

Full Length Research Paper

The pattern of skin disorders in a Nigerian tertiary hospital

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We analyzed the data of patients with skin disorders attending the Dermatology Clinic of the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Nigeria with the aim of identifying common skin disorders in our community. All patients attending the Dermatology Clinic of the UPTH, Nigeria from January 2005 to December 2008 were included in this retrospective analysis. The medical records of the patients (dermographics, history, physical examination and laboratory investigations) were analysed to ascertain the diagnosis. All patients were evaluated by qualified dermatologists. A total of 1,333 patients attended the Dermatology Clinic of UPTH. There were more females 812 (60.9%) than males 521 (39.1%). More than three quarter of the cases were aged above 16 years while less than a quarter were children below 16 years. Infectious diseases 317 (23.8%), mostly fungal 207 (15.5%) were the most common cause for attendance, followed by dermatitis 207 (15.5%) and pigmentary disorders 98 (7.4%). Preventable skin diseases are common in Port Harcourt, Nigeria. Health education is therefore necessary to curb their spread, reduce the associated morbidity, and improve the health status of the population. Effort should be made to train health workers in the diagnosis and treatment of the more common dermatologic conditions.

Key words: Pattern, skin disorders, infectious diseases, Port Harcourt, Nigeria.

INTRODUCTION

Skin diseases and their complications are a significant burden on the health system of many nations. The World Health Organization's report on the global burden of disease indicated that skin diseases were associated with mortality rates of 20,000 in Sub-Saharan Africa in 2001 (World Health Organization. 2005). In Africa, particularly Nigeria, nutrition is inadequate, environmental sanitation is poor with inadequate portable water supply, all contributing to the burden of skin disease and therefore increasing this figure (Mahé et al., 1998; Doe et al., 2001; Adebola, 2004).

Distribution of skin diseases differs from country to country and even city to city (Mahé et al., 1998; Doe et al., 2001; Adebola, 2004; Hartshorne, 2003). There are

several reports (Adebola, 2004; Altraide et al., 2008; Okoro, 1973) on the pattern of skin diseases in different parts of Nigeria with some variations. Some factors like genetic, environment, race, age, occupation, nutrition and habits can influence the pattern of skin diseases (Parthasaradhi and Gufai, 2004). Skin disorders in the tropics are preventable (Doe et al., 2001). Successful management of skin diseases requires accurate diagnosis and prompt treatment. Misdiagnosis will result in wrong treatment and this can subsequently lead to complications such as renal damage.

By undertaking a retrospective survey of skin diseases in this environment, this study hopes to identify the common skin diseases affecting various age groups in our locality and provide accurate baseline data for planning intervention. This will go a long way to improving case management and prevention of skin disorders as applicable to various age groups.

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Table 1. Distribution of skin diseases by age and gender.

Skin disease	Gender		Age (Years)		Total
	Male	Female	<16	>16	
1. Infections					
a. Parasitic	8	8	9	7	16
b. Fungal	84	123	27	180	207
c. Bacterial	12	16	8	20	28
d. Viral	25	41	13	53	66
2. Dermatitis	80	127	57	150	207
3. Drug eruption	16	21	12	65	77
4. Psoriasis	14	13	7	20	27
5. Pityriasis	11	37	12	36	48
6. Lichen planus	16	45	7	54	61
7. Pruritus/urticaria	33	54	9	78	87
8. Acneform eruptions	27	34	1	60	61
9. Sychosis/folliculitis	16	5	-	21	21
10. Disorders of keratinization	9	13	3	19	22
11. Benign tumours	5	13	1	17	18
12. Pigmentary disorders	51	47	10	88	98
13. Papular urticaria	14	35	34	15	49
14. Phymoderma	3	5	6	2	8
15. Bullous diseases	2	2	1	3	4
16. Alopecia	5	18	3	20	23
17. Connective tissue disorder	8	30	2	36	38
18. Neurocutaneous syndromes	9	7	4	12	16
19. Pruritic papular eruption of HIV	15	16	5	26	31
20. Kaposi sarcoma	2	1	-	3	3
21. Erythroderma	6	19	-	25	25
22. Others	50	42	54	38	92

MATERIALS AND METHOD

A retrospective analysis of all the dermatological patients seen in the Dermatology Clinic of the University of Port Harcourt Teaching Hospital (UPTH) over four year period from January 2005 to December 2008 was carried out. In the UPTH, individuals less than 16 years were regarded as children while those above 16 years are adults. The patients were referred from the Medical, Paediatrics, Surgical and General Out Patient Clinics of UPTH. The Dermatology Clinic also receives referrals from all the medical facilities in Rivers, Bayelsa and all the neighbouring states in the Niger Delta of Nigeria. The UPTH is located in Port Harcourt metropolis, the Capital city of Rivers State of Nigeria with a population of 541 115 (National Population Commission, 2006). Ethical approval was obtained from the Ethical Committee of the UPTH.

Data obtained from the medical records of the patients included age, gender, clinical and laboratory features, diagnosis and treatment. All the patients were seen and examined by dermatologists who confirmed all the diagnoses by clinical, laboratory and sometime by punch biopsy for histology, skin scrapping for mycology, skin snip for microscopy. Skin slit, smear and Ziehl-Nelson stain were also carried out for acid fast bacilli.

The statistical package for social sciences (SPSS) Version 14 was used to enter data and descriptive statistics in the form frequency distribution tables and percentages were used for the analysis.

RESULTS

A total of 1,333 patients attended the Dermatology Clinic of UPTH, Nigeria within the period under review. There were more females 812 (60.9%) than males 521(39.1%). One thousand and forty eight (78.6%) of the cases were aged above 16years while 285 (21.4%) were children below 16 years (Table 1).

Infectious diseases 317 (23.8%) were the most common cause for attendance, followed by dermatitis 207 (15.5%) and pigmentary disorders 98 (7.4%) (Table 1). Subjects above 16 years (n=260) were more affected than those under 16 years (n=57).

Hansen's disease 15 (1.1%) was the most common bacterial skin infection while Tinea vesicolor 72 (5.4%)

Table 2. Distribution of infectious causes of skin disorders by age and gender.

Skin disease	Gender		Age (Years)		Total
	M	F	<16	>16	
1. Parasites					
a. Scabies	5	2	7	-	7
b. Onchodermatitis	3	6	2	7	9
2. Fungal					
a. Tinea capitis	6	2	6	2	8
b. Tinea corporis	22	37	6	53	59
c. Tinea unguium	4	12	1	15	16
d. Tinea cruris	1	4	-	5	5
e. Tinea pedis	14	12	6	20	26
f. Tinea manus	3	3	1	5	6
g. Tinea vesicolor	29	43	6	66	72
h. intertrigo	-	1	-	1	1
i. Candidiasis/paronychia	5	9	1	13	14
3. Bacterial					
a. Furunculosis/carbuncles	2	1	1	2	3
b. Impetigo	3	5	4	4	8
c. Perioritis	1	1	1	1	2
d. Hansens disease	6	9	2	13	15
4. Viral					
a. Measles	1	2	2	1	3
b. Molluscum contagiosum	1	8	7	2	9
c. Verrucae	22	15	4	33	37
d. Genital warts	-	4	-	4	4
e. Herpes zoster	6	7	-	13	13

Table 3. Causes of dermatitis by age and gender.

Skin disease	Gender		Age (Years)		Total
	M	F	<16	>16	
Contact irritant dermatitis	-	2	1	1	2
Contact allergic dermatitis	17	21	5	33	38
Atopic dermatitis	31	49	44	36	80
Pompholyx	3	6	1	8	9
Undetermined type	5	10	1	14	15
Nursing mother dermatitis	-	3	-	3	3
Lichen simplex chronicus	12	18	2	28	30
Hand and foot dermatitis	12	17	5	24	29
Numular dermatitis	-	1	1	-	1

and verruca 37 (2.8%) were the commonest skin disorders due to fungal and viral agents respectively (Table 2).

Atopic dermatitis 80 (60%) was the most frequent dermatitis encountered and commonly seen in children (Table 3). Of the pigmentary disorders vitiligo accounted

for 71(72.4%) of the total cases while others were: post inflammatory 23 (23.5%) and melasma 4 (4.1%). Drug eruption was seen in 77 (5.8%) of cases (Table 1). The drugs incriminated were: sulphadoxine-pyrimethamine (n= 52), co-trimoxazole (n=22), carbamazepine (n=2), phenytoin (n= 1).

DISCUSSION

The study shows that infections were the most frequent skin disorders, accounting for 23.8% of the total, and is followed by dermatitis (15.5%) and pigmentary disorders (7.4%). The prevalence of infectious disorders in this study is lower than reports from other African countries (Doe et al., 2001; Adebola, 2004; Altraide et al., 2008; Souissi et al., 2007). A closer analysis of the infectious diseases shows that fungal diseases were predominant in both children and adults and this pattern is comparable with study from other African countries (Doe et al., 2001; Altraide et al., 2008; Tomb and Nassar, 2000; Hartshorne, 2003). The preponderance of infectious diseases may be explained by overcrowding, poor environmental hygiene and the high humidity of the region.

Among parasitic infections, onchocerciasis was the commonest and mainly found in adults in this study. It accounted for 0.7% of all the cases seen and is lower than a prevalence of 35.4% obtained from a community based study (Adeyeba and Adegoke, 2002) in Nigeria. Affected individuals have psycho-social problems as demonstrated by a Nigerian study (Okoye and Onwuliri, 2001). Scabies caused by the mite *Sarcoptes scabiei* variety *hominis* and transmitted by person-to-person contact was very low and mostly seen in children in this study. Low prevalence of scabies in our study may result from the fact that most of such cases are treated in the paediatric out patient clinics by the paediatricians.

Atopic dermatitis was the commonest dermatitis in this study accounting for 80 (6.0%) of patients seen. It was commoner in children (n=44/80) than adults (n=36/80) in this study. Our figure is however lower than a study (Nnoruka, 2001) from south eastern Nigerian which reported a prevalence of 8.5%. Contact allergic dermatitis was the next commonest dermatitis, though not commonly found in children (n=3/38), in our study. Oil exploratory activities in this region may explain the high frequency of allergic contact dermatitis. Shenefelt (1996) reports contact dermatitis as the first (30%) among the types of dermatitis seen in a Mediterranean island of Crete, Greece.

Pigmentary disorders were the third commonest skin disorder and accounted for 7.4% of all cases, among which vitiligo was most frequent. Pigmentary disorders are important because they pose a lot of psychosocial stigma and affects quality of life especially in adults.

Urticaria is a skin disease with significant morbidity and has a wide spectrum of causes. In this study, urticaria affected 6.5% of the subjects, mainly adults and thus will contribute to job time losses with significant reduction in productivity. The patients attending our hospital suffered from either acute urticaria or exacerbations of chronic

urticaria.

Drug eruptions accounted for 5.8% of skin disorders in this study and are higher than the figure from other studies within Africa (Doe et al., 2001; Tomb and Nassar, 2000). Drugs commonly incriminated are sulphonamides in anti malarial and antibiotics, anticonvulsant like phenytoin and carbamazepine. This can be explained by high prevalence of over the counter drugs use, outright drug abuses and poor drug use policy in Nigeria.

A wide range of skin conditions may develop as a consequence of HIV infection. In this study pruritic papular eruption of HIV was the commonest skin-related complication of HIV and accounted for 2.3% of skin diseases in our centre. This finding is similar to previous report in Nigeria (Yahya, 2007). It presents with fiercely itchy multiple papules on the face and upper trunk. Recognizing this condition is important, because it is seen only in HIV/AIDS cases and is often mistakenly treated as acne. Kaposi's sarcoma is another skin disorders in HIV infected patients. It accounted for 0.2% of the skin diseases seen in our dermatology clinic. This figure is similar to a previous study recently conducted in our department (Altraide et al., 2008).

Acne is a common skin disorder that affects susceptible pilosebaceous follicles of mainly teenagers and young adults (Onayemi et al., 2005). In this study, acne was found in 4.6% of all cases. It is generally common in females but more severe in males, with clinical evidence indicating a familial trait (Onayemi et al., 2005). Psychologic and emotional stress may accompany this skin condition especially in females (Vahid et al., 2009). Racial and cultural differences may explain the low prevalence (0.2%) of skin malignancies in this study compared to data from Western countries (Vahid et al., 2009). Most of our patients have dark complexions, which provide efficient protection from sunlight.

Conclusion

This review provides useful information about the prevalence of dermatological disorders in patients seeking medical advice at specialized dermatologic clinics and will contribute to proper health care planning and the establishment of essential drug list for dermatological use in Nigeria. Infections especially fungal infections are responsible for most of the skin disorders in Nigeria.

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