ORIGINAL RESEARCH PAPER VOLUME-6 | ISSUE-8 | AUGUST - 2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

HISTOPATHOLOGY OF SKIN BIOPSIES: A STUDY OF 720 PATIENTS IN A TERTIARY CARE CENTRE OF SAURASHTRA REGION

Pathology

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ABSTRACT

Background: Various skin lesions – infectious, benign and malignant of epidermis, dermis and dermal adnexa are studied histopathologically. **Method**: 720 skin biopsies were studied histopathologically over the period of 2 years in the department of pathology PDU medical college, Rajkot. Histopathological study was done in formalin fixed, paraffin embedded tissue sections stained in haematoxylin and eosin. **Results**: Out of total 720 biopsies, 25% are infectious skin lesions and 75% are non-infectious. Amongst non-infectious lesions (75%), 70% are benign lesions and 5% are malignant. Most of the patients fell between 2nd to 6th decade. Sex distribution is almost equal male 49.3% and female 50.7%. **Conclusion**: Among infectious skin lesions bacterial infection-leprosy is most common, benign lesions are the most common skin lesions, among which papulosquamous lesions are more common and BCC is the commonest malignant lesion. A detailed histopathological study of wide variety of skin lesions helps in confirming clinical diagnosis.

KEYWORDS:

Skin lesions, infectious, benign, malignant.

INTRODUCTION

Skin is the largest organ of the integumentary system. Various skin lesions can be divided into- infectious, benign and malignant. Clinically, many skin lesions mimic one another so closely that an exact diagnosis is often very difficult, though not impossible. A detailed histopathological study of such cases helps in confirming or ruling out the clinical suspicion. Skin is easily accessible for biopsy. In this study, skin punch biopsy is used for diagnosis. Punch biopsy is a simple, inexpensive, safe OPD procedure, causing minimal discomfort to the patient and no scarring.

MATERIALS AND METHODS

720 skin biopsies were studied histopathologically over the period of 2 years (September 2014 to August 2016) in the department of pathology PDU medical college, Rajkot. Histopathological study was done in formalin fixed, paraffin embedded tissues. Haematoxylin and eosin stained sections were examined.

OBSERVATIONS

Out of 720 cases of skin lesions, benign lesions are maximum i.e. 541 cases (70%) followed by infectious lesions 179 cases (25%) and then malignant lesions are 32 cases (5%) (Table 1). Most of the patients fell between 2nd to 6th decade. Sex distribution is almost equal male 49.3% and female 50.7% (Table 2). Among the infectious skin lesions bacterial infection is most common 95% followed by viral 4% and fungal 1% lesions. Leprosy [Fig 1] is the commonest infectious lesion 89%. Molluscum contagiosum [Fig 2] is the commonest viral infectious skin lesion. Dermatophytosis is the only fungal infection with a single case (Table 3). Males are more commonly affected 111/179 (62%) with highest prevelance in third decade. Among benign non-infectious lesions the prevalence of papulosquamous lesions is most common 33%, followed by connective tissue diseases 14%, vesicobullous lesions 13%, benign epidermal tumours and cysts 10%, benign adnexal tumours and vascular lesions 5% each, and pigmentory lesions 3%. Miscellaneous lesions constituted 17% (Table 4). Females are more commonly affected than males 277/509 (54.4%). The most common vesicobullous lesion is pemphigus vulgaris [Fig 3] 34 cases-49%. Males are more commonly affected than females 42/69 (60%). Incidence is more common in the age group of 4th to 6th decade. The most common papulosquamous lesion is lichen planus [Fig 4] (53%). Females are more commonly affected than males 96/166 (58%).Almost all age groups are equally affected. The most common benign adnexal lesions are of follicular type (44%). There is almost equal sex distribution. Incidence is more common in the age group of 3rd to 5th decade. Trichoepithelioma [Fig 5] is the most common follicular type (8 cases-32%) of lesion and eccrine acrospiroma/nodular hidradenoma [Fig 6] is the most common eccrine type (7 cases-28%). The most common connective tissue lesion is discoid lupus erythematosus [Fig 7] (38%). Females are more commonly affected than males 43/71 (60.5%). Incidence is more common in the age group of 2nd to 5th decade. The most common pigmentory lesion is nevus (79%). Females are more commonly affected than males 8/14 (57%). Incidence is more common in the age group of 3rd to 5th decade. The most common vascular lesion is vasculitis (52%). There is equal sex distribution. Incidence is more common in the age group of 2nd to 5th decade. The most common benign epidermal cysts and tumours is verrucous lession (31%). Females are more commonly affected than males 29/52 (56%). Incidence is more or less same in all age groups except extremes of ages. Miscellaneous lesions constituted 88 cases out of 510 cases of benign category of skin lesions (17%). Granulomatous lesions and keloid [Fig 8] are commonest among them. BCC [Fig 9] is the commonest malignant lesion constituting 44% followed by SCC [Fig 10] 35%, malignant melanoma [Fig 11] 9%, cutaneous metastasis 6%, dermatofibrosacoma and cutaneous lymphoma 3% each (Table 5). Female are more commonly affected than males 20/32 (62.5%) and the age group most commonly affected is 7th decade.

DISCUSSION

In our study 161 cases of leprosy forms 89.9 % total infectious skin lesions. Male to female ratio is nearly 1.6:1. Leprosy affected mostly middle aged people. In a retrospective analysis of 971 leprosy patients done by Reddy et al, 560 were males and 411 were females with a ratio of 5:4. Peak incident was observed in 20-29 years age group.[1] In 139 cases of leprosy registered in Institute Hospital, SHU, Varanasi the sex ratio was found to be 1.8:1.[2] All these studies show an increased incidence of leprosy in males. In our study the incidence of tuberculous lesions of skin is more common in females with male to female ratio of 1:3. Lupus vulgaris is the commonest lesion followed by tuberculous verrucosa cutis. Two-hundred and sixteen cases of cutaneous tuberculosis were identified by Kawtar Zouhair et al. in 2007. Men and women were equally affected.[3] Fourteen cases of lupus vulgaris reported during the study period by Pai VV et al. with equal incidence among males and females.[4] In a study by Kumar B. et al. Lupus vulgaris was the most common clinical presentation, followed by scrofuloderma, tuberculids, tuberculosis verrucosa cutis and tuberculous gumma.[5] In our study the male to female ratio of incidence of molluscum contagiosum is 1.5:1. In a study by R.S. Panell et al. the ratio is 1.05:1.[6] Comparision of incidence of various vesiculobullous lesions with other studies is as in Table 6. In present study, pemphigus vulgaris (47.8%) has highest incidence, which is comparable with results of Kanwar et al[7], having 36.4% cases of pemphigus vulgaris. Comparision of incidence of various papulosquamous lesions with other studies is as in Table 7. The incidence of benign adnexal tumours is comparable to Reddy et al[11] (Table 8). The results of malignant skin lesions in this study are comparable to that of D. Koh et al[12] (Table 9). The overall mean age of cases with BCC and SCC was 58.5 years and 64.7 years, respectively in a study by Michael D. Lichter et al.[13] which

is comparable to our study in which the peak incidence of BCC and SCC is 6th and 7th decades.

TABLE 1

	SKIN LESIONS
INFECTIOUS LESIONS	**179**
NON-INFECTIOUS	**541**
1.BENIGN LESIONS	509
2.MALIGNANT LESIONS	32

TABLE 2

AGE GROUP(YEARS)	MALE	FEMALE
<10	20	10
11-20	51	49
21-30	79	80
31-40	64	74
41-50	41	66
51-60	53	50
61-70	33	26
71-80	12	07
81-90	02	03
TOTAL	355	365
PERCENTAGE	49.3%	50.7%

TABLE 3

INFECTIOUS SKIN LESIONS		NO. OF CASES	
BACTERIAL	LEPROSY	161	170
	TUBERCULOSIS	09	
VIRAL	MOLLUSCUM CONTAGIOSUM	05	08
	EPIDERMODYSPLASIA VERRUCIFORMIS	02	
	HERPES ZOSTER	01	
FUNGAL	DERMATOPHYTOSIS	1	

TABLE 4

NON-INFECTIOUS-BENIGN LESIONS	NO. OF CASES
VESICOBULLOUS DISORDERS	69
PAPULOSQUAMOUS DISORDERS	166
BENIGN ADNEXAL TUMOURS	25
CONNECTIVE TISSUE DISORDERS	71
PIGMENTORY DISORDERS	14
VASCULAR DISORDERS	24
BENIGN EPIDERMAL TUMOURS AND CYSTS	52
MISCELLANEOUS	88

TABLE 5

MALIGNANT SKIN LESIONS	NO. OF CASES
SCC	11
BCC	14
MALIGNANT MELANOMA	2
CUTANEOUS METASTASIS	3
DERMATOFIBROSARCOMA	1
CUTANEOUS LYMPHOMA	1

TABLE 6

Workers	SR Arya et al8 (1999)	Amin et al9 (2006)	Leena et al10 (2010)	Present study
M:F	1.4:1	1.3:1	1.3:1	1.8:1

TABLE 7

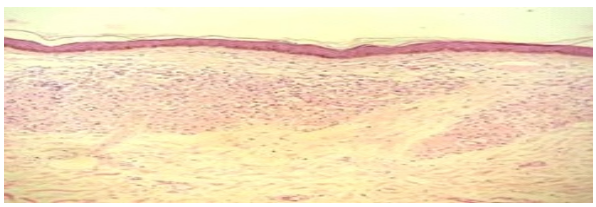
Lesions	Sushil et.al88 [no. of cases (%)]	Chavhan et.al89 [no. of cases (%)]	Sushma et.al90 [no. of cases (%)]	Present study [no. of cases (%)]
Lichen planus	25 (32.0)	36 (59.0)	39 (26.0)	88 (53.0)
Lichen nitidus	1 (1.28)	1 (1.6)	3 (2.0)	03 (1.8)
Lichen striatus	1 (1.28)	0	5 (3.3)	01 (0.6)
Lichen simplex chronicus	0	0	00	02 (1.2)
Psoriasis	44 (56.4)	20 (32.8)	89 (59.3)	41 (24.6)
Pityriasis	7 (9.0)	1 (1.6),	14 (9.4)	16 (9.6)
Prurigo nodularis	0	3 (4.91)	0	06 (3.67)
Reiter's disease	0	0	0	01 (0.6)
Erythema annulare centrifugum	0	0	0	02 (1.2)
Eczema	0	0	0	06 (3.67)
Total	78(100)	61(100)	150(100)	166(100)

TABLE 8

Lesions	Reddy et al.11 [no. of cases (%)]	Present study [no. of cases (%)]
Trichoepithelioma	4 (4.7)	03(12)
Proliferating trichelemmal cyst/tumour	-	08(32)
Nodular Hidradenoma	29 (34.1)	03(12)
Eccrine hidrocystoma	-	01(4)
Eccrine acrospiroma	-	04(16)
Eccrine spiradenoma	2 (2.4)	01(4)
Eccrine poroma	-	01(4)
Syringoma	3 (3.5)	02(8)
Chondroid syringoma	2 (2.4)	02(8)
Others	45(52.9)	-

` TABLE 9

Skin lesions	D. Koh et al.12 [no. of cases (%)]	Present study [no. of cases (%)]
BCC	2650 (61%)	14 (43.8%)
SCC	1407 (32.5%)	11 (34.4%)
MM	281 (6.5%)	02 (6.2%)
Others	-	05 (15.6%)



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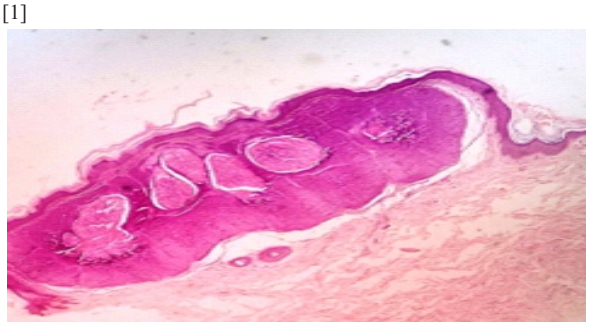

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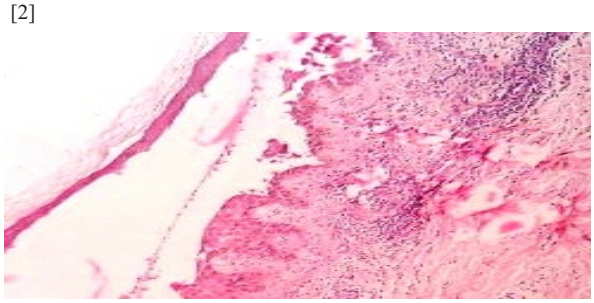

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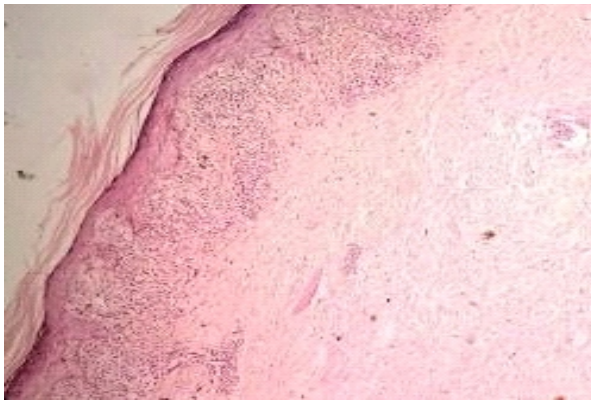

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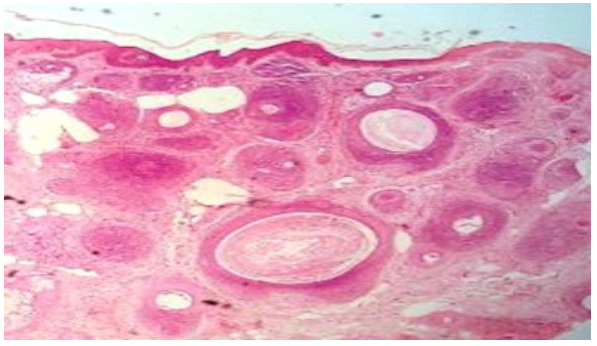

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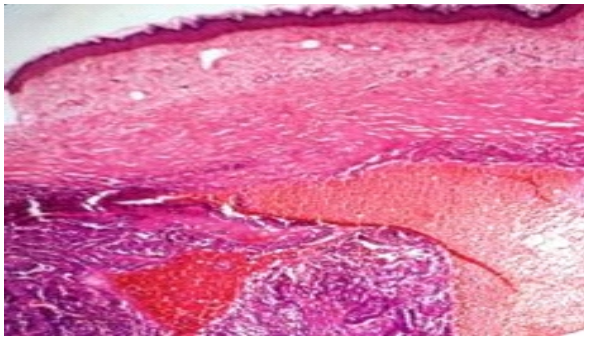

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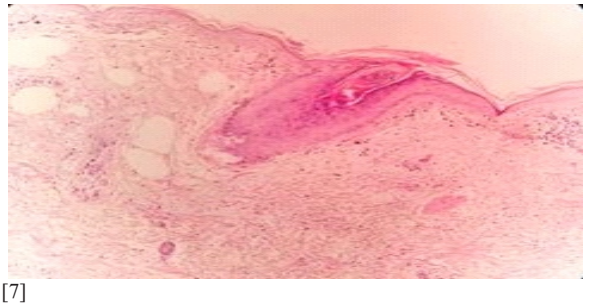

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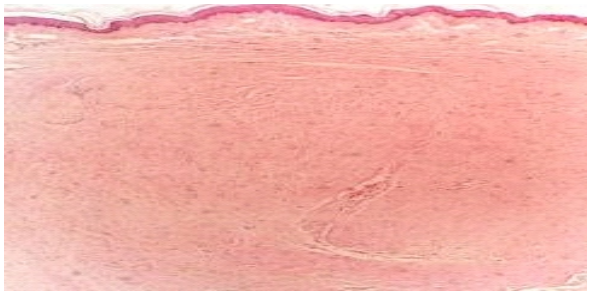

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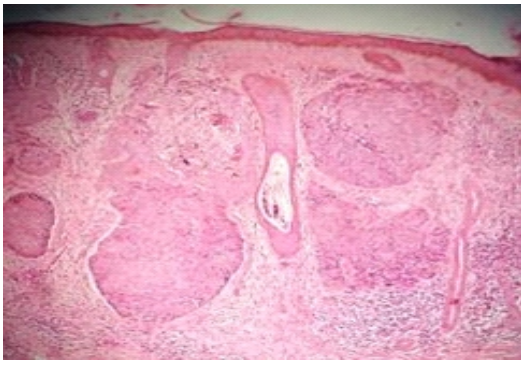

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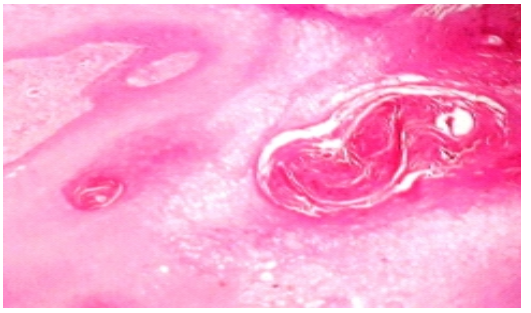

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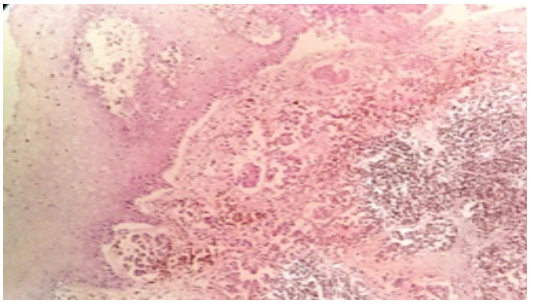

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CONCLUSIONS

Out of total 720 biopsies, non-infectious lesions are more prevalent. Amongst non-infectious lesions benign lesions are more common than malignant. Skin lesions have almost equal age and sex distribution. Leprosy is the commonest infectious lesion. Vesicobullous lesions mainly pemphigus vulgaris are the commonest benign lesion. BCC is the commonest malignant lesion. A detailed description of variety of skin lesions helps in clinical diagnosis.

REFERENCES:

1) Reddy BSN, Parthsaarthi A, Sait MA. Age at onset of leprosy. Ind. J. Dermatol, Venerol, Lepr. 1986; 52:23-25.
2) Singh VV, Singh G, Kaur P, Pandey SS. Histioid leprosy in Varanasi. Ind. J. Dermatol Venerol, Lepr. 1983; 49(4):160-161.
3) Kawtar Zouhair, Nadia Akhdari. Cutaneous tuberculosis in Morocco. International Journal of Infectious Diseases. May 2007; 11(3):209–212.
4) Pai VV, Naveen KN, Athanikar S B, Dinesh U S, Divyashree A, Gupta G. A clinico-histopathological study of lupus vulgaris: A 3 year experience at a tertiary care centre . Indian Dermatol Online J. 2014; 5:461-5
5) Kumar B., Muralidhar S. Cutaneous tuberculosis: a twenty-year prospective study. The International Journal of Tuberculosis and Lung Disease. June 1999; 3(6):494-500.
6) R.S. Panell. The incidence of molluscum contagiosum, scabies and lichen planus. Epidemiology and Infection. December 2005; 133(6):985-991.
7) Kanwar A.J.,Singh M., Mangonsh I.M., Bharija S.C., Belhuj M.S. Clinical pattern of bullous disorders in Eastern Libya. Ind. J. Dermatol Venereol Leprol. 1987; 53:337-339.
8) SR Arya, AG Valand, K Krishna. A clinico-pathological study of 70 cases of pemphigus. IJDVL. 1999; 65(4):168-171.
9) Amin, M. N. and Islam, A. Z. M. M. Clinical, histologic and immunologic features of pemphigus in Bangladesh. International Journal of Dermatology. 2006; 45: 1317–1318.
10) Leena, Vijaya B,Manjunath G V, Sunila. A Clinicopathological Study Of 22 Cases Of Pemphigus. JCDR. 2010June; l4(3):2446-2451.
11) Reddy MK, Veliath AJ, Nagrajan S, Aurora AL. A clinicopathological study of adnexal tumours of skin. Indian J Med Res. 1982; 75:882-9.
12) D. Koh, H. Wang, J. Lee, K.S. Chia, H.P. Lee, C.L. Goh. Basal cell carcinoma, squamous cell carcinoma and melanoma of the skin: analysis of the Singapore Cancer Registry data 1968–97 British Journal of Dermatology. June 2003; 148(6):1161–1166.
13) Michael D. Lichter, MD; Margaret R. Karagas, PhD; Leila A. Mott, MS; Therapeutic Ionizing Radiation and the Incidence of Basal Cell Carcinoma and Squamous Cell Carcinoma. Arch Dermatol. 2000; 136(8):1007-1011.