TO STUDY THE CLINICAL AND HISTOPATHOLOGICAL CORRELATION OF SKIN LESION - AN ORIGINAL RESEARCH ARTICLE

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ABSTRACT

Background: Dermatological disorders are very common in all parts of the country, but the spectrum may vary from region to region.[1] The skin diseases are more common in developing countries, which could benefit from public health care centers.

Material and Methods: A total of 120 cases with various skin lesions, presenting to our dermatological outpatient department during April 2013 to April 2014 were included in the study. The study was carried out in rural background tertiary care center of Northern India. Histopathological analysis of the skin biopsy samples was carried out and slides were stained with routine (Hematoxylin and eosin) and special stains used whenever required (Ziehl-Neelsen Staining, periodic acidic-Schiff etc.).

Results: Out of 120 cases, 35 cases were of granulomatous lesions, 25 cases were of non-specific dermatitis, 20 cases of psoriasiform dermatitis, 8 cases of spongiotic dermatitis, 6 cases of tumour and cyst in epidermis, 5 cases of vesicobullous diseases, 2 cases of pigmentary disorder and 2 cases of connective tissue disorder. 17 cases were observed with interface dermatitis.

Conclusion: The incidence of skin lesions was observed more frequently in adult males. Leprosy is still the most common granulomatous dermatitis.

Key-words: Vesicobullous lesions; granulomatous dermatitis; histopathology; psoriasiform dermatitis

INTRODUCTION

Various lesions affecting skin range from non-specific dermatosis and inflammatory diseases to neoplastic changes. Skin diseases are influenced by many factors like literacy, hygiene methods, environmental factors, racial and social customs.[2] Clinico-pathological analysis plays an important role in the diagnosis and further management of several skin disorders. Skin biopsy forms the basis of differential diagnosis in clinically similar dermatosis, thereby yielding important information to the dermatologist and the pathologist. After performing clinical

evaluation and excision of lesions, histopathological confirmation of diagnosis is the bedrock in guiding the further treatment. Though histopathology was an excellent diagnostic tool in routine dermatological practice, studies relating to the clinical and pathological correlation are few.[3-7] Papulonodular lesions are commonly seen in dermatological illnesses. Various infectious diseases, benign and malignant tumors are also manifested as papulo-nodular lesions. Histopathology made the diagnosis easier; but it is still a challenging job. So, clinical correlation is also important. Leprosy is found as granulomatous lesion, on histopathology. It is caused by Mycobacterium leprae and it predominantly affects the peripheral nerves. Clinically the lesions may appear as macular, papular, nodular, or diffused infiltrative type. Histopathologicaly it shows extensive cellular infiltrate with flattened epidermis and narrow grenz zone. Macrophages may be packed with lepra bacilli or foamy macrophages with degenerated bacilli.[8] The objective of our study is to evaluate the diagnosis histopathologically and correlate clinically.

MATERIAL AND METHODS

AIMS AND OBJECTIVES: The study aims to evaluate the incidence of different types of skin diseases and to evaluate the consistency between clinical and histopathological diagnosis of skin diseases. A total of 120 cases with various skin lesions, presenting to dermatology outpatient department of BPSGMC, Khanpur Kalan, during the study period of one year (from April 2013 to April 2014) were included in the study. Approval from IEC was taken before commencing the study. Clinical history and family history were taken. As acne in teenagers and pyoderma in children is a common skin problem, that were diagnosed clinically but no histopathology was done for that, so excluded from the study. A detailed history of the patients was taken and physical examination findings were recorded. Any patients with skin lesions not responding to conservative treatment for more than a period of 15 days were included in the study. Written informed consent of all the patients was taken. A fresh lesion i.e. a papule, vesicle or bullae with no sign of secondary infection was selected for skin biopsy, punch or excision biopsy was done to obtain tissues for histopathological examination. Skin biopsy sample was collected in 10% formalin vial and sent for histopathological examination to the pathologist. Sections were routinely stained with hematoxylin and eosin stain and special stains were used as and when required.

Inclusion criteria: - Patients were selected with following inclusion criteria.
Any patient with skin lesion, not responding to conservative treatment, all age and sex groups and who gave consent for the study.

Exclusion criteria:
-Patient who refused to be included in the study.
-Sexually transmitted infections, pyoderma and acne also excluded from study, because no histopathology was done for that.

Patient's history such as age, sex and other relevant clinical details such as site of lesion and characters were noted. All

tissue specimens were subjected to gross examination. Slides were stained with routine hematoxylin & eosin and special stains such as Ziehl-Neelsen stain, periodic acid-Schiff, Alcian blue, fite Faraco and Congo red for myeloid etc.

RESULTS

A total number of 120 cases were studied during the study period. Maximum numbers of biopsies sent were in the age group of 21 – 30 years and least number was in the group of 0 – 10 years. (Table 1) Out of the 120 patients, 67 patients (55.8%) were male and 53(44.2%) cases were females. The histopathological diagnosis distribution is presented in Table- 2. The majority of the patients observed were of granulomatous lesion 35 (29.16%) followed by non-specific dermatitis 25 cases (20.8%). Vacuolar interface dermatitis was observed in 8 (6.6%) cases (erythema multiforme-2, photodermitis-2, Lichen sclerosus et atrophicus-1, Lupus erythematous-1 and pigmented dermatitis -2). Lichenoid eruptions were seen in 9 (7.5%) cases which included 4 cases of Lichen planus, 2 cases each of Pityriasis lichenoides chronica and post inflammatory hyperpigmentation and one case of Lichen nitidus. The granulomatous lesions were observed in 35 cases. In this group lupus vulgaris was the commonest type of granulomatous lesion, observed in 10 cases, more common in males (6 cases). Tuberculous verrucous cutis was observed in one male patient. One patient of post kalazar dermal lechmaniasis was diagnosed histopathologically because of the presence of LD bodies, although clinically it showed resemblance to lupus vulgaris. Tubercular leprosy was observed in 7 cases, more common in male patients (5 cases) followed by borderline tuberculoid and borderline lepromatous leprosy in 4, 2 cases respectively. Lepromatous leprosy was observed in 6 cases. Histoid and indeterminate leprosy were observed in 2 cases each. Malignant tumors (basal cell carcinoma) were observed in 2 cases. Benign tumors were observed in 3 cases, in which one case of trichoepithelioma and 2 cases were of seborrheic keratosis.

DISCUSSION

This study has documented the clinico histopathological correlation of skin lesions at our rural background tertiary care center of north India. It showed the high presence of granulomatous lesion (29.16%). The sex distribution pattern revealed that most of the patients were male (55.5%). The age pattern revealed that the maximum biopsies sent were in the range of 21 to 30 years (Table-1). The granulomatous lesions were the most frequently seen followed by non specific dermatitis. The correlation of clinical and histological diagnosis is very important before reaching the final diagnosis. Psoriasiform dermatitis was observed in 20 (16.6%s cases), it revealed hyperkeratosis and elongation of the epidermal rete-ridges. Interphase dermatitis with lichenoid eruption was observed in 7.5% cases. Granulomatous lesions were observed in 35 (29.16% cases) which is in accordance with a study done by Mohan et al.[9] Leprosy was observed in 23 patients with male predominance, which is in concordance with the study of Gill et al.[10]

CONCLUSION

Papulonodular lesions of skin were diagnosed well clinically and better correlated with histopathological examination. Clinically, most of the infections were diagnosed and confirmed by histopathology and correlation was 100%. In leprosy, clinico-pathological correlation was 98% and in cutaneous tuberculosis, actinomycosis and vesicobullous disorders the clinico-pathological correlation was 100% on histopathological examination.

CONFLICTS OF INTEREST: None.
SOURCE OF FUNDING: Nil.

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Table-1:- Age wise distribution according to age group.

Age Group (years)	No of patients	Males	Females
Less than 10	9	5	4
11-20	25	13	12
21-30	35	20	15
31- 40	12	7	5
41 – 50	13	7	6
51 – 60	10	6	4
More then 60	16	9	7
Total	120	67	53

Table-2:- Distribution of skin lesions on the basis of histopathological diagnosis of patients.

Skin Lesions	No of patients	Percentage (%)
Non specific dermatitis	25	20.8
Psoriasiform dermatitis	20	16.6
Interface Dermatitis with lichenoid interface lesion	9	7.5
Interface Dermatitis with vacuolar interface lesion	8	6.6
Spongiotic Dermatitis	8	6.6
Granulomatous Lesions	35	29.16
Vesicobullous Lesions	5	4.16
Connective Tissue Diseases	2	1.6
Pigmentary Disorder	2	1.6
Benign Tumors	3	2.5
Malignant Tumors	2	1.6
Vasculitis	1	0.8
Total	**120**	**100**