, although the incidence of various conditions varied at different age periods. Almost one third of the patients, suffering from skin diseases were in the 21-30 years group and about two third of patients were in the

TABLE 2

Showing the sex incidence of various diseases in 588 biopsies by number and percentage

Skin lesions	Total cases	Males		Females	
		No.	%	No.	%
Psoriasis	182	134	73.6	48	26.4
Lichen planus	166	100	60.2	66	39.8
Eczematous dermatitis	33	24	72.4	9	27.3
Lupus vulgaris	9	6	66.6	3	33.4
Mycotic dermatitis	12	5	41.6	7	58.4
Tuberculosis verrucosa cutis	15	6	40.0	9	60.0
Pemphigus	6	3	50.0	3	50.0
Vitiligo	21	11	52.3	10	47.7
Nonspecific chronic dermatitis	126	94	74.6	32	25.4
Other lesions	18	12	66.6	6	33.4

11-40 years group. One fourth of the patients were over the age of 40 years. A small number of cases (6.97 per cent) were of 10 years or younger. The highest incidence of lichen planus was observed during the age period of 11-40 years ; of psoriasis during 21-40 years ; of eczematous dermatitis during 11-40 years ; of mycotic dermatitis during 21-30 years ; of lupus vulgaris during 11-40 years ; of tuberculosis verrucosa cutis during 21-40 years ; of pemphigus during 21-50 years ; of vitiligo during 11-30 years and of chronic nonspecific dermatitis during 21-30 years.

Considering the frequency of various skin lesions in different decades of life (Table No. 4), it is apparent that during the first two decades, lichen planus showed highest frequency, next in order of frequency being seen in psoriasis and chronic dermatitis. In the 21-50 years group psoriasis constitutes the commonest disease followed by lichen planus and nonspecific chronic dermatitis. After the age of 50 years, psoriasis and

TABLE 3

Showing age incidence decade - wise in different skin lesions of 588 biopsied cases by percentage

Skin lesions	Total cases	0-10 1	11-20 2	21-30 3	31-40 4	41-50 5	51-60 6	61-onwards 7.
Psoriasis	182	8	27	53	51	22	17	4
Lichen planus	166	4.39	14.83	29.12	28.02	12.08	9.34	2.19
Eczematous dermatitis	33	17	41	46	30	20	9	3
		10.24	24.69	27.71	18.07	12.48	5.42	1.8
Mycotic dermatitis	12	—	7	7	8	5	3	3
		3	21.21	21.21	24.24	15.15	9.9	9.9
Lupus vulgaris	9	25.0	8.33	50.0	—	2	—	—
		1	3	—	3	16.66	—	—
Tub. Verrucosa cutis	15	11.11	33.33	—	33.33	22.22	—	—
		1	3	4	5	2	—	—
Pemphigus	6	6.66	20.0	26.66	33.33	13.33	—	—
		1	—	2	1	2	—	—
Vitiligo	21	16.66	—	33.33	16.66	33.33	—	—
		3	7	10	1	—	—	—
Nonspecific chronic dermatitis	126	14.28	33.33	47.61	4.75	—	—	—
		5	22	38	14	21	20	6
Other lesions	18	3.96	17.46	30.16	11.11	16.66	15.87	4.61
		2	4	6	3	2	1 ^a	—
		11.11	22.22	33.33	16.66	11.11	5.55	—
Total	588	41	115	172	116	78	50	16
		6.97	19.55	29.25	19.55	13.26	3.5	2.72

TABLE 4

Showing the distribution of different skin diseases in different decades

Age in Yrs.	Total No. of Cases	Psooriasis %	Lichen planus %	Eczematous dermatitis %	Mycotic dermatitis %	Lupus vulgaris %	Tub. V. Cutis %	Pemphigus %	Vitiligo %	Chronic non-specific dermatitis %	Other lesions %
0-10	41	8	17	0	3	1	1	1	3	5	2
11-20	115	19.51	41.45	7	7.31	2.43	2.43	2.43	7.31	12.19	4.87
21-30	172	23.47	35.65	6.08	0.86	2.60	2.60	—	6.08	19.10	3.47
31-40	116	30.81	26.47	4.66	3.49	—	2.32	1.16	5.81	22.09	3.49
41-50	78	43.97	26.48	6.89	—	3	5	1	1	14	3
51-60	50	22	20	5	2	2.58	4.31	0.86	0.86	12.06	2.58
61 onwards	16	28.20	25.64	6.41	2.56	2.56	2.56	2.56	—	26.92	2.56
	50	17	9	3	—	—	—	—	—	20	1
	34.0	18.0	6.0	—	—	—	—	—	—	40.0	2.0
	4	3	3	—	—	—	—	—	—	6	—
	25.0	18.75	18.75	18.75	—	—	—	—	—	37.5	—
Total	588	182	166	33	12	9	15	6	21	126	18

chronic dermatitis show the highest incidence with a gradual decrease of the incidence of lichen planus.

Following main histological criteria have been employed for the pathological diagnosis of various skin lesions as described by Lever^a.

Psoriasis

Presence of hyperkeratosis, parakeratosis, thinning of supra papillary portions of the stratum malpighii, elongation of rete ridges, edema and clubbing of papillae and micro abscess of Munro.

Lichen planus

Hyperkeratosis, increase in thickness of stratum granulosum, irregular acanthosis, destruction of basal layer and band like infiltration pressing against and invading into the epidermis.

Lupus vulgaris

Typical tubercles with epithelioid cells, giant cells and a peripheral zone of lymphocytes with or without caseation within tubercles, lymphocytes and plasma cell infiltrate; and secondary changes in epidermis like acanthosis and hyperkeratosis.

Tuberculosis verrucosa cutis

Acanthosis, hyperkeratosis, papillomatosis, acute inflammatory infiltrate of polymorphonuclear leukocytes with abscess formation beneath the epidermis and presence of typical tubercles with moderate amount of caseation in the middle portion of the dermis.

Vitiligo

Absence of pigment in the epidermis in the depigmented areas with no other specific change.

Eczematous dermatitis

The various types of dermatitis did not present a histologic picture sufficiently diagnostic for their differentiation

because the same histologic reactions occurred in all forms of dermatitis i.e., spongiosis with vesiculations in the acute stage; proliferation leading to acanthosis in the chronic stage and a combination of these two reactions in subacute stage. No specific diagnosis could be made other than acute, subacute or chronic dermatitis.

Mycotic dermatitis

This was diagnosed after demonstration of various superficial fungi i.e., various types of dermatophytes by direct smear and culture.

Comments

The present review of 588 cases over a period of 7 years, include diseases such as psoriasis, lichen planus, eczematous dermatitis, mycotic dermatitis, lupus vulgaris, tuberculosis verrucosa cutis, pemphigus, vitiligo and non-specific dermatitis. Psoriasis, lichen planus and chronic dermatitis constitute the bulk of them (about 75 per cent). Whereas no specific aetiology is yet known about psoriasis and lichen planus, specific association with any agent could also not be established in cases of chronic nonspecific dermatitis.

Many of the skin diseases show a much higher preponderance in males than in females. This may be due to the greater exposure of the former to environmental and occupational hazards. Perhaps the protective effects of estrogens may be also in some way responsible for the lower incidence of skin diseases among women.

A low incidence during the first decade of life could be attributable to much less chances and short duration of exposure to environmental factors and great maternal care. The low incidence noted after the age of 40 years, could possibly be either due to neglect

TABLE 5

Showing differential diagnosis clinically thought in skin lesions

Histological diagnosis	No. of cases	Differential diagnosis clinically thought in these cases										
		Psoriasis	Lichen planus	Chronic dermatitis	Leprosy	Tub. cutis	Mycotic derma	Eczema	Tub. vulgaris	Vitiligo	Undiagnosed	Pemp. higus
	%	%	%	%	%	%	%	%	%	%	%	%
Psoriasis	182	178	1	3	—	—	—	—	—	—	—	—
	97.80	0.54	1.74									
Lichen planus	166	8	149	1	4	1	—	—	—	2	—	—
	4.81	89.75	0.6	2.4	0.6	0.6				1.2		
Eczematous dermatitis	33	—	—	1	2	—	30	—	—	—	—	—
				3.3	6.06		90.9					
Mycotic dermatitis	12	—	—	—	—	—	—	—	—	—	—	—
Chronic non-specific dermatitis	126	3	8	69	3	8	9	1	—	—	—	1
	2.38	6.34	54.76	2.38	6.34	17.46	7.14	0.79				0.79
Vitiligo	21	—	—	—	—	—	—	—	21	—	—	—
									100			
Total	588	189	158	74	9	9	39	1	21	1	2	1

of the ailments or those being only a small number of such cases in this series.

Correlating the pathological and clinical diagnosis (Table No. 5) it is seen that in most of them clinical diagnosis was confirmed by pathological studies. Although most of the cases of psoriasis (97.8 percent) and lichen planus (89.75 per cent) were also diagnosed clinically, some of the cases had differential diagnosis as psoriasis, lichen planus, chronic dermatitis, tuberculous cutis, mycotic dermatitis etc. The greatest variation of clinical diagnosis was seen in chronic non-specific dermatitis. Any particular factor responsible for the causation and incidence of these diseases in this area, however, could not be established.

The 5&8 cases in whom skin biopsy has been studied were those where biopsy was needed for the histopatho-

logical confirmation of the clinical diagnosis. This does not include cases of skin lesions like scabies, impetigo, folliculitis, etc. Thus, these cases represent only a small proportion of the cases of skin diseases of the department of skin, VD and leprosy of this hospital. Yet, this study seems to be quite significant indirectly indicating high incidence of such skin diseases in this area.

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