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PATTERN AND DEMOGRAPHIC FEATURES OF HISTOPATHOLOGICALLY DIAGNOSED NON-NEOPLASTIC LESIONS OF THE SKIN SEEN IN A TERTIARY HOSPITAL IN SOUTH-SOUTH NIGERIA

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ABSTRACT

Non-neoplastic skin lesions are very common in our environment and outnumber skin neoplasms.They have diverse etiologies. However, a good number of them are non-infectious in terms of etiology. Histopathologic evaluation with clinical correlation is the gold standard for diagnosis. The aim of this study is to review histopathologically diagnosed non-neoplastic lesions over a 7 year period (January 2015-December 2021); the objectives includes to determine the age and sex distribution of these lesions and to determine whether there is a correlation between these lesions and age. **Materials and method**: A total of 112 cases were retrieved from the archive. Data were entered into microsoft excel spreadsheet and were analysed with microsoft excel (version 2019). **Result:** Majority of the patients were female (58.9%). The mean age is 35.8 years (SD=17.6). The median age is 36 years. The peak age is 30-39 years. The commonest lesion in both sexes is psoriasis followed by lichen planus and epidermal inclusion cyst in both males and females respectively. There is a positive correlation between lesions and age *($p< 0.05$)*. **Conclusion**: Non-neoplastic lesions are relatively common in our environment especially papulosquamous lesions. Majority of them occur in young people.

KEYWORDS: Non-neoplastic, histopathologic, review, psoriasis, Lichen planus, lesions.

INTRODUCTION

The skin is the largest organ in the body and performs a wide range of functions including barrier to infection, synthesis of vitamin D, thermoregulation etc. It is composed of the epidermis and dermis; below the dermis is the subcutaneous fat.[1]

There are varieties of non-neoplastic skin lesions with diverse etiologies.[2] Non-neoplastic skin disorders are prevalent in our environment and a good number of them are non-infectious in etiology.[3] Despite the availability of myriads of non-neoplastic skin lesions, the clinical presentations are limited.[4]

Histopathology evaluation is usually required for confirmation of these lesion in conjunction with clinical findings.[5]

This paper intends to review histologically diagnosed non-neoplastic lesions of the skin seen over 7-year period in our institution, to determine the age and sex distribution and to determine whether there is a correlation between these lesions and age. This is the first in our institution, hence justifies the study.

MATERIALS AND METHOD

A total of 133 histologically diagnosed non-neoplastic lesions of the skin seen over a 7-year period (January 2015-December 2021) were retrieved from the archives of Anatomic Pathology Department. The cases were reviewed by a team of Pathologists and agreement were reached in all the cases. A total of 21 cases were excluded due to incomplete data. Patients were anonymized for ethical reason. Data were entered into Microsoft Excel spread sheet and analysis was also done using Microsoft Excel (version 2019).

RESULTS

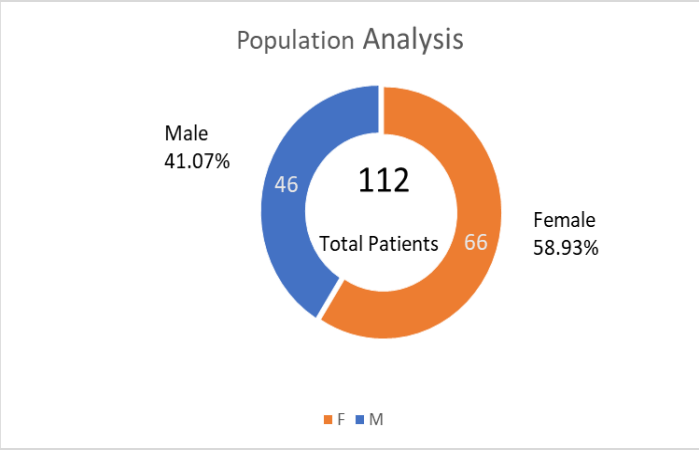


Fig. 1: Showing sex distribution of patients.

Majority of the patients (58.9%) are females (Fig. 1)

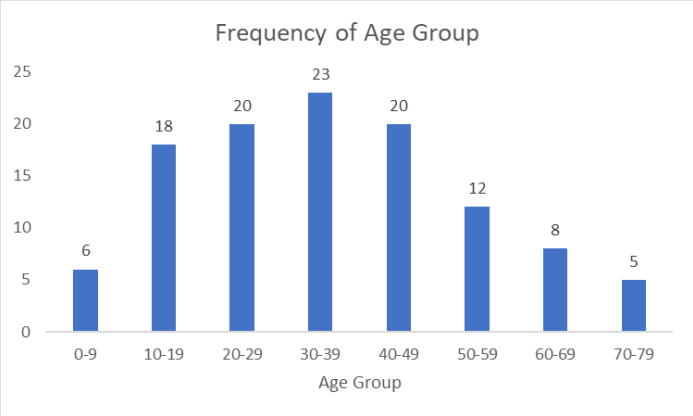


Fig. 2: Showing age distribution of patients.

Majority of the patients are in the age group 30-39. There is a gradual and progressive increase in non-neoplastic lesions from the age group 0-9 years with a peak in the age group 30-39 years followed by a sharp decline. The age groups 20-29 and 40-49 have the same frequency of 20. The age group 70-79 has the least frequency; just marginally below the frequency for the age group 0-9 (Fig. 2).

Table 1: Sex distribution of skin lesions.

Diagnosis	F	M	Grand Total
Psoriasis	12	5	17
Epidermal inclusion cyst	8	4	12
Dermatitis	4	4	8
Chronic non-specific dermatitis	5	2	7
Fibroepithelial polyp	2	5	7
Lichen planus	0	6	6
Discoid lupus erythematosus	3	2	5
Keloid	4	1	5
Panniculitis	3	0	3
Mycosis	1	2	3
Urticaria	3	0	3
Lichenoid dermatitis	0	3	3
Xanthoma	1	1	2
Necrolytic acral erythema	2	0	2
Seborrhoeic keratosis	2	0	2
Chronic granulomatous non-necrotizing lesion	2	0	2
Pityriasis lichenoidis chronica	2	0	2

Corn	0	2	2
Sycosis cruris	1	1	2
Pigmented dermatosis	0	1	1
Dermatitis hepertiformis	0	1	1
Pityriasis rosea	0	1	1
Psoriasiform dermatitis	1	0	1
Erythema multiforme	0	1	1
Condyloma acuminata	0	1	1
Fox-Fordyce disease	1	0	1
Hypertrophic scar	1	0	1
Pseudoepitheliomatous hyperplasia	1	0	1
Epidermodysplasia verruciformis	0	1	1
Fixed drug eruption	1	0	1
Pyoderma gangrenosum	1	0	1
Toxic epidermal necrolysis	1	0	1
Erythroderma	1	0	1
Morphea	0	1	1
Endometriosis	1	0	1
Lymphoedema	0	1	1
Bullous pemphigoid	1	0	1
Keratoderma	1	0	1
Grand Total	**66**	**46**	**112**

The commonest non-neoplastic lesion in both males and females is lichen planus and psoriasis respectively, This is closely followed by psoriasis/fibroepithelial polyp and epidermal inclusion cyst in males and females respectively.

Table 2: (age distribution of diagnosis).

Diagnosis	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	Grand Total
Psoriasis	0	5	2	3	3	2	1	1	17
Epidermal inclusion cyst	2	3	1	2	3	1	0	0	12
Dermatitis	1	1	1	3	0	1	1	0	8
Chronic non-specific dermatitis	1	2	2	1	1	0	0	0	7
Fibroepithelial polyp	1	0	1	3	1	1	0	0	7
Lichen planus	0	0	0	1	3	1	1	0	6
Discoid lupus erythematosus	0	0	0	3	2	0	0	0	5
Keloid	0	1	2	1	1	0	0	0	5
Panniculitis	0	0	1	1	0	0	0	1	3
Mycosis	0	0	1	0	0	2	0	0	3
Urticaria	0	0	0	0	3	0	0	0	3
Lichenoid dermatitis	0	0	1	0	1	1	0	0	3
Xanthoma	0	2	0	0	0	0	0	0	2
Necrolytic acral erythema	0	0	2	0	0	0	0	0	2
Seborrhoeic keratosis	0	0	1	0	0	0	1	0	2
Chronic granulomatous non-necrotizing lesion	0	0	1	0	0	1	0	0	2
Pityriasis lichenoidis chronica	0	1	0	0	0	1	0	0	2
Corn	0	1	0	1	0	0	0	0	2
Sycosis cruris	0	0	0	1	1	0	0	0	2
Pigmented dermatosis	0	0	0	0	0	0	0	1	1
Dermatitis hepertiformis	1	0	0	0	0	0	0	0	1
Pityriasis rosea	0	0	1	0	0	0	0	0	1
Psoriasiform dermatitis	0	0	0	0	0	1	0	0	1
Erythema multiforme	0	0	1	0	0	0	0	0	1
Condyloma acuminata	0	0	0	1	0	0	0	0	1
Fox-fordyce disease	0	1	0	0	0	0	0	0	1
Hypertrophic scar	0	0	0	0	0	0	1	0	1

Pseudoepitheliomatous hyperplasia	0	0	0	0	1	0	0	0	1
Epidermodysplasia verruciformis	0	1	0	0	0	0	0	0	1
Fixed drug eruption	0	0	0	1	0	0	0	0	1
Pyoderma gangrenosum	0	0	0	0	0	0	1	0	1
Toxic epidermal necrolysis	0	0	0	0	0	0	0	1	1
Erythroderma	0	0	0	0	0	0	1	0	1
Morphea	0	0	1	0	0	0	0	0	1
Endometriosis	0	0	1	0	0	0	0	0	1
Lymphoedema	0	0	0	0	0	0	1	0	1
Bullous pemphigoid	0	0	0	0	0	0	0	1	1
Keratoderma	0	0	0	1	0	0	0	0	1
Grand Total	**6**	**18**	**20**	**23**	**20**	**12**	**8**	**5**	**112**

Most cases of psoriasis, epidermal inclusion cyst, and dermatitis occur in the young age group 10-39 years (TABLE 2).

Table 3: (desscriptive statistics).

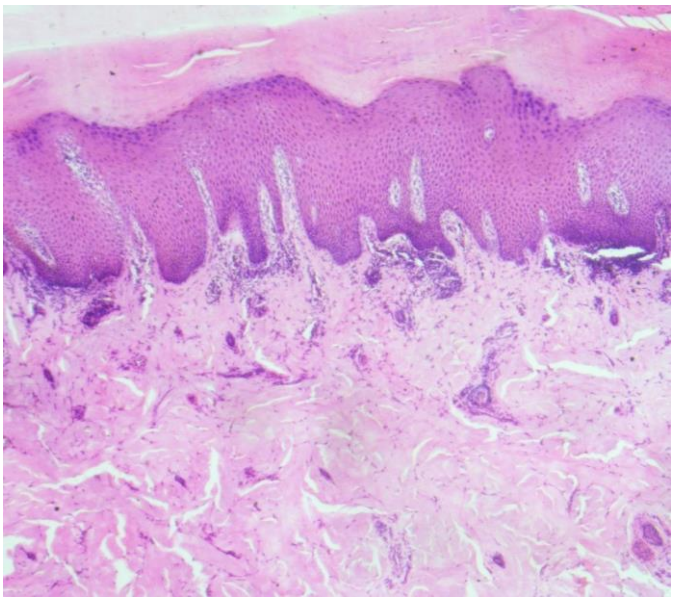
	VALUES
MEAN	35.78571429
MEDIAN	36
MODE	51
S.D	17.62882612
MIN	4
MAX	79

The mean age is 35.8 years (SD =17.6) whereas the median age is 36 years.

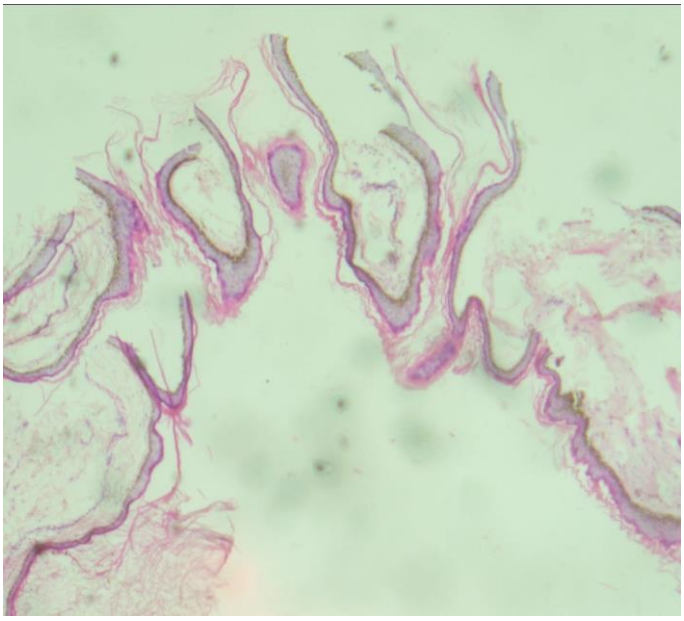
Table 4: (chi-squared test).

	Value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	314.333[a]	252	.005
Likelihood Ratio	203.615	252	.989
Linear-by-Linear Association	7.417	1	.006
N of Valid Cases	113		

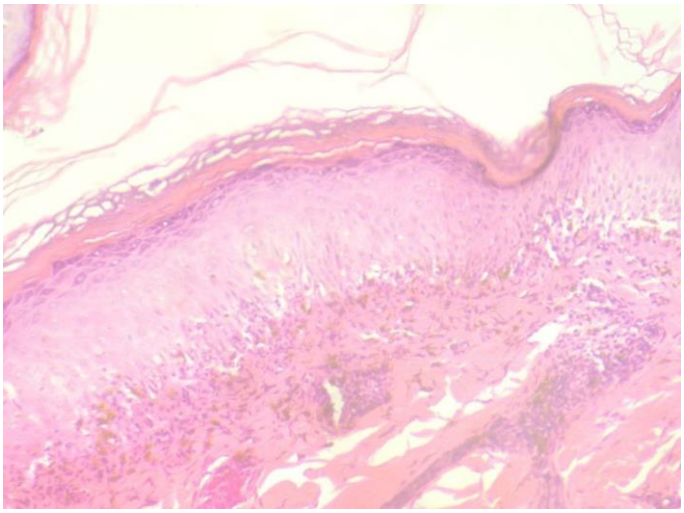
The results from the table above showing the test statistic of the chi-square Test, indicates that there was a significant association between the non neoplastic lesions and the age of patients at $p < 0.05$, hence we accept the alternative hypothesis and reject the null hypothesis, that there was significant association between non neoplastic lesions and age of patients.



Photomicrograph of psoriasis (40x magnification)



Photomicrograph of epidermal inclusion cyst (40x magnification)



Photomicrograph of lichen planus (40x magnification)

DISCUSSION

Majority of the patients were females (58.9%) which is similar to the work done in Nnewi, Benin, and Ibadan (*Omenai et al, Ndukwe et al, Ogun et al).*[3,6,7]This is contrary to studies done in Gujarat, Moinabad, Andhra Pradesh, Utta Pradesh, Mumbai and Ahmedabad (*Nishal et al, Sreedhar et al, Kadiri et al, Mittal et al, Kall et al, Italiya et al*).[8,9,10,11,12,13] which observed male predominance. Our findings are in keeping with local studies and reflects skin diseases pattern in our environment. The peak age in our study is 30-39 years. This is similar to studies done in Nnewi, Gujarat, Andhra Pradesh, and Mumbai (*Ndukwe et al, Nishal et al, Kadiri et al, Kall et al*).[6,8,1012] The mean age in our study is 35.8 years. This is similar to studies in Nnewi, Benin, Ibadan *(Omenai et al, Ndukwe et al, Ogun et al.*[3,6,7] The predominant lesion in this study is papulosquamous (psoriasis and lichen planus). This is similar to work done in Benin, and Ahmedabad (*Omenai et al, Italiya et al*).[3,13] There is a positive correlation between age and these lesion.

CONCLUSION

Skin diseases are relatively common in our environment and are currently under reported. A good number of them are treated without a histopathologic diagnosis as reflected in the small data seen in this study.

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