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Original Research

Histopathological analysis of skin lesions

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ABSTRACT:
Background: Various lesions afflicting the skin range from non-specific dermatoses and inflammatory diseases to neoplastic changes of various components of the skin. The present study was conducted to assess histopathological analysis of skin lesions in adult population. **Materials & Methods:** 46 patients of skin lesions of both genders were included. The biopsies taken were fixed in 10% formalin and then processed. Four microns thick sections were taken and stained with Haematoxylin and Eosin stain (H&E). **Results:** Out of 46 patients, males were 26 and females were 20. Lesions were non-neoplastic in 28, neoplastic in 14 and inconclusive in 4 cases. Non-neoplastic lesions were spongiotic dermatitis in 3, lichen planus in 5, erythema Dyschromicum perstans in 3, Psoriasis in 6, leprosy in 6, urticaria in 3, tuberculosis in 2 and subepidermal bullous disease in 2. Neoplastic skin lesions were squamous cell carcinoma in 2, basal cell carcinoma in 4, compound nevus in 3, malignant melanoma in 2, cutaneous lymphoma in 1 and soft tissue tumor in 2 cases. The difference was significant (P< 0.05). **Conclusion:** Common lesions were non-neoplastic lesions were spongiotic dermatitis, lichen planus, erythema Dyschromicum perstans, Psoriasis, leprosy, urticaria, tuberculosis and subepidermal bullous disease. Neoplastic skin lesions were squamous cell carcinoma, basal cell carcinoma, compound nevus, malignant melanoma, cutaneous lymphoma and soft tissue tumor.
Key words: Psoriasis, leprosy, urticaria

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INTRODUCTION

Various lesions afflicting the skin range from non-specific dermatoses and inflammatory diseases to neoplastic changes of various components of the skin.[1]

Cytology and skin biopsy form the basis of differential diagnosis in clinically similar dermatosis, thereby yielding important information to the pathologist and dermatologist.[2] Though cytopathology was an excellent diagnostic tool in routine dermatologic practice studies relating to histopathological and cytological correlation are few.[3] Skin diseases affect all age groups and are much common in developing countries.[4] In the field of dermatology, 2000 different skin diseases are well known. The pattern of skin disease varies from country to country and region to region within the same country.[5] Various factors such as racial, environment and social customs influence skin disease. Skin biopsies are often performed as many of the diseases have clinical overlaps which range from simple acne to serious disorder like toxic epidermal necrolysis and neoplastic condition.[6] The clinically different skin lesions may show similar histologic findings, therefore, a correlation between clinical presentation and history with histopathological findings improves the diagnostic specificity of the skin lesions.[7] The present study was conducted to assess histopathological analysis of skin lesions in adult population.

MATERIALS & METHODS

The present study comprised of 46 patients of skin lesions of both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. All the patients who were subjected to skin biopsy were included. Inadequate skin biopsies and cystic skin lesions were excluded from the study. The biopsies taken were fixed in 10% formalin and then processed.

Four microns thick sections were taken and stained with Haematoxylin and Eosin stain (H&E). Special stains like Ziehl- Neelsen (ZN), Periodic Acid Schiff (PAS) and Fite-Faraco were used whenever required. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 46		
Gender	**Male**	**Female**
Number	26	20

Table I shows that out of 46 patients, males were 26 and females were 20.

Table II Types of skin lesions based on histopathology

Lesions	Number	P value
Non- neoplastic	28	0.05
Neoplastic	14	
Inconclusive	4	

Table II, graph I shows that lesions were non- neoplastic in 28, neoplastic in 14 and inconclusive in 4 cases. The difference was significant (P< 0.05).

Graph I Types of skin lesions based on histopathology

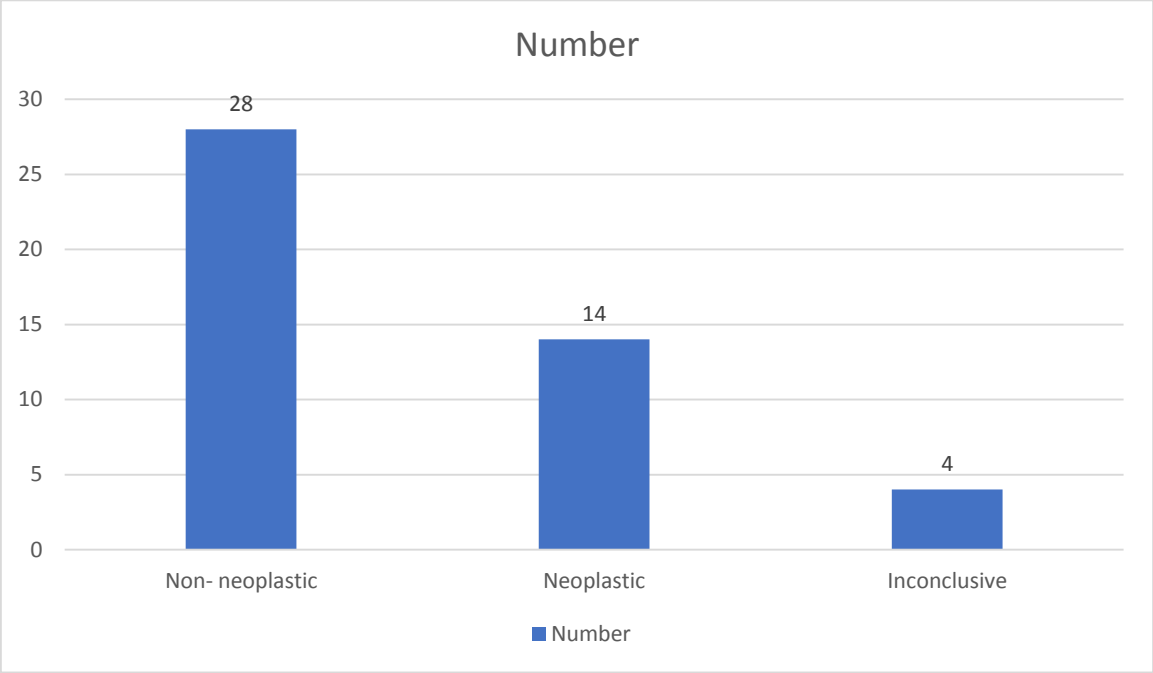

Table III Histopathological patterns of non-neoplastic lesions

Non-neoplastic lesions	Number	P value
Spongiotic dermatitis	3	0.01
Lichen planus	5	
Erythema Dyschromicum perstans	3	
Psoriasis	6	
Leprosy	6	
Urticaria	3	
Tuberculosis	2	
Subepidermal bullous disease	2	

Table III shows that non-neoplastic lesions were spongiotic dermatitis in 3, lichen planus in 5, erythema Dyschromicum perstans in 3, Psoriasis in 6, leprosy in 6, urticaria in 3, tuberculosis in 2 and subepidermal bullous disease in 2. The difference was significant (P< 0.05).

Table IV Neoplastic skin lesions

Neoplastic skin lesions	Number	P value
Squamous cell carcinoma	2	0.01
Basal cell carcinoma	4	
Compound nevus	3	
Malignant melanoma	2	
Cutaneous lymphoma	1	
Soft tissue tumor	2	

Table IV shows that neoplastic skin lesions were squamous cell carcinoma in 2, basal cell carcinoma in 4, compound nevus in 3, malignant melanoma in 2, cutaneous lymphoma in 1 and soft tissue tumor in 2 cases. The difference was significant (P< 0.05).

DISCUSSION

Skin diseases affect all age groups and are much common in developing countries. In the field of dermatology, 2000 different skin diseases are well known.[8] The pattern of skin disease varies from country to country and region to region within the same country. Various factors such as racial, environment and social customs influence skin disease.[9] Skin biopsies are often performed as many of the diseases have clinical overlaps which range from simple acne to serious disorder like toxic epidermal necrolysis and neoplastic condition.[10] The clinically different skin lesions may show similar histologic findings, therefore, a correlation between clinical presentation and history with histopathological findings improves the diagnosis.[11] The present study was conducted to assess histopathological analysis of skin lesions in adult population.

In present study, out of 46 patients, males were 26 and females were 20. Chalise et al[12] the prevalence of different skin lesions and to evaluate their frequency and site of distribution. Among 133 skin biopsies examined, non-infectious vesicobullous and vesicopustular disease were found in 42 (46.6%) cases followed by microbial disease in 22 (24.5%) and non-infectious erythematous papular and squamous disease in 21 (23.4%) cases. Spongiotic dermatitis was the most common vesicobullous disease seen in 26 (28.9%) cases. Leprosy was the commonest microbial disease found in 7 (7.8%) cases. The commonest non-infectious erythematous papular and squamous disease was erythema dyschromicum perstans seen in 7 (7.8%) cases. The commonest neoplastic lesion was keratinocytic tumor seen in 12 (32.5%) cases. The commonest tumor of the skin was intradermal nevus seen in 6 (16.3%) cases. Upper extremities were the most frequently involved site by skin lesions.

We found that lesions were non- neoplastic in 28, neoplastic in 14 and inconclusive in 4 cases. The non-neoplastic lesions were spongiotic dermatitis in 3, lichen planus in 5, erythema Dyschromicum perstans in 3, Psoriasis in 6, leprosy in 6, urticaria in 3, tuberculosis in 2 and subepidermal bullous disease in 2. We found that neoplastic skin lesions were squamous cell carcinoma in 2, basal cell carcinoma in 4, compound nevus in 3, malignant melanoma in 2, cutaneous lymphoma in 1 and soft tissue tumor in 2 cases.

Sabir et al[13] in their study eighty- five patients of skin lesions were included in the study. Skin scraping, Tzanck smears, slit smears and fine needle aspiration cytology (FNAC) were done to obtain material for cytological examination. Excisional biopsy, incisional biopsy and punch biopsy were done to obtain tissue for histopathological examination. The slides were stained with routine stains and special stains as and when required. Of the 85 patients, 45 were males and 40 females. The most common non-neoplastic lesions observed were vesicobullous lesions which comprised of 41 cases followed by neoplastic lesions which consisted of 24 cases, of which six were benign and 18 malignant. Concordant results between cytology and histopathology was seen in majority (91.7%) of lesions studied. Cytology (scrape/imprint/slit smears and FNAC), performed skillfully and with perfection, leads to an early diagnosis in majority of the lesions, as the observed cytomorphological features of various skin lesions were fairly distinctive making cytology a fairly sensitive 'patient compliant' technique for rapid diagnosis of skin lesions.

CONCLUSION

Authors found that common lesions were non-neoplastic lesions were spongiotic dermatitis, lichen planus, erythema Dyschromicum perstans, Psoriasis, leprosy, urticaria, tuberculosis and subepidermal bullous disease. Neoplastic skin lesions were squamous cell carcinoma, basal cell carcinoma, compound nevus, malignant melanoma, cutaneous lymphoma and soft tissue tumor.

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