

THE PREVALENCE AND PATTERN OF DERMATOLOGICAL DISORDERS AMONG ELDERLY PATIENTS IN A TERTIARY HOSPITAL IN SOUTH- SOUTH NIGERIA

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ABSTRACT

BACKGROUND: In the world especially in the developing countries like Nigeria, the geriatric population is expected to increase. This means the disorders of the skin in the elderly will assume greater importance. However few statistical studies have been carried about skin diseases among those who are elderly.

AIM: To describe the prevalence and pattern of dermatological lesions among elderly attending dermatology clinic in a tertiary health institution

MATERIALS AND METHODS: It was a retrospective cross sectional study which was carried out in patients above 60 years who visited the dermatology outpatient clinic from 2006-2015 using data extracted from patients' records from a clinical register.

RESULTS: The prevalence of elderly patients with skin disorders seen at the dermatology outpatient clinic was 3.1% over the ten year period. The three most common conditions were eczema, fungal infections and vitiligo. The mean age of attendance was 67.1+/-7.5.

CONCLUSION: Eczema is an important dermatological manifestation among the elderly.

KEYWORDS: Elderly, Dermatology, Disorder Prevalence, Pattern

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INTRODUCTION

Though there is no standardized age to term the elderly, the United Nations agreed cut off for Africa and other developing nations is sixty years and above¹. Thus the population that can be described as elderly is increasing with improvement in quality of living, thus life expectancy due to better earnings, health care facilities and increased health awareness that have taken place over the years, people are now living into their sixties and beyond.²

In 2050 the world population of people aged 60 and over is expected to be thrice its size in 2000, going from 600 million to 2 billion. Most of this increase will occur in less developed countries like Nigeria.⁴ This implies that worldwide that physicians and other healthcare workers would be faced with a lot of geriatric hospital visits including visits for skin complains so there is an urgent need to pay close attention to the health care

services which should be tailored to the peculiar nature of the elderly in developing countries.

In Nigeria in 2009, 5.0% of the population representing 7.6million people were said to be aged 60 and above this number is projected to increase to 27.7 million by 2050. Nigeria has the largest number of elderly people in Africa and is the thirteenth largest in the world.⁴ Thus the elderly in Nigeria contribute significantly to the proportion of elderly people in the world.

Aging is the method of gradual decrease in the maximum performance and reservation capacity of all organs in the body including the skin. This natural process is further worsened by chronic environmental exposures such as exposure to sunlight or irradiation for diagnostic or therapeutic purpose. Skin aging in other words is a combination of chronologic (intrinsic) and environmental (extrinsic) process.^{5,6}

Changes accompany aging leading to a decline in physiological reserves that increases the risk of disease and means a general reduction of the healing capacity

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of the individual.² The skin ages with progressive atrophy of the blood vessels, deteriorating supportive dermis and disordering of the collagen and elastin fibres.⁷ This changes leave the elderly increasingly susceptible to vascular and skin injuries such as pressure ulcers and skin tears. The immune function of the elderly is also often eroded making way for autoimmune disorders. Thus elderly are likely prone to having skin disorders.

Skin disorders are significant in the elderly. A study in United States (American HANES study) demonstrated that by 70years, about 70% had significant skin conditions and many others had multiple skin problems.⁸

Health promotion and disease prevention can prevent or delay the onset of several diseases. The basis of these public health activities depends on obtaining adequate data.³ Despite the importance of these conditions in the elderly, few published research exist in Nigeria on them.

The aim of this study is to know the prevalence and pattern of skin diseases among elderly patients visiting the dermatology clinic in the University of Port Harcourt Teaching Hospital. This work will contribute to the prevention, early detection and treatment of elderly patients with these conditions.

METHODOLOGY

The study was a retrospective cross-sectional study. Study population were patients above 60 years old presenting to Dermatology Clinic of Internal Medicine Department of the University of Port Harcourt Teaching Hospital over a ten year period (2006-2015) for the first time with dermatological complains.

The University of Teaching Hospital is the premier specialist hospital in Rivers State, Nigeria. Its Internal medicine department has Dermatology and Geriatric units respectively with weekly outpatient clinics.

Data on those aged 60 and above was retrieved from new patient register of the Dermatology unit. Information about their age, gender and diagnosis of skin diseases were extracted using a data proforma and was analysed.

The limitations of the study was that predisposing factors such as occupation, area of residence associated systemic disease as well as factors which may affect presentation to the clinic such as level of education couldn't not be ascertained for all patients.

RESULTS

Over a ten year period, those 60 and above had a total of

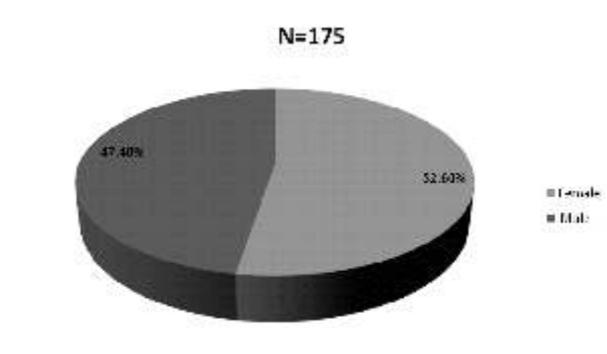
175 patients and 190 diagnoses constituting 3.1% and 3.2% respectively of the total patients and diagnoses.

Table I: Total number of new elderly cases versus the total population within the period 2006-2015

S/no	year	Total no. of elderly males	Total number of males	Total no of elderly females	Total no of females	Total no. of elderly	% of elderly to all (pxts/diag)	Total new pxts /diagnosis
1	2006	8	192	6	276	14/14	3.0/2.9	468/486
2	2007	11	279	7	323	18/20	3.0/3.1	602/654
3	2008	5	238	12	346	17/18	2.9/2.8	584/646
4	2009	10	273	7	339	17/20	2.8/3.0	612/653
5	2010	7	261	7	401	15/15	2.3/2.2	662/670
6	2011	12	351	20	486	32/35	3.8/4.0	837/865
7	2012	4	222	8	276	12/14	2.4/2.6	498/536
8	2013	5	163	2	220	7/8	1.8/1.9	383/423
9	2014	7	164	10	218	17/18	4.5/4.5	382/398
10	2015	11	273	15	318	26/28	4.4/4.4	591/630
Total		80	2416	94	3203	175/190	3.1/3.2	5619/5961

The male: female ratio was 1:1.1.

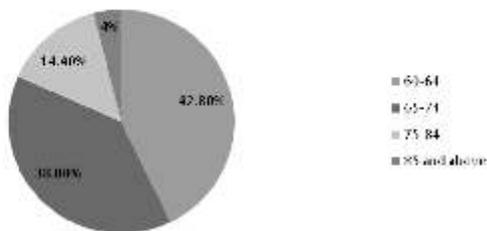
Figure 1: Sex distribution of the Elderly at DOPC, UPTH



Those aged 60-64 had the highest number of persons constituting about 42.8% of the elderly persons. The number of those aged 65 and above were 100(57.1%) of the total population of elderly, with an average number of elderly patients visiting the DOPC as 17.5 and 10 respectively for those aged 60 and above; and those 65 years and above. The mean age of the respondents was 67.1 with standard deviation of 7.5.

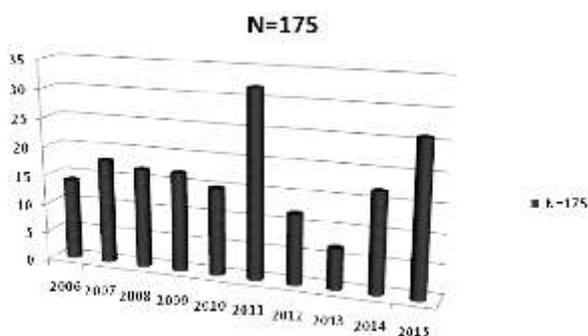
Figure 2: The percentage of distribution of new patients amongst the elderly groups

AGE DISTRIBUTION OF GERIATRIC PATIENTS IN DERMATOLOGY CLINIC



The highest number of elderly cases (32) were seen in the year 2011 constituting 18.3% of all cases seen within the ten year period.

Figure 3: The distribution of the new elderly patients at DOPC, UPTH over the period 2006-2015



The ten commonest diagnoses among the elderly seen in the dermatology out-patient clinic were eczema, superficial fungal infections, vitiligo, fixed drug reactions, urticaria, keloid/ hypertrophic scar, lichen planus, herpes zoster/post neuralgic herpetica, generalized pruritus, and Hansen's disease

Table II: Ten commonest diagnoses amongst the elderly in DOPC in UPTH within 2006-2015

Diagnoses	Total number of new diagnoses in all age groups	Total number of new diagnoses in the elderly	Number of male diagnoses	Number of female diagnoses	Percentage(%) contribution to diagnoses in the elderly	% contribution to diagnoses in all age groups
Eczema	888	39	21	18	20.5	4.4
Superficial fungal infections	701	23	15	8	12.1	3.3
Vitiligo	183	10	6	4	5.2	5.5
Fixed drug reactions	112	7	5	2	3.6	6.3
Urticaria	256	7	2	5	3.6	2.7

Keloids hypertrophic scar	69	6	3	3	3.2	8.7
Lichen planus	164	6	3	3	3.2	3.7
Herpes zoster/Post Neuralgia Herpetica	34	5	2	3	2.6	14.7
Generalized pruritus	49	4	1	3	2.1	8.2
Hansen's disease	51	4	3	1	2.1	7.8
Others		79	22	57	41.6	
		190	83	107	99.8 approx.	100

Eczema which was the major reason of presentation to the clinic contributed 20.5% of the total diagnoses in the elderly. The elderly with eczema constituted about 4.39% of all eczema cases within the period, having seborrhoeic dermatitis as the major clinical diagnosis.

Table III: Comparing the different types of eczema in the elderly and the total population of Eczema diagnoses

S/no	Type of eczema/dermatitis	Total number of elderly cases	% of individual case population	Total case population of different type of eczema
1	Seborrhic dermatitis	10	3.4	290
2	Contact dermatitis (irritant/allergic)	8	4.9	162
3	Exfoliative dermatitis	7	25.9	27
4	Neuradermatitis(Lichen simplex chronicus +prurigo nodularis)	6	16.7	36
5	Other non specified dermatitis	3	7.7	39
6	Atopic/allergic dermatitis	1	0.4	236
7	Pompholyx	1	2.8	36
8	Stasis eczema	1	10.0	10
9	Discoïd/ Nummular Eczema	1	4.8	21
10	Hand and foot dermatitis	1	5.6	18
11	Flexural dermatitis	0	0	13
12	All the different types of eczema	39	4.4	888

Among the fungal infections, Tinea infections were the most occurring constituting 67% of the fungal infections in the elderly. When compared to the general population of new cases with tinea infection the elderly constituted of 3.3% of the total new cases with tinea infection. Tinea corporis was commonest form of presentation.

Table IV: Comparing the cases of fungal infection in the elderly with the total population of fungal infection seen at DOPC, UPTH

S/no	Type of fungal infection	Total new cases in the elderly	% of total case population	Total new cases in the general population
1	Tinea infections	16	3.3	484
2	Pityriasis versicolor	5	3.6	138
3	Candidiasis	1	4.5	22
4	Onychomycosis	1	3.8	26
6	Others	1	3.2	31
		24	3.4	701

Table V: Pattern of Tinea infections in the elderly compared to total population who presented at DOPC, UPTH

S/no	Type of Tinea	Total new cases in the elderly	% of total case population	Total new cases in population
1	Coporis	6	4.2	143
2	Incognito	5	10.2	49
3	Pedis	4	4.7	86
4	Manum	1	2.7	37
5	Capitis	0	0	55
6	Cruris	0	0	56
7	Ungium	0	0	45
8	Faciale	0	0	2
9	Glutei	0	0	10
10	Others	0	0	2
11	All combined	16	3.3	485

Other dermatological manifestations which are generally known to be common in the elderly such as alopecia, bullous pemphigoid, idiopathic guttate hypomelanosis, skin tumours, ulcers and xerosis constituted 1.6%, 0.5%, 1.6%, 2.6%, 1.1% and 1.6% of the elderly diagnoses respectively.

DISCUSSION

Skin conditions are conditions which may hardly cause mortality in patients but can greatly affect the psychosocial well being and quality of life of the elderly.

Studies indicate in Nigeria that more than 40% of the elderly have poor quality of life.⁹ Dermatological lesions can be used as an index to assess the health of an individual including the elderly.² Caring for skin manifestations in the elderly presents a unique but important challenge.¹⁰ Health care providers need to be able to have statistical backing for identifying correctly the skin diseases associated with aged patients.

A total of 175 elderly patients were seen in dermatology

clinic representing 3.1% of the new patients. This is a small fraction may not be a true reflection of the contribution of the elderly population to the occurrence of skin diseases but rather that due to reduced earning power and lack of social welfare as the elderly may not be able to access healthcare. This result is similar to that of a study done in India where 4.7% of patients with skin conditions were elderly.¹¹

In this study the fractions of elderly dermatological cases increased from 2.9% in 2006 to 4.4% in 2015. This could be due to the increasing percentage of the elderly in the population, increase of dermatological conditions in the elderly or more of them accessing care at the dermatology clinic, increased health seeking behaviour by the elderly and the awareness of the availability of dermatologists within the area. It however means that elderly patients are becoming an increasing subject for dermatologists. It means more attention needs to be paid to skin diseases in the elderly.

The total of 175 elderly patients had about 42.8% of them were within the age group 60-64years, 65-74year old contributed 38.8%, 75-84year old constituted 14.4%. The smallest fraction was the age range 85 years and above at 4%. This is not surprising due to the young demographic population of the country.

The most commonly reported disorder in the study was eczema at a rate of 20.5%. Eczema has been commonly found in the elderly. A study published in 2006 had eczema similarly as the most common disorder.¹²

Eczema is a chronic inflammatory skin disorder which can be associated with family history of allergy. Altered immune status due to aging among the elderly may partly account for their susceptibility to it.¹³ Generally eczema is said to be common and widespread among the elderly. However the prevalence of the different types of eczema differs among the elderly. Seborrhoeic dermatitis which was the commonest type of eczema found in this study is known to have two peaks, one during infancy and the second during the ages of 40-70years. Discoid eczema has its peak between 50-65years. The neuradermatitis are mostly seen in the middle aged group. It is noted that older persons have defects in inducing and eliciting allergic reactions which may be related to the altered immune status seen commonly at this age.⁵ Apart from discoid eczema which is commonly seen in men and lichen simplex chronicus which is commonly seen in women, all other types of eczema are known to have equal sex preponderance as this study reflects

Fungal infections were the next common condition. They accounted for 12.1% of the diagnosis in this study.

This is likely due to the reduction in the immunological functions in the elderly persons. Studies have suggested that fungal infections are common disorders of the elderly around the world with rates of 14%-58% reported.^{11, 14, 15} In the age group 60 years and above it has been shown that dermatophytes and yeasts are present in about 40% of them, while Tinea infections which was the commonest fungal infection in this study is said to be found in about 80% of them. This suggests that fungal infections of the skin contribute to morbidity and hence hospital use by the elderly. Other infections such as viruses and bacteria are also common in the elderly.

The complications of herpes zoster such as post herpetic neuralgia are found more in the elderly compared to other age groups. It is estimated that about 40% of those 60 and above have post herpetic neuralgia.⁵ Leprosy is not common in the elderly but can manifest following a long incubation period which can be as long as 40 years.

Vitiligo was the third most commonly reported skin disorder among the subjects in this study at a rate of 5.2%. In vitiligo there is a loss of brown colour from areas of the skin resulting in irregular white patches that feel like normal skin.¹² The incidence of vitiligo in the elderly seems to be increasing, although is still more common in children and young adults. This is likely due to the increase in population of the elderly. This study showed that the elderly constituted 5.5% of all vitiligo cases seen within that period. A similar finding was reported in Brazil where the elderly constituted 6.7% of all vitiligo cases seen within a 65 month period.²⁰

Pruritus was reported among the subjects in this study at a rate of 2.2%. Higher rates have been reported in other studies. A study among geriatric patients in Sienna, Italy reported a rate of 18.9%.¹⁶ Another study in Taiwan reported a pruritus rate of 14.2%.¹⁵ Among geriatric patients in Iran a study reported a rate of 22%.¹⁸ However smaller rates were reported in a multi-centre study carried out in Tunisia (6.4%)¹⁶, and in Uttakhand, India (9%).¹¹ Pruritus in the elderly may sometimes be due to some other skin condition which can be discovered when the patient is examined. Systemic diseases and drug reactions can also contribute to the occurrence of pruritus.¹⁰

Benign tumours have been common among elderly people in dermatological clinics. In a study done in National Taiwan University hospital benign tumours constituted 12.8% of the diagnosis in the clinic.¹⁵ In a study done in Italy benign tumours constituted about 13.5%.¹⁶ However in this study the occurrence of all types of skin tumours was 2.6%, with benign skin

tumours making 1.1 % of elderly diagnosis. This may suggest that benign tumours of the skin are not common among elderly patients in Nigeria or most tumours seen are usually referred to the general surgeons first. It may also be that they may not cause significant discomfort necessitating them to see dermatology specialists.

The male/female ratio was 1:1.1. This means that there was slightly more females than males. Other studies have reported slight male preponderance. In a study done in Italy, 1.4:1 was the male/female ratio.¹⁶ A study in Taiwan reported a ratio of 1.3:1¹⁵ Another study reported a ratio of 2:1, a vast difference from what was reported in this study.¹⁷ This slightly higher proportion of females is not unexpected in Nigeria as life expectancy for women is higher than that for men.¹⁹ It is thus to be expected that more women than men will be available at this age. The slightly higher female preponderance may also be due to the fact that females are more cosmetically inclined in this environment thus would seek the attention of a dermatologist.

CONCLUSION

Eczema, infections and vitiligo are common manifestations in the elderly. The dermatologist would be dealing with a lot of elderly patients in the nearest future thus needs to be adequately grounded on the prevalent skin diseases affecting them.

RECOMMENDATIONS

Measures and guidelines in combating eczema and other dermatitis in the elderly have to be developed and tailored to their peculiar needs in this environment.

There is a dire need to train and retrain physicians, dermatologists and geriatricians on skin care in the elderly. This can be achieved by adding topics on geriatric dermatology as part of continuous medical education (CMEs)

Health education to all caregivers and patients on skin care including the elderly must be emphasized. It should not be restricted to hospitals alone but also to venues and events where older persons will be in attendance such as old persons home, pensioners' meetings or senior clubs.

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