

Original Research Article

Pattern of skin diseases seen in the dermatology clinic of Rivers State University Teaching Hospital, Port Harcourt, Nigeria

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ABSTRACT

Background: Skin diseases are a source of significant health concern worldwide. Understanding its epidemiology is important for effective healthcare planning. In our hospital, this study is the first of its kind. This study examines the pattern and trends of skin diseases as seen in RSUTH.

Methods: Medical records of patients seen in the dermatology clinic of RSUTH between August 2020 and August 2021 were retrieved, recorded and analyzed with SPSS version 27.

Results: The total number of patients seen during this period was 294. However, 4 were excluded due to insufficient data leaving 290 persons. Of these, 189 were females, while 101 were males. Age range is between 6 months and 88 years Mean age is 31.6692 ± 16.87406 . Commonest group of skin disorders is infectious skin diseases, commonest diagnosis is Dermatophytosis followed by Acne vulgaris. The least diagnosed disorders are nail disorders and autoimmune disorders.

Conclusions: A wide variety of skin diseases were seen in the subjects during the period of study. Dermatophytosis was the commonest skin disease seen while nail disorders was the least prevalent.

Keywords: Pattern, Skin diseases, Dermatology, Port Harcourt, Nigeria

INTRODUCTION

The burden of skin diseases in Nigeria is significant with various studies highlighting the prevalence and impact of various skin disease on the populace. The prevalence of skin diseases varies across the different regions of the country as well as the different age groups.¹⁻⁶ Various factors contribute to the burden of skin diseases and this include genetics, climate, hygiene, nutrition, stress etc.

Infectious skin diseases are the commonest type of skin disorder in Nigeria and this may be largely attributable to the hot, humid climate prevalent in the country which favours the growth and multiplication of micro-organisms.^{7,8} Some of the negative impact of skin diseases include social stigma, financial burden and emotional distress among others. To address this negative

impact, it is necessary to create awareness, improve healthcare delivery and make it affordable to the general population as well as improving on training of health care professionals in dermatology. The main objective of this study is to identify the common skin diseases prevalent in the community and this will help prioritize healthcare resources in order to develop effective strategies to promote skin health.

METHODS

Study place

This study was carried out in the dermatology out-patient clinic of the Rivers State University Teaching Hospital, Port-Harcourt, Nigeria.

It is a clinic-based retrospective study. 294 consecutive patients seen between August 2020 and August 2021 were recruited into the study.

Inclusion criteria

The inclusion criteria are all the patients that visited the clinic during the period of study and all the patients that has complete data in their medical records.

Exclusion criteria

Exclusion criteria is any patient with incomplete or missing data in their records.

Statistical analysis

The patients' medical records were retrieved and entered into Microsoft excel spreadsheet. The records obtained include, biodata, symptoms, clinical examination findings, diagnosis, investigations and results. Thereafter, the data was analysed with the statistical package for social sciences SPSS version 27. Results of relevant investigations which were conducted, where necessary, to confirm the diagnosis, were also retrieved and recorded.

RESULTS

A total of 294 patients participated in this study. However, the data of 4 patients were incomplete hence

they were excluded from collation of the results. There were 101 males and 189 females. Male to female ratio is 1:1.87. The ages of the patients ranged from 6 months to 88 years. The mean age of the patients is 31.6692 ± 16.87406 . 237 Patients were adults while 53 were children (i.e., below the age of 18 years). All of the patients are black indigenous Nigerians residing in Portharcourt city and its suburbs. 165 (56.89%) are employed, 16 (5.51%) are not employed and 109 (37.58%) are economically inactive (i.e. children, students, retirees). See table 1 below.

Thirty-three patients presented with multiple skin pathologies making a total of 323 dermatological diagnoses. Infectious dermatosis was the commonest group of skin disorders seen 102 (31.57%), followed by follicular diseases (11.45%) and tumours and genetic skin diseases (10.52%). Nail disorders are the least common group of disorders (0.61%) seen followed by autoimmune (1.23%) and disorders of keratinization (1.85) Table 2. Of the infectious dermatosis, the commonest is dermatophytosis (27.45) followed by pityriasis versicolor (16.66).

Skin diseases classified miscellaneous include, post herpetic neuralgia, peripheral neuropathy, drug eruptions, ecchymosis, acrodermatitis enteropathica, photodermatitis, pyoderma gangrenosum, erythema nodosum, focal linear elastosis, miliaria, xerosis, xerosis and necrolytic acral erythema. These make up 4.95% of dermatological diagnosis.

Table 1: Demographic data of the patients.

Variable	Number	%
Age (in years)		
<18	53	18.27
>18	237	81.72
Sex		
Male	101	34.82
Female	189	65.17
Occupation		
Employed	165	56.89
Unemployed	16	5.51
Economically inactive	109	37.58
Nationality		
Nigerian	290	100
Non-Nigerian	0	0

Table 2: Frequency of the various groups of skin diseases.

S. no.	Diagnosis	Frequency	%
1	Infections	102	31.57
2	Follicular disorders	37	11.45
3	Tumours and genetic disorders	34	10.52
4	Papulosquamous	27	8.35
5	Eczemas	27	8.35
6	Pruritus	22	6.81

Continued.

S. no.	Diagnosis	Frequency	%
7	Pigmentary disorders	20	6.19
8	Miscellaneous	16	4.95
9	Urticaria and angioedema	10	3.09
10	Bullous dermatosis	8	2.47
11	Hair disorders	8	2.47
12	Keratinization disorders	6	1.85
13	Autoimmune disorders	4	1.23
14	Nail disorders	2	0.61
15	Total	323	100

Table 3: Frequency of infectious dermatosis.

S. no.	Diagnosis	Frequency	%
1	Dermatophytosis	28	27.45
2	Pityriasis versicolor	17	16.66
3	Warts	17	16.66
4	Scabies	14	13.72
5	Candidiasis	11	10.78
6	Furunculosis	3	2.94
7	Onychomycosis/Chronic paronychia	3	2.94
8	Cutaneous larva migrans	1	0.98
9	Herpes Simplex	1	0.98
10	Subcutaneous mycosis	1	0.98
11	Leprosy	1	0.98
12	Tuberculosis verrucosa cutis	1	0.98
13	<i>Herpes zoster</i>	1	0.98
14	<i>Varicella zoster</i>	1	0.98
15	Molluscum contagiosum	1	0.98
16	Epidermodysplasia verruciformis	1	0.98
17	Total	102	100

Table 4: Frequency of follicular diseases.

S. no.	Diagnosis	Frequency	%
1	Acne vulgaris and acneiform eruptions	24	64.86
2	<i>Pityrosporum folliculitis</i>	4	10.81
3	<i>Pseudofolliculitis barbae</i>	3	8.10
4	<i>Acne keloidalis nuchae</i>	2	5.40
5	Sycosis cruris	2	5.40
6	Folliculitis Decalvans	1	2.70
7	Hidradenitis Suppurativa	1	2.70
8	Total	37	100

Table 5: Frequency of skin tumors and genetic Dermatoses.

S. no.	Diagnosis	Frequency	%
1	Keloids	9	26.47
2	Seborrheic keratosis	4	11.76
3	Kaposi sarcoma	4	11.76
4	Steatocystoma multiplex	2	5.88
5	Eccrine hydrocystoma	2	5.88
6	Syringoma	2	5.88
7	Dermatofibroma	1	2.94
8	Basal cell carcinoma	1	2.94
9	Sebaceous cyst	1	2.94

Continued.

S. no.	Diagnosis	Frequency	%
10	Squamous cell carcinoma	1	2.94
11	Keratoacanthoma	1	2.94
12	Lymphangioma circumscriptum	1	2.94
13	Pyogenic granuloma	1	2.94
14	Dermatosis papulose nigra	1	2.94
15	Neurofibromatosis	1	2.94
16	Port wine stain	1	2.94
17	Mycosis fungoides	1	2.94
18	Total	34	100

Table 6: Frequency of papulosquamous disorders.

S. no.	Diagnosis	Frequency	%
1	Psoriasis	12	44.44
2	Lichen planus and lichenoid eruptions	7	25.92
3	<i>Pityriasis rosea</i>	4	14.81
4	Seborrheic dermatitis	2	7.40
5	Darier disease	1	3.70
6	Pityriasis lichenoides chronica	1	3.70
7	Total	27	100

Table 7: Frequency of Eczematous diseases.

S. no.	Diagnosis	Frequency	%
1	Atopic dermatitis	10	37.03
2	Contact dermatitis	6	22.22
3	Lichen simplex chronicus	3	11.11
4	Photodermatitis	3	11.11
5	Hand eczema	1	3.70
6	Pompholyx	1	3.70
7	Lip smackers dermatitis	1	3.70
8	Nummular eczema	1	3.70
9	Prurigo nodularis	1	3.70
10	Total	27	100

Table 8: Top ten commonest skin diseases seen in the study.

S. no.	Diagnosis	Frequency	%
1	Dermatophytosis	28	8.66
2	Acne vulgaris and acneiform eruptions	24	7.43
3	Pityriasis versicolor	17	5.26
4	Warts	17	5.26
5	Scabies	14	4.33
6	Psoriasis	12	3.71
7	Candidiasis	11	3.40
8	Atopic dermatitis	10	3.09
9	Vitiligo	10	3.09
10	Keloids	9	2.78
11	Total	112	34.67

DISCUSSION

The commonest group of skin disorders seen in this study are infectious skin diseases (31.57%), this is not surprising given the fact that the tropical climate in the

region under study is hot and humid coupled with over-crowding and poor living conditions prevalent in the city. All these factors favor the growth and proliferation of micro-organisms. This is similar to other studied done elsewhere in Nigeria that also reported infectious

disorders being the commonest skin disorders.⁷⁻¹⁰ A similar trend has been reported in other parts of Sub-Saharan Africa as well.¹¹⁻¹³ However, a few other studies done in the subregion revealed a higher prevalence of non-infectious dermatosis.^{1,14,15} This may likely be attributed to urbanization, Westernization of diet, stress, aging population and increased access to Health care among other reasons. The country has undergone rapid industrialization especially in the oil industry and this has led to the increase in exposure to various chemicals that may cause various types of dermatitis, especially eczematous dermatoses.

Dermatophytosis is the commonest infectious skin disorder seen in the study (and also the commonest skin disease). This is followed by pityriasis versicolor. This is comparable to other studies done elsewhere in the country.¹⁶⁻¹⁸ This high prevalence is likely due to the high temperature and humidity creating a conducive environment for fungal growth, poor hygiene, cultural practices of sharing items and walking barefooted etc.

Warts and scabies were also common infectious disorders seen in this study and constitute 16.66% and 13.72% of all infectious skin disorders respectively. The second most common group of skin disorders follicular disorders of which Acne vulgaris and other acneiform eruptions constitute a large percentage. This is not surprising since acne vulgaris is one of the commonest skin eruptions especially in the young.¹⁹ Several studies have reported a similar high proportion of acne vulgaris in the country.^{17,20,21}

The third most common group of skin disorders are skin tumours and genetic dermatosis. Keloids make up a large percentage of this group. 8.8% of keloid cases seen in this study were female. This is similar to a study done elsewhere in the country that reported a higher prevalence among females.²² This may be due to hormonal factors especially fluctuations in estrogen and progesterone levels during the menstrual cycle, pregnancy and Menopause which might affect collagen production and keloid formation. Other factors include, genetic predisposition- females are more likely to inherit genetic traits that predispose them to keloid formation.

Ear piercing and body modification is another possible reason since females are more likely to undergo ear piercing and other forms of body modification, which can increase the risk of keloid formation. The high proportion of keloids compared to other skin may also be attributable to the fact that keloids have relatively high prevalence in black adults; in addition to genetic factors and the hot humid tropical climate that tends to promote inflammation and collagen production. Most of the subjects in this study were adults 81.7%. The least group of skin disorders seen in this study are nail disorders, autoimmune disorders and disorders of keratinization. This is comparable to other studies.²³⁻²⁶ The rarity of nail disorders may partly be attributable to the reluctance to

seek medical care because it may be seen as a minor ailment. Autoimmune diseases are less common in Africa hence their rarity in this study. Disorders of keratinization were also relatively rare in this study. Factors that may be responsible for this include: Environmental factors- Nigeria's tropical climate, with high temperatures and humidity, might help to keep the skin hydrated and reduce the risk of dry skin conditions like ichthyosis, also keratinization disorders might be underreported or misdiagnosed in Nigeria, leading to an apparent lower prevalence.

A major limitation in this study is the fact that many patients with skin disease referred to the clinic do not turn up and so these figures may be lower than what is expected. Also, the period of study is relatively short and therefore may not accurately reflect long-term trends.

CONCLUSION

Infectious dermatosis is the commonest group of skin diseases seen in the study of which dermatophytosis constituted the largest percentage. This is followed by Acne vulgaris and acneiform eruptions. Autoimmune skin diseases and nail disorders were rare. In view of the high prevalence of infectious dermatosis, community-based interventions such as public awareness campaigns and school bases education programmes are recommended for effective prevention.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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