ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
Index Copernicus Value: 68 . 16
PubMed - National Library of Medicine - ID: 101731606

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 5, Issue –2, March - 2020, Page No. : 196 - 201

Spectrum of Skin Lesions: A Histopathological Study

[1]Megha Sharma, Senior Resident, Department of Pathology, Govt. Medical College, Jammu

[2]Nitin Gupta, Assistant Professor Department of Pathology, Acharya Shri Chander College of Medical Sciences and Hospital, Jammu

Corresponding Author: Nitin Gupta, Assistant Professor Department of Pathology, Acharya Shri Chander College of Medical Sciences and Hospital, Jammu.

Citation this Article: Megha Sharma, Nitin Gupta, "Spectrum of Skin Lesions: A Histopathological Study", IJMSIR- March - 2020, Vol – 5, Issue -2, P. No. 196 – 201.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Introduction

Skin with its appendages is a complex dynamic organ that produces a variety of tumours. More than being just a barrier to fluid loss and mechanical injury, skin is composed of cells that contribute to protective functions.1 Skin tumours is a frequent occurrence in the clinical set up.

Incidence of skin tumours has increased dramatically over the last several decades at least in part as a result of increasing sun exposure necessitating vigorous surveillance.2 Several Studies conducted over a period of time have shown high prevalence of skin disorders in developing countries.3

The histopathology of tumours related to follicular, sebaceous, apocrine epithelium are at times difficult to interpret. Difficulties arise because of the variety and complexity of histologic, ultra structural and histochemical study ,complex nomenclature, multiple classifications and conflict in opinion regarding histogenesis of some of the entities and relative rarity of these tumours.(4)

The histopathological spectrum of which has been highly variable but the clinical presentation is restricted to only few changes such as hyperpigmentation, hypopigmentation, macules, papules, nodules and a few others1. So the separation of each of these becomes important because the treatment and prognosis tends to be disease specific.(5)

In conclusion, histopathological investigation of excised skin lesions yields a high percentage of pre-malignancies and malignancies. This indicates that all excised skin lesions must undergo histopathological investigation to ensure that malignancies are not missed. Thus early recognition, diagnosis and treatment offer the best chance for cure.(6)

AIM: The present study was carried out with an aim of describing the histopathological spectrum of all the neoplastic skin lesions in a tertiary care hospital.

Material and Method

This study was carried out at the department of Pathology Govt Medical College,Jammu for a period of 1 year (Oct 2018 to Nov 2019) and included all the skin biopsies specimens received in the dept.With necessary clinical details obtained in a proforma, skin biopsy specimens were sent to the histopathology section for final diagnosis. Formalin fixed,paraffin

embedded sections were prepared & slides were routinely stained with H & E . Data obtained was tabulated and analysed.

Exclusion Criteria

Inadequate and Autolysed skin biopsies were excluded from our study.

Tissue processing

Paraffin embedding and block making, trimming, sectioning and staining.

Hematoxylin & Eosin Staining Procedure

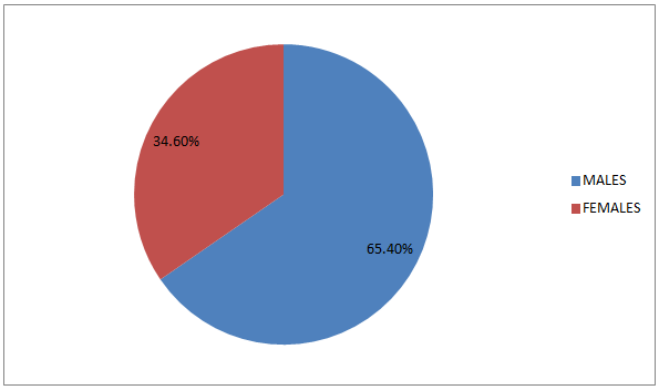
- Sections were dewaxed in 2 jars of Xylene, each for 2 min.
- Slides were kept in 2 jars of absolute alcohol, each for 2 mins to remove xylene.
- Put the slides for 1 min. in 90% alcohol
- Put the slides for 1 min. in 70% alcohol
- Rinsed in water.
- Put the sections in Harris Hematoxylin for 7-10 min.
- Wash in running water and the sections turn blue.
- Then Sections were kept in 1% acid alcohol solution just for 5-10 sec.
- Washed with the tap water for 5-6 mins.
- Dipped in saturated solution of lithium carbonate till the section is completely blue.
- Washing with the tap water for 5-6 mins.
- Put the sections in 50% alcohol for 2 mins. Followed by 70% alcohol for 2 mins. And finally in 90% alcohol for 2 mins.
- Then sections were kept in 1% Eosin Y for 60 seconds.
- Rinsed for 2 min. in 95% alcohol 2 times each
- Dehydrated with absolute alcohol for 2 mins. for 3 times.
- 3 changes in Xylene each for 2 mins. is done for clearing.
- DPX. Mount.

Detailed study of the sections was performed under the light microscope and then the final diagnosis was given

Results

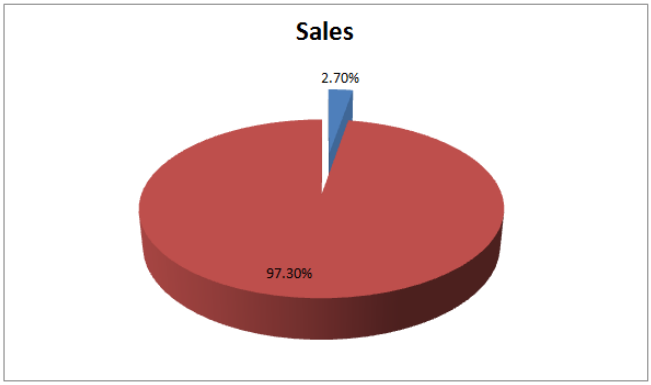
The present study comprised of 260 cases. Histopathological examination results of biopsy show the wide range of diagnosis even though the clinical features are similar in different patients.

Fig 1: Sex Wise Distribution



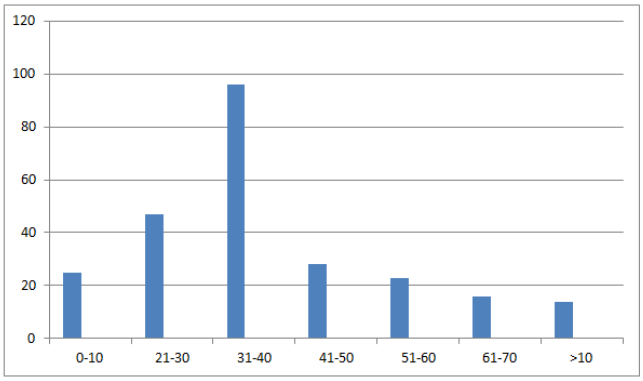
Out of a total of 260 cases, males compromised 170 cases (65.4%) while females consist of 90 cases (34.6%). Results show the male predominance with male to female ratio of 1.8:1.

Fig 2: Distribution of Bengin and Malignant Lesions



Majority of the cases ie 253 cases were of benign etiology while malignant lesions comprised 2.7% of cases (squamous cell carcinoma 4 cases,basal cell carcinoma 2 cases,,malignant melanoma 1 case).

Fig 3: Age Wise Distribution of Skin Lesions



Patient with younger age group (< 40 years) were 68% with 18% of patients are between 21-30 years age group.

Table 1: Age Distribution of Benign & Malignant Skin Lesions

Age Group	Malignant	Bengin	Total
0 - 10 years	0	11	11
11- 20 years	0	25	25
21-30 years	0	47	47
31-40 years	0	96	96
41-50 years	1	27	28
51-60 years	1	22	23
61-70 years	3	13	16
> 70 years	2	12	14
TOTAL	7	253	260

Table No.2 showing types of skin lesions

Lesions	No Of Cases
Hansen Diseases	110(42.3%)
lepromatous	
tuberculoid	54
ENL	43
	5
histoid	8
Disorders of Pigmentation	44(17%)
Interdermal nevus	
Dermal nevus	15
Compound nevus	
Verrucous nevus	2
Blue nevus	4
Backer s nevus	2
nevus sebecous	2
Intradermal melanocytic nevus	5
	11
	3
Inflammatory Conditions	35(13.4%)
psoriasis	
Lichen planus	9
DLE	6
Seborrhic dermatitis	8
Chronic dermatitis/lichen simplex chronicus	2
Lichenoid dermatitis	3
Allergic contact dermatitis	
	2
	3
Erythema multiforme	2
Bullous Lesions	10(3.8%)
Pemphigus vulgaris	5
Bulous pemphegoid	4
Dermatitis herpetiformis	
	1
Disorders of Epidermal Maturation	2
Lamellar Icthyosis	
Benign Epithelial Tumours	15

Seborrhic keratosis	
Fibroepithelial polyp	4
Cyst	
ketionous	4
trichemenial	
epidermal inclusion	5
dermoid	
keratoacanthoma	2
Adenaxal tumours	5
TUMOURS OF DERMIS	10(3.8%)
Dermatofibroma	
xanthoma	2
haemangioma	1
Pyogenic granuloma	4
neurofibroma	
leiomyoma	
Mycosis fungoides	1 1 1
Premalignant &Malignant Lesions	9(3.4%)
Actinic keratosis	
Squamous cell carcinoma Basal cell carcinoma	2
Malignant melanoma	4 2 1
Infections	15(5.7%)
verruca	3
Post kala azar dermal leishmanisis	4
sporotrichosis	
scrofuladerma	
Lupus vulgaris	1 2 5
Panniculitis	2
Granulation Tissue	1
Tattoo Granuloma	2

With 42 % of patients, most common diagnosis in our study is Hansen's disease followed by disorders of pigmentation and melanocytes constituting abt 17% of total cases. Third in frequency were inflammatory conditions like DLE, psoriasis, lichenplanus, dermatitis, seborrhic keratosis.

Bullous lesions comprised 3.8% of the total cases and included pemphegious vulgaris (5 cases),bullous pemphegoid (4 cases)and 1 case of dermatitis herpetiformis.

Amongst benign epithelial tumours(5 cases),the most common diagnosis was epithelial cysts like tricheminal, epidermal inclusion,dermoid and kertainious cyst, while vascular tumors (4 cases) like haemangioma and pyogenic granuloma were most common among tumors of dermis. Hair follicle tumours constituted 1.9% out of which majority of cases were pilomatricoma followed by trichoepithelioma (30.8%) and trichofolliculoma.

Infectious etiology like cutaneous leishmaniasis,lupus vulgaris,post kalaazar dermal leishmaniasis,sporotrichosis were also found out.

Premalignant and malignant lesions comprised 3.4% of all the cases i.e 2 cases of actinic keratosis,squamous cell carcinoma 4 cases,basal cell carcinoma 2 cases and 1 case of malignant melanoma .

Discussion

Skin tumours constitute a small but significant proportion of patients. Skin tumours are so ubiquitous

that they can affect people of all ages and is an ideal subject for study from clinical and morphological point of view. This study was carried out at the department of Pathology Govt Medical College,Jammu for a period of 1 year (Oct 2018 to Nov 2019) and included 260 skin biopsies specimens received in the dept.

Majority of the cases ie 253 cases were of benign etiology while malignant lesions comprised 2.7% of cases (squamous cell carcinoma 4 cases,basal cell carcinoma 2 cases,,malignant melanoma 1 case). Skin malignancies are rare in India compared to western countries. In India, skin malignancies constitute about 1-2% of all diagnosed cancers. This finding of present study is comparable to the study of Chakravorthy R C et al (7)(1968), Deo S V et al (2005)(8), Budharaja S N et al (1972)(9). In the present study SCC accounted for maximum number (46.25%) of cases. This finding is similar to the study of Budharaja S N et al 1972(9)

However Kapoor et al(10) (1993) found higher frequency of occurrence of malignant neoplasms of skin.

With 42.3 % of patients most common diagnosis in our study is Hansen's disease followed by disorders of pigmentation and melanocytes constituting about 17% of total cases. This is in concordance with a study by Kumar V et al(11) in which , most common diagnosis was Hansen's disease(30.6% cases) followed by vesicobullous lesions with 12.5% of cases. In the study by Bharambhe et al(12) lichenoid lesions were most common (46.57%) followed by psoriasis (19.88%). Most common histopathological diagnosis was Psoriasis (42.5%) followed by Lichen planus in the study by Rajasekhar et al(13)

In the present study, patient with younger age group (< 40 years) were 68% with 18% of patients are between 21-30 years age group.

25% of the patients were in the age group of 21 to 30 years in the study by Yonus et al(14). 23.75% of the patients were in the age group of 31 to 40 years in the study by Rajasekhar et al.(13)

Conclusion

Histopathological spectrum of skin lesions has been highly variable but the clinical presentation shows very few changes such as hyperpigmentation, hypopigmentation, macules, papules, nodules and a few others. Therefore for confirmation of diagnosis and initiation of treatment, biopsy becomes inevitable in various skin disorders. The separation of each of these becomes important because the treatment and prognosis tends to be disease specific.

Therefore, it is emphasised that histopathological assessment of skin biopsies yields the greatest accuracy when a concise and pertinent clinical history including a description of the cutaneous lesion (i.e. morphology of the lesion, distribution, duration and symptomatology), are included on the pathology requisition. With the clinical information, a definitive histopathologic diagnosis can be made, thus reducing the number of cases signed out using descriptive terms. The knowledge of histopathological patterns can help in prognosis and planning an effective management.

References

1. Murphy GF, Sellheyer K and Mihm MC. The skin. In Robbins and Cotran Pathological basis of disease. 7th ed. Philadelphia : Saunders; 2008.p.1227-1271.
2. Koh D, Wang H, Lee J, Chia KS, Lee HP and Goh CL. Basal cell carcinoma, squamous cell carcinoma and melanoma of the skin: analysis of the Singapore Cancer Registry data 1968-97. British journal of Dermatology; 148:1161-1166.

3. Burns T, Breathnach S, Cox N, Griffiths C; Rook's Textbook of Dermatology. 2010.
4. LeBoit PE, Burg G, Weedon D and Sarasin A. Pathology and genetics of skin tumours. In World health organisation classification of tumours. IARC press. Lyon, 2006.p.1-300.
5. Lever's histopathology of skin; Devid E Elder, Bernett Johnson Jr., Rosalle Elenltsas; 9th Edition
6. David W. Tumors of cutaneous appendages. In: Weedon David's Skin Pathology. Churchill Livingstone; 2002. p. 859-916.
7. Charkravorthy RC and Choudhuri DR. Malignant neoplasms of the skin in Eastern India. The Indian Journal of Cancer, vol 5,1968:133-144.
8. Deo SV. Surgical management of skin cancers: Experience from a regional cancer centre in North India. Indian Journal of Cancer 2005; 42:145-50.
9. Budharaja SN, Pillai VCV, Periyanagam WJ, Kaushik SP and Bedi BMS. Malignant neoplasms of skin in Pondicherry- a study of 102 cases. The Indian Journal of Cancer,1972: 284-295.
10. Kapoor R, Goswami KC. Pattern of cancer in Jammu region (Hospital based study 1978-89). Ind J Cancer 1993; 30:67-71.
11. Vivek Kumar and Hansa M. Goswami .Spectrum of Non-neoplastic Skin Lesions: A Histopathological Study based on Punch Biopsy: International Journal of Current Research and Review DOI: 10.7324/IJCRR.2018.1069.
12. D'Costa G, Bharambhe BM. Spectrum of NonInfectious Erythematous, Papular and Squamous lesions of the skin. Indian J Dermatol. 2010;55: 225-8.
13. Reddy R, Krishna N. Histopathological spectrum of non-infectious erythematous, papulo-squamous lesions. Asian Pac J Health Sci. 2014;1(4S):28–34.
14. Younas M, Haque A. Spectrum of histopathological features in non-infectious erythematous and papulosquamous diseases. Int J Pathol. 2004;2(1):24–30.