

Dermatoses in the Elderly Within a Duodecennial Era at Rivers State University Teaching Hospital (RSUTH): A Retrospective Review

Ekechi Stella Amadi^{1,2,*}, Mary Nnenda Amaewhule¹, Erinma Fortuna Pepple³, Faith Ebere Uwaeme⁴, Roseline Miebaka⁴, Adokiye Erasmus⁴

¹Dermatology Unit, Department of Internal Medicine, Rivers State University & Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

²Dermatology in Clinical Practice, University of South Wales, UK

³Community Medicine Department, Rivers State University & Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

⁴Nursing Services Department, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

*Corresponding author:

Ekechi Stella Amadi

Dermatology Unit, Department of Internal Medicine, Rivers State University & Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria & Dermatology in Clinical Practice, University of South Wales, UK, Phone: 08032790394; Email: ekechiamadi@yahoo.com

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ABSTRACT

Background: The population of older adults have been rising steadily across the globe. This increase is even noticed in the rural areas. Aging is associated with a lot of skin changes that predisposes older persons to skin diseases. Skin care in older adults is of importance contrary to the poor perception that older adults are not concerned about their skin. **Aim:** The aim of this study is to examine the various dermatoses that affected the older adults who visited the skin clinic under the period stated. The various causes would be evaluated and literature review with special focus on Africa would be discussed as well. **Methods and Materials:** Data which includes the socio-demographics and diagnoses for those aged 60 years and above were taken from the new patient registers of the dermatology clinic. The data was entered into a data spread sheet and was analysed. The frequencies were represented in tables for better visualization. **Result:** Those aged 60 years and above consisted of 9.4% of the total patients who attended the dermatology clinic of RSUTH over the twelve year period. The proportion of males was 38.8% and that of females was 61.2%. The age range was 60-92 years. Those who visited from the rural areas constituted 10.4% of the older population. The commonest dermatoses found within this group were eczemas including allergic skin reactions and photodermatitis; Tinea infections, vitiligo, ulcers, generalized pruritus, lichenoid eruptions, urticarias and dermatosis papulosa nigra in a descending order. **Conclusion:** A variety of dermatoses were seen among the older adults.

The findings are similar to other studies done within the same region.

Keywords: Dermatoses, Elderly, Rivers State University Teaching Hospital

INTRODUCTION

The population of older adults have been rising steadily across the globe. This increase is even noticed in the rural areas [1]. Aging is associated with a lot of skin changes that predisposes older persons to skin diseases [2]. Skin care in older adults is of importance contrary to the poor perception that older adults are not concerned about their skin [3]. The aim of this study is to explore the incidence and types of dermatoses seen in older age group in this tertiary clinic which were made clinically except in few cases that were confirmed histologically.

METHODS AND MATERIALS

The study site was initially called Braithwaite Memorial Specialist Hospital with only one dermatologist as at 2011. Full scale dermatology clinic began in 2012. The name changed to Rivers State University Teaching Hospital (RSUTH) in 2018 when it was upgraded to become the centre for training medical students for the Rivers State University that began a medical school. In 2020, another dermatology lecturer was employed. The materials used in retrieving the data were the medical out patient records kept by the nurses and the new patient registers kept by residents and consultants. Socio-demographic data including hospital number, age, sex, address and occupation were retrieved. The treatment received prior to hospital visits, diagnoses, investigations, treatment received from clinic and follow up care were also noted if documented. The data was entered into a data spread

sheet and was analysed. The frequencies were represented in tables for better visualization.

RESULTS

Those aged 60 years and above consisted of 9.4% of the total patients who attended the dermatology clinic of RSUTH over the twelve year period. The proportion of males was 38.8% and that of females was 61.2%. The male: female ratio was (1:1.5). The age range was 60-92 years. There were 207 dermal diagnoses made amongst 183 geriatric patients; 164 patients had just one skin diagnosis, 15 had two skin diagnoses, 3 had three skin diagnoses and 1 patient had 4 skin diagnoses. The incidence of geriatric dermatoses is seen in Table 1. The modal age group was the young old age group in this study as reflected in Table 2. The commonest dermatoses found within this group were eczemas including allergic contact dermatitis and photodermatitis, Tinea infections and vitiligo. Ulcers, generalized pruritus, lichenoid eruptions, urticarias and dermatosis papulosa nigra in a descending order were other common lesions. This is displayed in table 3. Those who visited from the rural areas constituted 10.4% of the older population as seen in Table 4. Hypertension was the commonest indicated chronic medical condition (9.8%), followed by diabetes (3.8%) and metastatic skin cancer from breast cancer (3.8%). Five older adults had both hypertension and diabetes (2.7%) as table 5 displays. Two older patients (1.1%) were diagnosed with leprosy and 75% of the muco-cutaneous ulcers were seen in those with diabetes. The cases seen within the skin clinic were managed with the appropriate treatment such as antifungals, antibacterial and anti- viral agents; topical corticosteroids, emollients and other specific agents. A few cases particularly those who had tumours, had to be referred to the surgical clinic.

Table 1. Incidence of geriatric dermatoses

Year	Male	Female	Total Elderly	Total patients	Proportion	Frequency (%)
2012	4	13	17	85	0.20	20.0
2013	5	5	10	90	0.11	11.1
2014	1	4	5	90	0.056	5.6
2015	0	2	2	65	0.031	3.1
2016	4	2	6	123	0.049	4.9
2017	3	14	17	153	0.11	11.1
2018	10	12	22	156	0.14	14.1
2019	4	2	6	157	0.038	3.8
2020	3	7	10	148	0.068	6.8
2021	9	12	21	239	0.088	8.8
2022	16	21	37	300	0.123	12.3
2023	12	18	30	325	0.092	9.2
Total	71	112	183	1931	0.094	9.4

Table 2. Age group distribution

Age group	Frequency	% of Total dermatoses
60-64	77	42.1
65-74	78	42.6
75-84	21	11.5
>85	7	3.8
Total	183	100

Table 3. Variety of dermatoses (Top 20 diagnoses)

Diagnoses	Frequency	Diagnoses	Frequency
Dermatitis (non-specified)	31(15.0%)	Herpes Zoster	5(2.4%)
Vitiligo	11(5.3%)	Hypertrophic scar	5(2.4%)
Tinea infections	11(5.3%)	Kaposi sarcoma	5(2.4%)
Allergic contact dermatitis	9(4.3%)	Intertrigo	5(2.4%)
Ulcers	8(3.9%)	Photodermatitis	5(2.4%)
Generalized Pruritus	7(3.4%)	Xerosis	5(2.4%)
Dermatosis papulosa nigra(DPN)	6(2.9%)	Lichen simplex chronicus	4(1.9%)
Lichenoid eruptions	6(2.9%)	Seborrhoeic keratosis	4(1.9%)
Onychomycosis	6(2.9%)	Chronic stasis dermatitis	4(1.9%)
Urticaria	6(2.9%)	Ichthyosis (acquired)	3(1.4%)

Table 4. Area of Residence

Area of Residence	Frequency
Rural	10.4 %(19)
Urban	89.6%(164)
Total	100%

Table 5. Existing Chronic Medical Conditions

Chronic Medical Condition	Males	Female	Total Number	Proportion
Hypertension	4	14	18	9.8%
Diabetes Mellitus	4	3	7	3.8%
Breast Cancers	1	2	3	1.6%
Retroviral Disease	1	2	3	1.6%
Peptic Ulcer Disease	0	1	1	0.5%
Tuberculosis	0	1	1	0.5%
Rheumatoid Arthritis	0	1	1	0.5%

DISCUSSION

Studies carried out in Africa show the varying proportions of the elderly with dermatoses. Amadi et al at the dermatology outpatient clinic of the University of Port Harcourt Teaching Hospital (DOPC–UPTH, 2017) had a prevalence of 3.1%, [4] Bell-Gam et al in that same centre during an audit in 2018 had a proportion of 2.7% [5] and Otike-Odibi in a private health facility had the frequency of geriatric dermatoses to be 3.3% [6]. Otike-Odibi et al examined older adults in different wards of UPTH which showed a much higher frequency of geriatric dermatoses; 51.4% of the patients had at least one skin lesion [7]. Ikpa et al had 2.7% of the older adults in rural area in upland Rivers State having a skin complaint [8]. Ayanlowo et al at the clinic of Lagos University Teaching Hospital (LUTH) had a proportion of 4.8% in those who visited the clinic to be older than 60 years and above [9]. Ajani et al showed that 60.6% of the elderly patient seen in Ile-Ife had at least one chronic non-communicable dermatosis [10]. In Ghana, Addo at the dermatology outpatient clinic of the Korle Bo Teaching Hospital had those 60 years and above to be 4.2% [11]. In a study in a rural riverine area of Liberia had 16.7% of those with skin complains to be older adults [12]. Amadi et al in a study at UPTH showed that only 9.5% of the elderly sought for care for their dermatological lesions despite majority of them having a cutaneous disease [3]. Some were lower than the proportion found in this study while others were much higher this can be explained by the site where the older adults were attended to. Several of these studies were done at the clinic where the older adults make complaints of what bothers them which may not fully reflect all the problems they have if a physician carries out full body examination.

Studies that showed female preponderance like this study include Ayanlowo et al at LUTH (1:1.3), Amadi et al at UPTH (1:1.1) and Otike-Odibi at a private health facility (1:1.5) Studies done in Tunisia, Libya and Egypt showed a variety of skin lesions in older adults with a higher proportion of females [13-15]. Male preponderance was seen in other studies such as that done by Otike-Odibi et al and Mponda & Masenga. Otike-Odibi et al had a M: F ratio of 1.3:1 amongst admitted older adults at the UPTH while Mponda & Masenga in Tanzania showed more than half of the participants to be males [7,16].

The studies carried out by Otike-Odibi in a private health facility and Otike- Odibi et al at UPTH showed the modal age group to be 65-74 just as this study shows [6,7]. Ayanlowo

et al at LUTH clinic had 60-69 age group with the highest numbers; Elfaituri et al in Libya also had majority of elderly patients within this group (65-74) Ajani et al had 58% of older adults in the 7th decade and Bell-Gam et al had 60-65 as the modal group in their study [5,9,10,14]. This is not surprising as the younger old age group is higher in proportion across the globe.

Dermatitis (eczema) is a common skin manifestation in several studies just as this study has showed. It was top most in the study carried out by Ayanlowo et al; who showed also in that study papulosquamous disorders, tumors, pruritus, and prurigo nodularis were amongst the top five skin disorders [9]. Amadi et al at DOPC- UPTH had eczema, fungal infections, vitiligo, urticaria, herpes zoster, keloids, lichen planus and generalized pruritus as some of the top most diagnoses just as this study also reflects [4]. Otike-Odibi et al showed xerosis was the most common skin disorder [7]. Amadi at Kakata, Liberia had chronic stasis dermatitis as the commonest manifestation amongst the elderly who attended an outreach clinic [12]. Dermatitis (eczema) comprised of 45% of the dermatoses seen in the elderly population in the study by Addo in Ghana [11]; however, Souissi et al had fungal infections as the most common in their study in Tunisia which was attributed to the very hot weather [13]. Kaposi sarcomas was the commonest malignant tumour seen in this study similar to the finding in studies done by Ayanlowo et al unlike the study done by Elfatouri et al in Libya that showed basal cell carcinoma to be the highest [9,14]. This difference can be explained by the different Fitzpatrick skin types seen across Africa. Those in Libya have lighter skin pigments (Type I-III) with a sunnier climate. Kaposi sarcoma is common in Africa and the emergence of retroviral disease has increased its prevalence also.

Hypertension was the commonest chronic medical condition seen amongst the elderly in this study which is similar to the studies done by Amadi in Liberia, Otike-Odibi et al in UPTH, and Mponda & Masenga in Tanzania [7,12,16]. This is not surprising as age related hypertension is common in the elderly. There is increasing evidence of skin Na⁺ retention in hypertension which chronic skin diseases such as eczema and psoriasis may be predisposing risk [17,18]. Diabetes was the second most common chronic condition seen in this study. Diabetes and skin diseases have been well established [19]. This study clearly showed that ulcers are common in diabetic patients. This finding however is not unique to this age group alone, despite age being a confounding factor for both chronic

skin diseases and diabetes [19]. There are many skin diseases associated with diabetes including ulcers, generalized pruritus, onychomycosis and ichthyosis that fall into the top diagnoses in this study. This study showed metastatic skin cancer with primaries from the breast. The dermatologist certainly sees cases of metastatic skin disease which can affect any part of the body [20]. There could also be other primary skin malignancies that can manifest on the breast [20]. Breast cancers can mimic skin lesions such as allergic contact dermatitis, Paget's disease, herpes zoster and intertrigo necessitating visit to the skin clinic [20]. Malignant tumours are not so common in the dark skinned African however when it is diagnosed it would most likely have metastasized. Risk factors include sunlight, genetic skin diseases like albinism and xeroderma pigmentosum; chronic wounds and use of skin lightening creams [21]. Approximately 90 % of persons living with HIV develop skin changes and symptoms at some stage during the course of their disease [22]. Retroviral disease is also known to manifest in older adults regardless of the perception that it is not common in the elderly [23]. Older adults can still engage in risky sexual behaviour need to be counselled [23]; however, with the advent of highly active antiretroviral therapy (HAART) younger persons with HIV/AIDS can live longer reaching advanced age [24]. Tuberculosis and rheumatoid arthritis have been well established to have cutaneous signs [25]. The rheumatoid arthritis patient presented with pyoderma gangrenosum which was published as a case report [26]. Peptic ulcer disease has not been associated with established cutaneous signs but the causative organism *Helicobacter pylori* has been implicated in causing an increase in some chronic skin diseases such as chronic spontaneous urticaria, psoriasis, rosacea and generalised itching [27]. Hansen's disease was one of the top ten disorders in a tertiary health facility within the same state done by Amadi et al, unlike this study that had fewer persons with the disease. This difference might be due to the location of the health facility and the improvement of diagnosing Hansen's disease over time. The long incubation of the mycobacterium may also affect the prevalence.

SUMMARY

This study showed the incidence of dermatoses in the elderly at RSUTH over a 12 year period (2012-2023) to be 9.4%. The commonest skin lesion was non-specified dermatitis from

records retrieved. Kaposi sarcoma was the highest malignant tumour seen amongst the elderly. Hypertension and diabetes were the two most common chronic medical diseases seen amongst this age group.

CONCLUSION

A variety of dermatoses were seen among the older adults. The findings are similar to other studies done within the same region.

REFERENCES

1. World Health Organisation, Aging and Health. Available at: <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health#>. Accessed (28/08/2023)
2. Na CR, Wang S, Kirsner RS, Federman DG. (2012). Elderly adults and skin disorders: common problems for nondermatologists. *South Med J*. 105(11):600-606.
3. Amadi ES, Otiike-Odibi B, Pepple EF, Bell-Gam HI. (2021). Skin Health Seeking Behaviour amongst Admitted Seniors. *Greener Journal of Medical Sciences*. 11(1):94-99.
4. Amadi ES, Bell-Gam HI, Pepple EF. (2017). The Prevalence and Pattern of Dermatological Disorders in Elderly in A Tertiary Hospital in South-South Nigeria. *Nigerian Journal of Medicine*. 26(1):23-35.
5. Bell Gam HI, Amadi ES. (2018). Audit of Patients 60 years and Above Presenting in a Tertiary Hospital in South-South, Nigeria. *Nigerian Clinical Journal of Medicine*. 9(1):10-29.
6. Otiike-Odibi B. (2022). Scope of Skin Diseases in the Geriatric Population of an Urban Dermatology Clinic in Port Harcourt, Nigeria. *Central African Journal of Public Health*. 8(2):69-73.
7. Otiike-Odibi B, Amadi ES, Pepple EF, Bell-Gam HI. (2021). Dermatologic Manifestations in Senior Citizens at University of Port-Harcourt Teaching Hospital. *Asian Journal of Research in Dermatological Science*. 4(1):77-87.
8. Ikpa BE, Amadi ES. (2021). Disease profile among the elderly in a rural community in Nigeria. *Yen Med J*. 3(4):212-219.

9. Ayanlowo OO, Akinkugbe AO, Olumide YM, Ahamneze N. (2011). Dermatoses in the elderly at the dermatology clinic of the Lagos university teaching hospital. *Nigerian Journal of Dermatology*. 1:10-16.
10. Ajani AA, Olanrewaju FO, Enitan A, Fabusuyi O, Oripelaye M, Oninla OA, et al. (2023). A Retrospective Review of Chronic Non-Communicable Dermatoses Among Older Adults at a Tertiary Healthcare Facility in South western Nigeria. *Dermatol Pract Concept*. 13(4):e2023262.
11. Addo H. (1990). A survey of skin diseases seen at Korle Bu Teaching Hospital. *Ghana Med J*. 24(1):7.
12. Amadi ES. (2023). Spectrum of skin disorders at a semi-urban setting: the Kakata experience. *Yen Med J*. 5(2):61-70.
13. Souissi A, Zeglaoui F, El Fekih N, Fazaa B, Zouari B, Kamoun MR. (2006). Pathologie cutanée chez le sujet âgé Etude multicentrique tunisienne [Skin diseases in the elderly: a multicentre Tunisian study]. *Ann Dermatol Venereol*. 133(3):231-234.
14. Elfaturi SS. (2015). Geriatric Dermatoses in Benghazi, Libya. *J Turk Acad Dermatol*. 9(3):1593a1.
15. Mohammed E, Abd-Elmaged W, Mohammed N. (2020). Skin disorders among elderly patients: clinicodemographic characteristics of 808 Egyptian patients. *Egyptian Journal of Dermatology and Venerology*. 40(1):38. Gale OneFile: Health and Medicine.
16. Mponda K, Masenga J. (2016). Skin diseases among elderly patients attending skin clinic at the Regional Dermatology Training Centre, Northern Tanzania: a cross-sectional study. *BMC Res Notes*. 9:119.
17. Chen JY, Chew KS, Mary S, Boder P, Bagordo D, Rossi GP, et al. (2023). Skin-specific mechanisms of body fluid regulation in hypertension. *Clin Sci (Lond)*. 137(3):239-250.
18. Bulger DA, Minhas S, Asbeutah AA, Kayali S, Shirwany HAK, Patel JR, et al. (2021). Chronic Systemic Inflammatory Skin Disease as a Risk Factor for Cardiovascular Disease. *Curr Probl Cardiol*. 46(5):100799.
19. David P, Singh S, Ankar R. (2023). A Comprehensive Overview of Skin Complications in Diabetes and Their Prevention. *Cureus*. 15(5):e38961.
20. Throckmorton DA. (2021). Is it breast cancer? —common dermatologic disorders found on the breast. *Ann Breast Surg*. 5:28.
21. Amadi ES, Pepple EF. (2020). Reflection On The Risk Factors For Skin Cancers: Focus On Dark-Skinned Africans. *Gazette of Medicine*. 8(2):1-14.
22. UC San Health Diego HIV-Related Skin and Complexion Conditions. Available at: <https://health.ucsd.edu/care/hiv/resources/skin/>. Accessed (10/10/2024).
23. Wooten-Bielski K. (1999). HIV & AIDS in older adults. *Geriatr Nurs*. 20(5):268-272.
24. Trickey A, Sabin CA, Burkholder G, Crane H, d'Arminio Monforte A, Egger M, et al. (2023). Life expectancy after 2015 of adults with HIV on long-term antiretroviral therapy in Europe and North America: a collaborative analysis of cohort studies. *The Lancet HIV*. 10(5):e295-e307.
25. Leal JM, de Souza GH, Marsillac PF, Gripp AC. (2021). Skin manifestations associated with systemic diseases - Part II. *An Bras Dermatol*. 96(6):672-687.
26. Figilo MI, Altraide DD, Nnenda AM, Stella AE, Nkiru AR, Ukachi CC, et al. (2024). Pyoderma Gangrenosum: A Case Report. *Asian J Res Dermatol Sci*. 7(1):50-54.
27. Tan E. Helicobacter pylori infection and skin diseases. Available at: <https://dermnetnz.org/topics/helicobacter-pylori-infection-and-skin-diseases>. Accessed (11/10/2024).