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INFORMATION TO CONTRIBUTORS AND READERS

Nigerian Journal of Dermatologists, NJD, is a forum for communication of research results and policy issues in the health sciences especially as related to dermatology and allied sciences, Plastic Surgery, Venereology, Pathology, Anatomy, Physiology and Biochemistry.

The journal is dedicated to serving primarily scientists in Africa and other developing countries outside the continent who seek a medium for publishing their research findings. Since science is global, articles would be welcome from every geographical location across the world.

There are pressing and specific problems related to Africa and to people of coloured skin. Ainhum, acne keloidalis are examples of two of a long list of cutaneous diseases peculiar to the sub region and waiting for research by the basic sciences; gratifying modalities of treatment are equally awaited.

The editorial board will therefore give priority to the development and promotion of such cutaneous health issues.

Frequency of publication: Quarterly.

Content format: Each issue will contain essentially the following sections, with variants where necessary:

i. A short editorial statement on policy issues not more than two thousand words, placed not necessarily on the first page.
ii. A short review (not more than five thousand words) titled "Perspective" on a current topical issue in Dermatology.
iii. One or two review articles by invitation or on application.
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v. Letters to the editor.
vi. News about, and on, African health and related matters.

Research papers should be composed of the following in that order, clearly typed in double space:

i. Title, which should be short and specific.
ii. Full names of all the authors, qualifications and affiliations of each, and full address of each author. (Qualifications of authors are only required for purposes of Editor's use and not for publication).
iii. Name and address of the corresponding author and his/her phone/fax numbers (home & office).
iv. Sources of financial support, if any.
v. Summary of not more than 200 words as well as three to four key words.
vi. Introduction.
vii. Materials and methods.
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xi. Acknowledgments — placed immediately after the next, and before the references
xii. Citations and references will be arranged according to the Vancouver Style:

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C. Citation of Chapters in books

Same as (B) above.

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in the body of text should be in chronological order and identified by roman numerals in brackets: e.g. Specific point mutations in ..... naturally resistant laboratory isolates of P. Falciparum [4, 5]

E. Figures, Charts & Pictures

Figure legends and tables should be professionally done. Tables/charts should be in black and white - 100 mm (minimum) and 175 mm (maximum). Coloured pictures may be submitted. Such pictures should be very clear and in size 5 x 7 inches. Where digital pictures are submitted, they should be in jpeg or bitmap format and not less than 300dpi resolution. Unclear and blurred pictures will be rejected. The publisher also reserves the right to convert coloured plates to grayscale where necessary.

F. Short Communications

This should possess all the elements of scientific communication as research papers, but without abstracts and subheadings and with not more than 500 words and 5 references.

G. Submission of paper to the Journal

Anyone who submits a paper for publication must provide the following:

i. A letter of submission electronically.

ii. Manuscript created using a word-processing program in PC format is encouraged. This is submitted electronically. Two hard copies of the peer reviewed , corrected manuscript will be sent over by the corresponding author to the editorial assistant, Regina Faleye MS, at the editorial office in the Department of Medicine, University College Hospital, Ibadan, Oyo State, Nigeria

iii. Written permission from authors whose copyright material has been used in the manuscript.

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vi. A letter of acceptance will be sent once the above stages have been complied with.

Editor's Comment

Team Science in Multicenter Research Efforts

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Africa is found to lag behind in research and development compared to Europe, America, and Asia. Apart from the low financial resources from underfunding and poor governmental commitment, lack of collaboration fostered by teamwork has been identified to be one of the factors responsible for this.[1]

Team Science refers to a collaborative effort to address a scientific challenge that leverages the strengths and expertise of professionals trained in different fields.[2] This is the integration of knowledge and skills in a single research effort to maximize outcomes.[2] In research, it is the multidisciplinary approach to every aspect from conception, hypothesis, proposal writing, and funding to execution and translation.[2]

Team science engages multiple stakeholders such as scientists, community members, and policymakers, and requires coordination to ensure efficiency, productivity, and overall effectiveness.[2] Team effectiveness involves the capacity to achieve goals and objectives for desired and improved outcomes. For science or research teams, the outcomes may include new research findings or methods and translational applications of the research. [3]

Some strategies found to be important in teamwork include establishing clear goals and roles, open communication amongst team members, emphasizing diversity and inclusion, encouraging activities that foster a sense of oneness which may be either work-related or non-work-related, celebrating achievements, and providing opportunities for skills development and conflict resolution. Others include supportive leadership and promoting positive work-life balance. [4]

A multicentre study uses a single protocol or instrument at different locations either in a country, across communities, or research centres. In medicine, this is an integration of basic medical sciences or biological sciences with clinical sciences, public health, global health, industrial sciences, pharmaceutical sciences, laboratory sciences, and translational studies.[5] This affords the involvement of many researchers at different locations, in various aspects of science; and conducted by many researchers. The advantages of multi over single-center studies include quicker recruitment, large data or participants, diverse population coverage, and increased generalizability. However, these studies suffer from methodological, implementation, and statistical challenges that can compromise the validity of the study.[5,6]

Principles of teamwork are particularly important in multicentre studies. At the heart of multicentre studies is teamwork fostered by meticulous oversight and coordination, with the assignment of roles and responsibilities, along with guidelines and policies.

Collaborative efforts within Africa and with other climes across disciplines will improve by teamwork, giving improved and more generalizable outcomes in research.

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Onychomycosis in Diabetes Mellitus Patients: In Vitro Susceptibility Testing of Four Antifungal Drugs Against Fungal Isolates

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ABSTRACT

Introduction: Despite recent advances in the development of antifungal drugs, onychomycosis is still difficult to treat. It negatively affects the quality of life of affected patients. Antifungal susceptibility testing may provide insight into the use of appropriate antifungal medications, thus improving patients' care.

Objectives: The study aimed to compare the in-vitro susceptibility of fungal isolates' sensitivity patterns against four antifungal drugs among diabetic and non-diabetic patients with onychomycosis.

Methodology: This cross-sectional study was conducted at the Sub-Department of Dermatology, University of Nigeria Teaching Hospital, (UNTH) Ituku-Ozalla, Enugu, Nigeria. Single colony isolates from clinically suspected cases of onychomycosis among diabetics and non-diabetics were used for the antifungal susceptibility. The inoculum was streaked on Muller Hinton 2% glucose/ methylene blue agar and four commercially prepared available drugs (HIMEDIA, India) namely Fluconazole (25 µg), Itraconazole (30 µg), Terbinafine (e-test 0.002-32 µg) and Voriconazole (1 µg) were applied. The data was analyzed using the IBM Statistical Package for Social Science (version 25).

Results: A total of 276 isolates but single colonies were 217: non-dermatophyte moulds 94, dermatophytes 84, and candida species 39, and were tested against the four antifungal discs. Voriconazole had the highest diameter of inhibition against the three classes of pathogenic fungi among the DM participants (73.9%-100%) and was found to be highly statistically significant (P-value < 0.002).

CONCLUSION: Because of this, voriconazole may be recommended for diabetics with recalcitrant cases, while itraconazole, terbinafine, and fluconazole may be used as empirical treatment of dermatophytes, non-dermatophyte moulds, and yeasts.

KEYWORDS: Onychomycosis, Diabetes Mellitus, Antifungal Susceptibility Testing.

Onychomycose chez les patients diabétiques : Etude de la sensibilité in-vitro de quatre médicaments antifongiques contre les isolats fongiques.

Contexte : Malgré les progrès récents dans le développement de médicaments antifongiques, l'onychomycose reste encore difficile à traiter. Cela affecte négativement la qualité de vie des patients concernés. Les tests de sensibilité aux antifongiques peuvent donner un aperçu de l'utilisation de médicaments antifongiques appropriés, améliorant ainsi les soins aux patients.

Objectifs : L'étude visait à comparer la sensibilité in vitro des profils de sensibilité des isolats fongiques à quatre médicaments antifongiques chez des patients diabétiques et non diabétiques atteints d'onychomycose.

Méthodologie : Cette étude transversale a été menée au sous-département de dermatologie de l'hôpital universitaire de l'Université du Nigéria (UNTH) Ituku-Ozalla, Enugu, Nigéria. Des isolats de colonies uniques provenant de cas cliniquement suspectés d'onychomycose chez des diabétiques et des non-diabétiques ont été utilisés pour évaluer la sensibilité aux antifongiques. L'inoculum a été étalé sur une gélose Muller Hinton à 2 % de glucose/bleu de méthylène et quatre médicaments disponibles dans le commerce (HIMEDIA, Inde), à savoir le fluconazole (25 µg), l'itraconazole (30 µg), la terbinafine (e-test 0,002-32µg) et le voriconazole (1 µg) ont été appliqués. Les données ont été analysées à l'aide d'IBM Statistical Package for Social Science (version 25).

Résultats : Un total de 276 isolats mais 217 colonies uniques : 94 moisissures non-dermatophytes, 84 dermatophytes et 39 espèces de candida, ont été testés sur les quatre disques antifongiques. Le voriconazole présentait le diamètre d'inhibition le plus élevé contre les trois classes de champignons pathogènes parmi les participants atteints de diabète (73,9 % à 100 %) et s'est avéré hautement

statistiquement significatif (valeur P < 0,002).

Conclusion : Pour cette raison, le voriconazole peut être recommandé aux diabétiques présentant des cas récalcitrants, tandis que l'itraconazole, la terbinafine et le fluconazole peuvent être utilisés comme traitement empirique des dermatophytes, des moisissures non-dermatophytes et des levures.

Mots-clés : Onychomycose, diabète, tests de sensibilité aux antifongiques.

Introduction

Onychomycosis is a term that describes a fungal infection of the nail unit in which dermatophytes, yeasts, and non-dermatophyte moulds have been implicated as the aetiological agents.[1] More than 70% of culture-positive onychomycosis are caused by anthropophilic dermatophytes predominantly *Trichophyton rubrum*, while non-dermatophytes are responsible for approximately 20% of fungal infections and yeasts account for 10%-20% of cases.[2,3]

Resistance to antifungal drugs is an increasing health challenge, which may be responsible for treatment failure, fueled by injudicious use of various antifungal drugs, phenotypic and genetic alterations, and the presence of immunosuppressive states like diabetes mellitus (DM).[4,5] The need for targeted antifungal therapy for fungal organisms causing onychomycosis is of utmost importance,[5] especially in persons living with DM who are at risk of DM foot syndrome.[6] Therefore, it is vital to evaluate the antifungal susceptibility pattern of fungal organisms causing onychomycosis to available antifungal medications using a simple, standard, reproducible in-vitro assay. This will help select effective antifungal agents for the treatment of onychomycosis. Data regarding the sensitivity pattern of various antifungals especially among DM patients is scarce, especially in Nigeria. Hence, this study was to determine the in-vitro susceptibility of fungi causing onychomycosis in DM participants to terbinafine, fluconazole, itraconazole, and voriconazole. This susceptibility pattern was compared with that in non-diabetics.

Materials and Methods

This was a cross-sectional and descriptive study conducted at the Sub-Department of Dermatology, the University of Nigeria Teaching Hospital, (UNTH) Ituku-Ozalla, Enugu, Nigeria from October 2020 to March 2021. The sample population was diabetes mellitus patients and non-diabetics (controls) suspected to have onychomycosis. The inclusion criteria were known diabetes mellitus patients, normal fasting blood glucose or random blood glucose (for controls), clinically suspected onychomycosis, and informed consent. Exclusion criteria include patients with other immuno-suppressive states, pregnancy, and those who had taken antifungal medications within the prior month.

One hundred and fifty-one (151) nail clippings from 76 known diabetes mellitus patients and 75 non-diabetic patients (controls) were sampled. The study participants were recruited from the diabetic and dermatology (controls) clinics. Further processing and antifungal sensitivity study was done in the Sub-Department of Dermatology research laboratory. Nail clippings from each participant were cultured on both the selective media such as Sabouraud Dextrose Agar (SDA) and Dermatophytes Test Media with supplements (HIMEDIA, India) for the identification of the species.

Isolation and identification of the fungal organisms were based on the macroscopic observation of fungal colonies and lactophenol cotton blue mount microscopic examination. All yeast species on SDA were subcultured onto HiChrome agar Candida (HIMEDIA, India) for candida species identification. Only single colony isolates and four commercially prepared available drugs (HIMEDIA, India) namely Fluconazole (25 µg), Itraconazole (30 µg), Terbinafine (e-test 0.002-32 µg), and Voriconazole (1 µg) were used for antifungal susceptibility testing.

Disk Diffusion Assay: From identified fungal cultures, each inoculum from distinct colonies were harvested and suspended in 5ml of sterile 0.9% saline and the resulting suspensions were spun. Dense inoculum suspensions of conidia and hyphae elements were transferred to sterile test tubes and allowed to sediment for 30 minutes. After the settlement of heavy particles, each upper homogeneous suspension was transferred to another sterile tube and adjusted to 0.5 McFarland turbidity.[4]

Then a sterile non-toxic cotton swab was dipped into the standardized inoculum and used to streak the entire surface of the sterile Muller Hinton 2% glucose/ methylene blue agar on the petri dish, turning the dish at 60° angle between each streaking.

The inoculum was allowed to dry for 5-15 minutes before the commercially prepared antifungal disks and e-strips were applied. The plates were inverted and incubated, then examined after 2-5 days for zones of inhibition. After the colonies grew, the inhibition zones around the disks were measured in millimeters (mm) and recorded. Criteria for classification of susceptibility as sensitive, intermediate, and resistant were reported according to Pakshir *et al*.[7] The data were analyzed using the IBM Statistical Package for Social Sciences (SPSS version 25).

Results

The study was conducted on 151 nail clippings: 143 toenails and 8 fingernails and a total of 276 fungi isolates were isolated. Figures 1, 2, and 3 showed the spectrum of dermatophytes, non-dermatophyte moulds (NDM), and yeast species isolated from positive cultures and by lactophenol cotton blue mount microscopy. Aspergillus species [*A. niger* and *A. fumigatus*] (44.9%), *Trichophyton soudanense* (which is classified as part of T. *rubrum* of African origin complex found mainly in Sub-Saharan Africa)[8] (30%), and *Candida albicans* (4.7%) were the predominant NDM, dermatophyte, and yeast respectively.

Single colonies were 217: non-dermatophyte moulds 94, dermatophytes 84, and candida species 39. The frequencies of single colonies isolated in both the DM participants and non-DM group are shown in Table 1.

The antifungal susceptibility testing was conducted only on the single colonies isolated. The susceptibility patterns of antifungal drugs against different classes of onychomycosis-causing fungi in both the DM and non-DM groups are shown in Tables 2 and 3, respectively.

Voriconazole had the highest diameter of inhibition against the three classes of pathogenic fungi among the DM participants (73.9%-100%). The dermatophytes and candida species were more resistant to terbinafine (69.6% and 82.3% respectively). All the candida species isolated were susceptible to fluconazole and voriconazole. The sensitivity of voriconazole to the three classes of pathogenic fungal organisms isolated namely dermatophytes, non-dermatophytes, and candida species in the diabetic group was highly statistically significant (P value < 0.002) as shown in Table 2.

Table 3 revealed the antifungal activity against the dermatophytes, non-dermatophytes, and candida species among the comparative group. Itraconazole (86.5%) was the most sensitive antifungal against dermatophytes, followed by voriconazole (83.8%), while voriconazole had the highest inhibition zone diameter (IZD) against non-dermatophytes (91.4%). For the Candida species, itraconazole and voriconazole were the most sensitive (81.8%). The sensitivity of itraconazole and voriconazole to dermatophytes and candida species was highly statistically significant (P value < 0.00001). Similarly, the sensitivity of voriconazole to non-dermatophytes was found to be statistically significant, (χ^2=8.0769, P value = 0.04448).

The highest resistance of the dermatophytes was to terbinafine in both the DM participants (69.6%) and the comparative group (64.9%). Similarly, candida species had the most resistance to terbinafine in both the DM participants (82.3%) and controls (81.8%) as shown in Figure 4. Intermediate activity/response was observed only in the DM group.

The highest resistance of the dermatophytes was to terbinafine in both the DM participants (69.6%) and the comparative group (64.9%). Similarly, candida species had the most resistance to terbinafine in both the DM participants (82.3%) and controls (81.8%) as shown in Figure 4. Intermediate activity/response was observed only in the DM group.

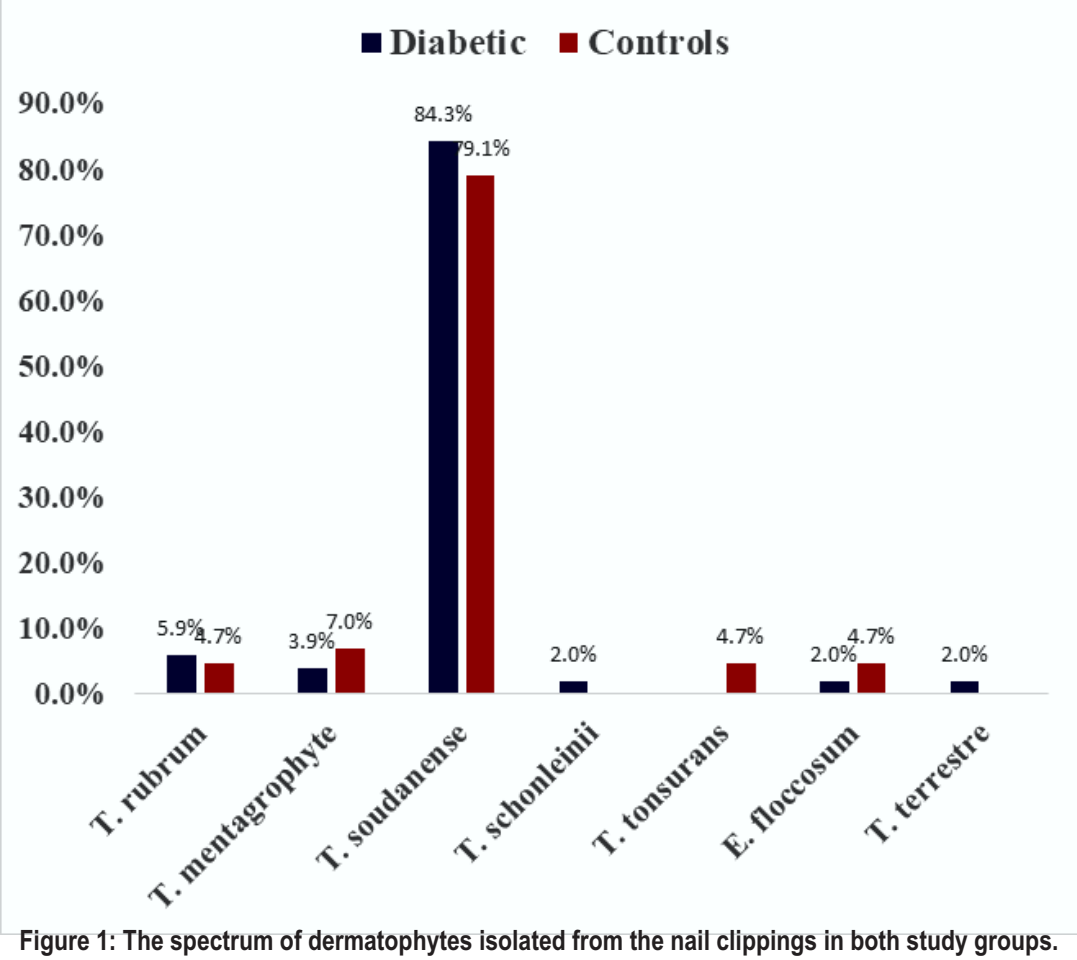

Figure 1: The spectrum of dermatophytes isolated from the nail clippings in both study groups.

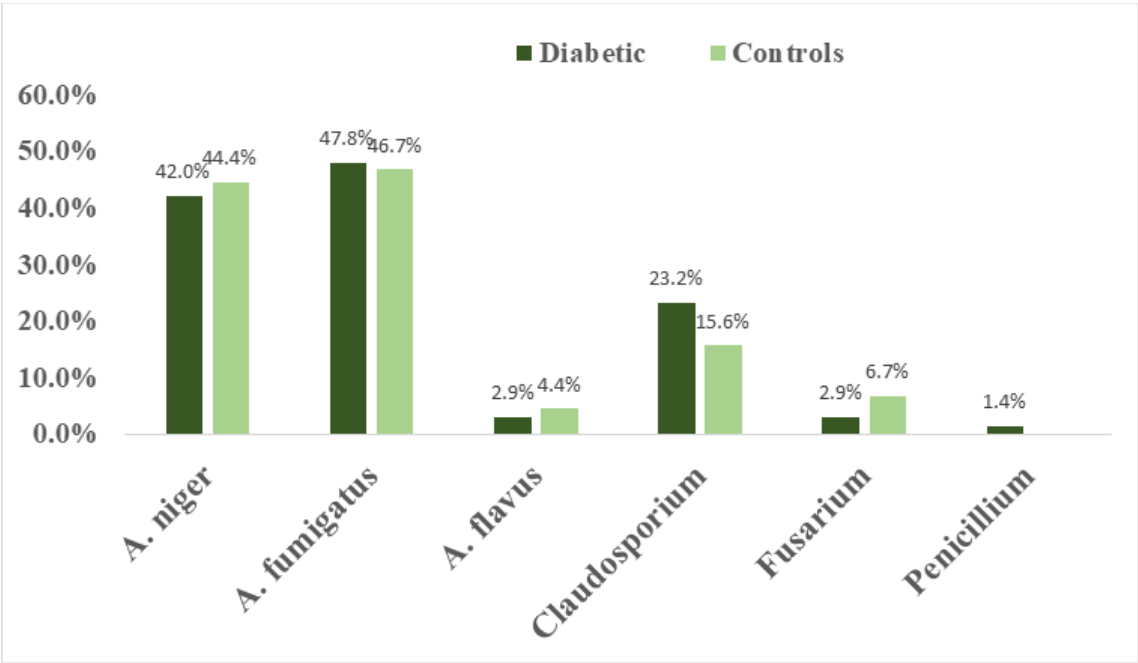

Figure 2: The spectrum of non-dermatophytes isolated from the nail clippings in both study groups.

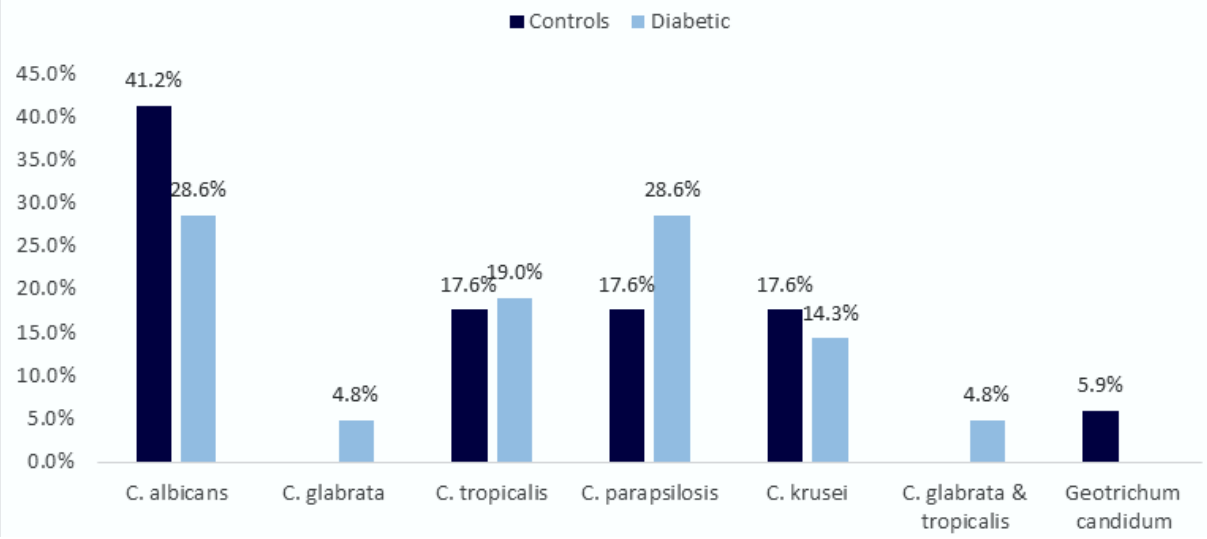

Figure 3: The spectrum of candida species isolated in both study groups.

Table 1. The spectrum of fungi used for antifungal susceptibility testing in both DM and non-DM isolates.

Single colonies (217)	DM N= 123 n (%)	Control N=94 n (%)
Dermatophytes (84)	47(38.2)	37 (39.4)
Non-Dermatophytes (94)	59 (48)	35 (37.2)
Candida species (39)	17 (13.8)	22 (23.4)

Table 2. Susceptibility patterns of common pathogenic fungi isolated from DM participants to antifungals.

		Antifungal activity observed in diabetic participants				
		Resistant	Sensitive	Intermediate	χ^2	P value
Pathogenic Fungi	**Antifungal**	n (%)	n (%)	n (%)		
Dermatophytes (47)	Terbinafine	33 (69.6)	14 (30.4)	0 (0.0)	28.2523	<0.0001
	Fluconazole	10 (21.3)	31 (65.9)	6 (12.8)		
	Itraconazole	16(34.8)	27 (56.5)	4 (8.7)		
	Voriconazole	10 (21.7)	35 (73.9)	2 (4.4)		
Non-Dermatophytes (59)	Terbinafine	31 (52.5)	28 (47.5)	0 (0.0)	19.7462	0.00192
	Fluconazole	35 (59.3)	21 (35.6)	3 (5.1)		
	Itraconazole	24 (41.2)	24 (41.2)	11 (18.6)		
	Voriconazole	10 (16.9)	49 (83.1)	0 (0.0)		
Yeasts (17)	Terbinafine	14 (83.3)	3 (16.7)	0 (0.0)	35.2154	0.0001
	Fluconazole	0 (0.0)	17 (100.0)	0 (0.0)		
	Itraconazole	11 (64.7)	9 (35.3)	0 (0.0)		
	Voriconazole	0 (0.0)	17 (100.0)	0 (0.0)		

Table 3: Susceptibility of common pathogenic fungi in the non-diabetic (control) group to antifungals.

		Antifungal activity observed in non-diabetic participants.				
		Resistant	Sensitive	Intermediate	χ^2	P value
Pathogenic Fungi	**Antifungal**	n (%)	n (%)	n (%)		
Dermatophytes (37)	Terbinafine	24 (64.9)	14 (35.1)	0 (0.0)	29.4723	<0.00001
	Fluconazole	10 (27.2)	27 (73.0)	0(0.0)		
	Itraconazole	5 (13.5)	32 (86.5)	0 (0.0)		
	Voriconazole	6 (16.2)	31 (83.8)	0 (0.0)		
Non-Dermatophytes (35)	Terbinafine	10 (28.6)	25 (71.4)	0 (0.0)	8.0769	0.04448
	Fluconazole	10 (28.6)	25 (71.4)	0 (0.0)		
	Itraconazole	13 (37.1)	22 (62.9)	0 (0.0)		
	Voriconazole	3 (8.6)	32 (91.4)	0 (0.0)		
Yeasts (22)	Terbinafine	18 (81.8)	4 (18.2)	0 (0.0)	35.2154	0.0001
	Fluconazole	7 (31.2)	15(68.2)	0 (0.0)		
	Itraconazole	4 (18.2)	18 (81.8)	0 (0.0)		
	Voriconazole	4 (18.2)	18 (81.8)	0 (0.0)		

Figure 4: Antifungal susceptibility testing using antifungal discs (Fluconazole[FLC], Itraconazole [IT], Voriconazole [VRC]) and terbinafine e-strip [Ezy TRB] on Muller-Hinton agar with 2% glucose and methylene blue.

Discussion

A standardized disk diffusion-based assay for determining the antifungal susceptibility testing of pathogenic fungi causing onychomycosis are desirable and have advantages. In developing countries especially, disk diffusion assays will aid antifungal susceptibility testing as several studies show that this assay is not only reproducible and accurate but also economical and very easy to perform.[9] There is a need for accurate, reproducible, and predictive susceptibility testing of fungal isolates to help inform clinical choice. The standard disk diffusion assay can be adapted for the assessment of dermatophytes, non-dermatophytes, and yeasts resistance against antifungal drugs.

In this study, the main specific fungal species identified were *Trichophyton soudanense:* a dermatophyte, followed by the *Aspergillus spp.* (*A.*

fumigatus, A. flavus and *A. niger)* and *Candida albicans*. The least common isolated fungal species (<2%) were *T. rubrum, T. mentagrophyte, Fusarium spp., Candida tropicalis, Candida krusei, Candida parapsilosis, Epidermophyton floccosum and Penicillium.* This finding of *T. soudanense* as the main onychomycosis-causing dermatophyte has been reported mainly in Africa, especially the West African Sub-region,[8] and is similar and comparable to the findings of studies by Sylla *et al* conducted in Senegal, West Africa, and Afene *et al* conducted Gabon, which are all in the Sub-Saharan African region.[10,11] However, *T. rubrum* was the major fungi isolated in several studies in North America, Europe, and many other parts of the world, including Africa.[12-17] The geographical distribution of aetiologic fungi explains the different profiles of species based on the study area.[18-20]

Antifungal susceptibility testing results in our study revealed that voriconazole had the highest activity (highest inhibition zone diameter) against the three pathogenic groups: non-dermatophytes, dermatophytes, and yeasts in both the diabetic subjects (82.4%, 73.9%, and 100%) and controls (90.9%, 81.8% and 80%) using the Agar Based Disk Diffusion (ABDD) method. This may be because voriconazole is a third-generation azole antifungal that has a fluoropyrimidine ring instead of a triazole ring seen in the second-generation azole family (fluconazole and itraconazole).[21] This structural difference makes the compound 10-30 folds more potent against non-dermatophytes and candida organisms.[22] It is also not commonly prescribed and available in our study setting and hence the fungal organisms are not likely to have developed resistance against voriconazole.

Terbinafine, followed by itraconazole, had the poorest antifungal activity against dermatophytes and candida in our study. This high resistance is comparable to the findings of Prabhat *et al*[23] and that of a multicentre study conducted by Yamada *et al*, where isolates tested had more resistance to terbinafine.[24] The study also determined the mechanism of resistance and discovered that all the resistant isolates had single-point mutations on the squalene epoxidase gene alleles.[25] Surprisingly, terbinafine had more activity against non-dermatophytes in the control group when compared to the diabetic participants in this study. On the contrary, several studies conducted in Iran, India, and Nepal reported terbinafine (though voriconazole was not among the antifungals tested) to be the most sensitive antifungal against dermatophytes and non-dermatophytes by employing ABDD and/or dilution methods.[7,26,27]

Itraconazole and fluconazole had some activity against dermatophytes and non-dermatophytes in our study. Notably, Itraconazole was recorded to have the highest activity against dermatophytes in some studies.[28] In contrast, Eba *et al* in Cameroun found all dermatophytes tested to be resistant to Itraconazole.[17] Candida species were most susceptible to fluconazole and voriconazole in the diabetic group and itraconazole and voriconazole in the control group in this study, following other studies in India and Spain. [29,30] However, fluconazole was noted in an isolated uncontrolled study among diabetics in Iran to have the least inhibition zone diameter against candida spp.[31] The sensitivity of voriconazole to the different classes of pathogenic fungi in both study groups was highly statistically significant.

The pattern of resistance seen among the tested antifungals in this study may be due to easy availability, and frequent empirical or indiscriminate use of antifungals (both topical and systemic) in the treatment of fungal infections. Moreover, these infections may occur more among diabetics because of their immunocompromised state and thus they become more at risk of developing resistance. Resistance to voriconazole was the least, probably because of the non-availability of this drug in the Southeastern region of Nigeria.

Some differences in the antifungal susceptibility patterns were observed between the DM group and controls (non-diabetics) in our study; resistance of non-dermatophytes to the four antifungals was higher in the diabetics than in the controls. The observed differences may be due to changes in virulence, the presence of immunosuppressed states like DM, abuse of antifungals as an over-the-counter medication in the study setting, and species-specific susceptibility against antifungal drugs.[32]

Conclusion

Overall, the maximum sensitivity of the isolated fungal organisms was Voriconazole> Itraconazole > Fluconazole > Terbinafine, and resistance was observed more in the diabetics, especially to terbinafine. Treatment may be based on antifungal sensitivity testing in refractory cases among people living with Diabetes Mellitus.

The disc diffusion method is a simple and valuable method for the in-vitro evaluation of antifungal susceptibility of fungi causing onychomycosis and this could play a key role in decision-making for the choice of antifungal medications.

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Cutaneous Dermatosis in Persons Living with Albinism in Kaduna — Northwestern Nigeria

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Abstract

Background: Albinism is a congenital autosomal recessive disorder characterized by the complete or partial absence of pigment in the skin, hair, and eyes. Nigeria is ranked amongst the highest in the world with an estimated figure of over two million. Albinism is associated with several skin anomalies such as freckles, thickening, and wrinkling of the skin, yellowish-brown hair, and a high incidence of skin cancers among others. In Nigeria, there are few studies on skin disorders associated with albinism in the north. This study is aimed at identifying skin anomalies among albinos and also to identify factors related to these skin changes.

Materials and Methods: This was a cross-sectional study conducted during the 2022 World Albinism Day at Kaduna. All Fifty-one Albinos who were in attendance were recruited. Records of the patient's age, gender, use of sunscreen, and family history of Albinism were noted. An evaluation of the skin lesions was made clinically. Data was analyzed using SPSS 21.

Results: The mean age of the respondents was 22.4 years ±16.5. The respondents were mostly males. Twenty-nine respondents had more than one skin lesion these include –freckles, solar elastosis, Squamous cell carcinoma of the ear lobe, and a case of congenital ectropion. Thirty-six individuals (71%) had a family history of albinism and ten (20%) used sunscreen consistently and correctly..

Conclusion: Dermatoses are common among individuals living with albinism. Since dermatoses are related to exposure to sunlight, counseling on the use of sunscreens and other measures to reduce sun exposure is essential in people living with albinism.

Keywords: Albinism, Sun protection, Kaduna, Squamous cell carcinoma.

Dermatoses chez les Personnes Vivant avec l'albinisme à Kaduna - Nord-Ouest du Nigeria

Résumé

Contexte : L'albinisme est une maladie congénitale autosomique récessive caractérisée par l'absence totale ou partielle de mélanine dans la peau, les cheveux et les yeux. Le Nigeria est classé parmi les premiers au monde avec un chiffre estimé à plus de deux millions d'albinos. L'albinisme est associé à plusieurs anomalies cutanées telles que des taches de rousseur, un épaississement et des rides de la peau, des cheveux bruns jaunâtres et une incidence élevée de cancers de la peau, entre autres. Au Nigeria, il existe peu d'études sur les troubles cutanés associés à l'albinisme dans le nord. Cette étude vise à identifier les anomalies cutanées chez les albinos et ainsi que les facteurs liés à ces modifications.

Matériels et méthodes: Il s'agissait d'une étude transversale menée lors de la Journée mondiale de l'albinisme 2022 à Kaduna. Cinquante et un albinos ont été recrutés. L'âge, le sexe, l'utilisation de crème solaire ainsi que les antécédents familiaux d'albinisme des patients ont été collectés. Un examen clinique des lésions cutanées a été réalisée. Les données ont été analysées à l'aide de SPSS 21.

Résultats: L'âge moyen des répondants était de 22,4 ans ±16,5. Les répondants étaient majoritairement des hommes. Les trois cinquièmes des personnes interrogées présentaient plus d'une lésion cutanée, notamment des taches de rousseur, une élastose solaire, un carcinome épidermoïde du lobe de l'oreille et un cas d'ectropion congénital. Environ les trois cinquièmes avaient des antécédents familiaux d'albinisme et seulement un cinquième utilisait un écran solaire de manière cohérente et correcte.

Conclusion: Les dermatoses sont courantes chez les personnes vivant avec l'albinisme. Étant donné que il s'agit de dermatoses liées à l'exposition solaire, des conseils sur l'utilisation d'écrans solaires et d'autres mesures visant à réduire l'exposition au soleil sont essentiels chez les personnes atteintes d'albinisme.

Mots clés: Modifications cutanées, Albinos, Protection solaire, Kaduna, Carcinome épidermoïde.

Introduction

Oculocutaneous albinism (OCA) encompasses a heterogeneous group of genetic conditions with an autosomal recessive inheritance. It is characterized by hypopigmentation of the skin, hair, and eyes due to a reduced or lack of cutaneous melanin pigment production.[1]

It has a global prevalence of 1:20,000[2] with wide variation from population to population. There are higher figures than the global average ranging from 1 in 15,000 in Eastern Nigeria[3] to 1 in 1,000 in the Tonga tribe of Zimbabwe.[4] It shares an equal occurrence in both genders. There are two major types of OCA; the syndromic and the non-syndromic OCA with the former being more common and of seven different types.

OCA1 and OCA2 are variants mostly seen with the latter accounting for one-third of cases worldwide and more common in Africa.[5] This study aimed to document the skin findings in people with albinism living in Kaduna, Northwestern Nigeria.

Methods

This was a cross-sectional study that was conducted during the 2019 World Albinism Day in Kaduna –Northwestern Nigeria. There are 23 local government areas in Kaduna state, with Kaduna North being one of the largest. During World albinism day, most individuals living with albinism usually attend the outreach at Kaduna North where lectures are delivered by different professionals amongst which are dermatologists, ophthalmologists, and meteorologists.

Ethical approval and informed consent were obtained from the ethical committee of the hospital and Ministry of Humanitarian Services and respondents respectively before the commencement of the study.

Fifty-one persons with albinism who were in attendance and consented were recruited for the study. All those who did not give their consent were excluded from the study. An interviewer-administered questionnaire. Records of the patients' age, gender, family history of Albinism, and use of sunscreen were noted. An evaluation of the skin lesions was made clinically after examination with a dermoscope. Those with suspicious lesions were referred to our center for further evaluation.

Data was analyzed using a statistical package for Social Sciences version 21. Data cleaning was carried out and errors were corrected. Quantitative variables were summarized using means and standard deviation. The association between age and skin lesions was tested using a chi-square test. The level of statistical significance was $P \leq 0.05$.

Ethical approval and informed consent were obtained from the ethical committee of the Hospital, the Ministry of Humanitarian Services, and the respondents respectively before the commencement of the study. (NHREC/30/11/21A)

Results

A total of 51 respondents with Albinism were recruited for the study. The majority of the respondents were males 30 (58.82%). The youngest respondent was 1.5 years and the oldest was 60 years with a mean age of 22.4 ± 16.56. (Table 1). About three-fifths (71%) of the respondents had a family history of ocular or oculo-cutaneous albinism. Three-fifths (59%) of the respondents had skin lesions while 22 (41%) had no clinically evident skin lesion except albinism.

The most frequent skin changes seen were freckles, which were observed in 28 (54.9%) of the respondents, other abnormalities seen in association with freckles are solar elastosis which was observed in10 (19.6%) of the respondents, and actinic keratosis 5 (9.8%). There was one case each of squamous cell carcinoma (following histology), Folliculitis keloidalis nuchae, and congenital ectropion (Table 1). Only 10 (19.6%) of the respondents used sunscreen creams regularly. There was a statistically significant relationship between increasing age and skin lesions (P<0.000). (Table 2)

Discussion

Albinism is an autosomal recessive disorder due to partial or total absence of melanin pigment. It is characterized by the deficiency of the enzyme tyrosinase which is involved in the conversion of tyrosine to dopa and then to melanin.[6,7,8,9] This melanin produced protects the skin from harmful

ultraviolet rays which can lead to skin cancers. In this study, more than half of the respondents have one form of skin disorder and only one-fifth of the respondents used of sunscreen correctly and consistently.

Males constituted three-fifths of the population with a male-to-female ratio of 1.4.:1 This is comparable to the study in south-eastern Nigeria by Okoro E where he got a male: female ratio of 1.3:1[3] but one Lagos study had a female preponderance of (M/F) 1:1.25.[10]

The mean age of the respondents was 22.4 years ±16.5, the youngest being 1.5 years and the oldest being 60 years. This is similar to the mean ages seen in a Lagos and Southern Nigeria study. [10,11] In another study by Okoro in Enugu carried out 50 years ago, he found that very few persons living with Albinism were above 30 years.[3]This age disparity may be due to modernization and increased awareness over the years.

More than 71% of the respondents had a family history of albinism. This is slightly higher than what was found in Enugu, where 63.3% had at least one family member with albinism.[3] The higher figure observed in our study may be due to the small sample size of 51 persons compared to 1000 in the Enugu study. Albinism being an autosomal recessive trait has a 1 in 4 chance of being inherited.

Only 20% of the respondents used sunscreen correctly and consistently and these individuals were noticed to have less photodamage. Similar, values were obtained by Madubiko in southern Nigeria where only 20.5% used sunscreens and had few lentigines. This was statistically significant.[11]

More than half (58%) of the respondents had one form of skin lesion or another. This is lower than that seen in the Lagos (95.8%) and Benin study (78%).[10,11] The low value seen in this study may not be unrelated to the majority of the respondents in our study being young less than 40 years. Most of these changes have been noticed to increase with age and sun exposure. This is in contrast to what was observed in a study by Samuel et al in Tanzania where none of the respondents had skin lesions. The respondents in the Tanzanian study used sunscreen regularly due to an efficient surveillance program for albinos by the government. The use of sunscreens has been found to reduce the appearance of photo-aging spots.[12] The most common skin lesions observed were those related to sun damage- freckles, solar elastosis, and actinic keratosis. Solar lentigines (freckles) were found in about half (54%) of the respondents in this study. This is lower than the 63% seen in the Benin study- southern Nigeria. This disparity may be due to the smaller sample size used in our study in the Northwest.

Other skin changes recorded in this study were solar elastosis (20%), actinic keratosis (10%), and squamous cell carcinoma (1%). These figures are lower than those found in the Benin study with values of 45%, 29%, and 12.3% respectively. The wide differences seen in these studies may be due to the selection processes involved in the north where all the respondents present during the outreach were used for the study, the younger age group formed the bulk of the study accounting for 55% of the total population and also the dress code in the north, which involved covering most of the body due to religious reasons. The cutaneous malignancy (squamous cell carcinoma) noted in this study was on the ear lobe, previous studies have recorded similar findings.[13,14,15]

There was a case of congenital ectropion seen in a 57-year-old woman. There was no associated chemosis or corneal scarring. Ectropion is said to be due to the eversion of the eyelids. No report of this finding in persons living with Albinism has been recorded previously. Although very rare, but more common in Africans.[16] It may be associated with Down's syndrome, ichthyosis, and blepharophimosis syndrome. Our patient did not have any of these as such it could be said to be a case of an isolated finding.[17-20]

Only one person had folliculitis (acne) keloidalis nuchae (FKN). These are itchy round small bumps at the back of the neck which later form scars and then keloidal masses.[21] In a study by Ogunbiyi et al in southwestern Nigeria, a prevalence of 1.5% was found in men aged 35-44 years. These were individuals with normal skin pigmentation[22] A similar case was reported in Mali-Bamako, where a 27-year-old albino presented with folliculitis

keloidalis nuchae.[23]

There was a statistically significant relationship between increasing age and the presence of skin lesions, ($p<0.000$) with the younger age group (0-20) having no skin changes. The main limitation is the small sample size used in this study.

In conclusion, the importance of skin monitoring and protection cannot be over-emphasized in these groups of individuals since most of the skin findings seen are related to sun exposure. Similarly, patients with albinism are at a high risk of developing skin cancers as such primary preventive measures like enlightenment, free drugs, and accessible screening facilities are highly recommended.

Declaration of patient consent

Appropriate patients' consent was obtained in writing and consent was also given for their images and medical to be used in the journal The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil

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Table 1: Demographic Characteristics of 51 Albinos studied

Character	Frequency (%)
Gender	
Male	30 (58.82)
Female	21 (41.18)
Age (years)	
0-20	28 (55)
21-40	12 (23)
41-60	11 (22)
Family history of Albinism	
Yes	36 (71)
No	15 (29)
Use of sunscreen	
Yes	10 (20)
No	41 (80)
Lesions	
Freckles	11 (21.6)
Freckles/solar elastosis	10 (19.6)
Freckles/Actinic keratosis	05 (9.8)
Freckles/Ectropion	01 (1.96)
Freckles/Squamous cell Ca	01 (1.96)
Acne keloidalis nuchae	01 (1.96)
No skin lesion	22 (43.1)

Table 2: Relationship between age and skin lesions

Variable	Grade		
Age (years)	**Present**	**Absent**	**P**
0-20	5	23	0.000
21-40	12	0	
41-60	11	0	

Figure 1: Solar lentigines (Freckles) on the face

Figure 2: Solar Elastosis- characterized by furrowing and pebbly appearance on the neck of this Albino

Figure 3: Ectropion in a respondent with Albinism

Figure 4: Folliculitis keloidalis nuchae (Infected) on the back of the neck

Epidemiological and Clinical Profile of Acne Vulgaris in Some Private Hospitals in Kinshasa

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Abstract

Introduction: Acne vulgaris is a chronic inflammatory pathology of the pilosebaceous follicle, preferentially affecting adolescents, and also adults. On average, one acne sufferer in two seeks medical attention. This study aims to describe the epidemiological and clinical features of acne in our environment.

Methodology: Retrospective, multicenter study of patients treated for acne in private hospitals in Kinshasa: Clinique Bondeko (n=58), Centre Hospitalier Akram (n=210), and Centre Hospitalier Alliance (n=60). It covered a 12-month period, from January 01, 2021, to December 31, 2021. 328 patients constituted the sample for this study.

Result: 2208 patients were skin for various dermatoses, including 328 for acne during the study period giving a prevalence of 15%. Females were most affected (62%). Age ranged from 10-54 years, mean age was 23.9 years, with the 20-29 age group being the most affected. Mixed acne was the most common variant. The cheeks (78%) and forehead (65%) were the areas of the face most affected, and the most common aggravating factor was the use of irritating cosmetic products in 32% of cases.

Conclusion: Acne vulgaris accounted for 15% of all dermatoses seen during the study period in our environment, most predominant in females and in the third decades of life. Intervention for people with acne should include addressing use of irritant cosmetics.

Keywords: Acne vulgaris, Pilosebaceous unit, Irritant Cosmetics, Kinshasa

Profil épidémiologique et clinique de l'acné vulgaire dans les hôpitaux privés de Kinshasa

Abstrait

Introduction : L'acné vulgaire est une pathologie inflammatoire chronique du follicule pilo-sébacé, touchant préférentiellement les adolescents, mais également les adultes. En moyenne, une personne acnéique sur deux consulte un médecin. Cette étude vise à décrire les caractéristiques épidémiologiques et cliniques de l'acné dans notre environnement.

Méthodologie : Il s'est agi d'une étude rétrospective multicentrique réalisée du 1er janvier 2021 au 31 décembre 2021 dans 3 hôpitaux privés de Kinshasa (Clinique Bondeko, Centre Hospitalier Akram, Centre Hospitalier Alliance). Ont été inclus les patients suivis pour une acné et consentants.

Résultat : Sur 2208 patients atteints de dermatoses diverses, 328 présentaient une acné durant la période d'étude soit une prévalence de 15 %. Les femmes représentaient 62 %. L'âge moyen était de 23,9 ans avec des extrêmes de 10 à 54 ans, la tranche d'âge de 20 à 29 ans étant la plus touchée. L'acné mixte était la variante la plus courante. Les joues (78 %) et le front (65 %) sont les zones du visage les plus touchées, le facteur aggravant « l'utilisation de produits cosmétiques irritants » était rapporté par 32 % des patients.

Conclusion: L'acné vulgaire représentait 15 % des dermatoses observées dans 3 structures privées à Kinshasa. Elle prédominait chez les femmes de la trentaine. L'intervention auprès des personnes souffrant d'acné devrait inclure l'utilisation de produits cosmétiques irritants.

Mots clés: Acné vulgaire, unité pilosébacée, cosmétique irritant, Kinshasa

Introduction

Skin diseases are difficult to hide because they are easy to access, and therefore exposed to the view and judgment of others. Some of them, although not presenting a vital risk, are unsightly and often make life difficult for patients who are affected. Among this type of disease is acne vulgaris, which is an inflammatory dermatosis of the pilosebaceous unit/follicles.

Acne vulgaris is a chronic inflammatory pathology of the pilosebaceous follicle/unit, preferentially affecting adolescents, and also adults (1,2). The prevalence of acne is 80% in most countries of the world in this age group. Moderate to severe acne accounts for 20% of all acne cases (3). It represents one of the most frequent reasons for consultation in dermatology. Its prognostic factors for severity are hyperseborrhea, tobacco, extension to the back, stress, and the presence of familial acne (3).

Acne vulgaris is more severe if associated with the following factors: age 17 years and above, a family history of acne, Oily or seborrheic skin, as assessed by the patient or physician, premenstrual flare-up, and significant stress (4).

Very little data exists on acne vulgaris in the Democratic Republic of Congo in general and in particular in Kinshasa, the capital of the Democratic Republic of Congo. Epidemiological data show that on average, individuals with acne consult a doctor one out of two times. This work aims to describe the epidemiological and clinical aspects of acne in Kinshasa.

Methodology

This is a retrospective, descriptive, cross-sectional, multicenter study. Data was obtained from the medical records of patients seen and diagnosed with acne in the dermatology departments of the following hospitals in Kinshasa: Clinique Bondeko, Centre Hospitalier Akram, and Centre Hospitalier Alliance. It covered a 12-month period, from January 01, 2021, to December 31, 2021.

Patients present at hospitals near their homes and where they have access to medical insurance for those who have a job that affords them this opportunity. Not all public or private hospitals have dermatology services in Kinshasa. Kinshasa does not have more than 20 dermatologists for a population of 12,000,000, and the whole country does not have more than 25 dermatologists for 102,000,000 inhabitants. We chose those from private hospitals where we have access as a dermatologist consultant.

Inclusion and non-inclusion criteria

Data from the medical records of individuals with a diagnosis of acne vulgaris were included in this study and were subjected to a literature review in search of variables of interest. Data from medical records with a diagnosis of acne but lacking all variables of interest and with a diagnosis other than acne vulgaris were excluded.

Parameters of interest include sociodemographic and epidemiological data (age, sex, region of origin, race, and socio-economic category; and clinical data (history, symptomatology, clinical diagnosis). Acne severity was determined using an acne lesion scoring scale (Echelle de Cotation des Lésions d'Acné, ECLA) and Cardiff Acne Disability Index questionnaire (CADI) validated in French.

Ethical considerations

All information collected in the retained files was kept confidential; only the research team could access it. Security measures regarding confidentiality were guaranteed by: anonymity, limited access to data, collection sheets kept in a secure location, impossibility of identifying subjects when publishing the results of the study.

Data analysis

Data were encoded and entered using Excel software. Analysis was performed using SPSS 19 software. Descriptive statistics enabled us to present the data in the form of frequency distribution tables.

Result

A total of 2208 patients were included, 328 of which had acne vulgaris, giving a prevalence of 15%. The age range was 10 – 54 years, with a mean age of 23.9 years. Sixty-two percent were women and 38% were men giving a male-to-female ratio of 1:1.63. Furthermore, acne occurred more frequently in the third decade of life, in the 20-29 age group. A family history of acne was found in 39.4% of cases. Students

were the social category most affected in 33% of cases.

The most common clinical form was mixed acne. The cheeks (78%) and forehead (65%) were the most common acne sites. The most predominant aggravating factor was the use of cosmetics and irritant products (30.2%). Seborrheic dermatitis (25%) was the most commonly associated skin disorder.

The use of irritating cosmetic products, and topical bleaching agents, was found in 62.5% of cases. A questionnaire integrating the ECLA and CADI grids was administered to participants, acne vulgaris causes mood alteration for 60 % of the affected.

The age at the onset of acne was around 10 years for females and 12 years for males. Among adults, 52% reported having had acne since their adolescence, while 48% had acne only after the age of 18.

DISCUSSION

The frequency of acne varies in different settings and study periods. In the present study, data was extracted from the medical records of 328 patients. Adityan (5) in India reported 309 patients from August 2006 to June 2008, and Rajar (6) in Isra (Pakistan) sampled 100 patients over 2 years. A family history of acne was found in 39.4%; Rajar (6) found values higher than ours at 49%. A family history of acne was considered not only as a predisposing factor but also as an aggravating factor.

The female predominance in the present study is in agreement with the results of Yahya (7) in Nigeria and Suh (8) in Korea. We can explain this predominance by hormonal fluctuations due to menstruation, use of contraceptive pills, dysfunction of the ovaries or adrenal glands, as well as stress which can promote the appearance of acne lesions. (9)

The average age of participants was 23.9 years. Variable data were found for Adityan (5) (19.78 years) and Khunger (10) (30.5 years). On the other hand, the most affected age group was 20-29 years, an observation close to that of Ismail (3) 21-25 years but differing from that of Rajar (6) 15-19 years.

In our series, the most common acne sites were the cheek and forehead. Our data are identical to those of Khunger (10) and Adityan (5). Acne is known to localize more on convex than concave areas of the face. The majority of patients had mixed acne, which contradicts the findings of Khunger (10), who found inflammatory acne to be predominant.

The use of skin-lightening products (hydroquinone, glutathione, steroid, diprosone), particularly in acne patients, is one of the aggravating factors, due to the harmful effects of these products on skin keratinization.

More than half the participants (60%) in the present study stated that acne affected their quality of life, and our data concurred with those reported by Mallon (11) and Cotterill (12). The conspicuous and unsightly nature of acne could justify its negative impact on quality of life since we know that image plays a role in self-esteem. Indeed, acne would cause a profound alteration of the quality of life of patients who suffer from it, with a considerable increase in the risk of depression, nervousness, suicidal ideation, anxiety, and inhibition of social life (13).

The age at the onset of acne was around 10 years for females and 12 years for males. This is probably because acne sets in as puberty approaches, with it arriving early in girls compared to boys (14).

The method of recruiting our participants and the retrospective nature of the study cannot allow us to generalize our results to the population Congolese. It was also impossible to search for factors influencing the occurrence of acne.

In conclusion, we observed that acne vulgaris is a common pathology in this population (15%). The lesions were predominantly on exposed parts of the body, which could have an impact on the psycho-affective state and the quality of life of these patients. Studies on a larger scale with large sample sizes are necessary to investigate the factors impacting the appearance of acne and assess the quality of life of patients in our environment.

Conflict of interest: none

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Table 1: Distribution by Social Demographic Data

Social category	n	%
Unemployed	45	13,7
Pupils	80	24,4
Employees	95	29
Students	108	32,9
Total	328	100

Table 2: Patient distribution by age and gender

Age range (Year)	Sex (n=328)		
	Females n(%)	Males n(%)	Total n(%)
≤09	12	7	19(5,8)
10-19	60	39	99(30,1)
20-29	86	64	150(45,8)
≥30	45	15	60(18,3)
Total	203(61,9)	125(38,1)	328(100)

Table 3: Classification of patients by clinical form of acne.

Types of acne	n	%
Mixed	136	41,5
Inflammatory	124	37,8
Retentional	63	19,2
Conglobata	5	1,5
Fulminant	0	0
Total	328	100

*** Mixed (inflammatory and retentional)**

Evaluation of Medical Students' Perception of Dermatology as a Choice of Specialization

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Abstract

Background: Students' choice of specialization has been noted to be influenced by the amount of exposure they have to a particular topic. The foundation of understanding dermatology depends on the extent of the amount of exposure they have as students. This study aims to find out the general perception of the pioneer set of medical students of the dermatology lectures received and if this has influenced their consideration of dermatology as a choice of specialization.

Methods: Pioneer students of two new medical schools in Rivers State were given a self-administered structured questionnaire to seek the student's perception of the lectures received.

Result: Sixty-four percent of the total students were females. The majority, 98.7 % were single and within the 18-24 years age group. A majority, 69.3% of the total pioneer medical students found the lectures interesting, 60% of the students understood what was taught most times, 97.3% had their knowledge increased, and 81.3% had gained more confidence. However, only 18.6% considered dermatology as a choice of specialization. Majority of the students who considered dermatology as a choice of specialization were influenced by the lectures received..

Conclusion: Dermatology lectures received by the pioneer students were found to be interesting, and increased their knowledge and confidence in the management of skin diseases; however, few considered dermatology as a choice of specialization.

Keywords: Assessment, Dermatology, Medical, Perception, Students

Évaluation de la perception de la dermatologie par les étudiants en médecine comme choix de spécialisation

Contexte: Il a été constaté que le choix de spécialisation des étudiants est influencé par le degré d'exposition qu'ils ont à un sujet particulier. Les fondements de la compréhension de la dermatologie dépendent de l'étendue de l'exposition qu'ils subissent en tant qu'étudiants. Cette étude vise à apprécier la perception qu'ont les étudiants en médecine générale des cours de dermatologie reçus et si cela a influencé leur choix de la spécialisation.

Méthodes: Les étudiants en médecine générale de deux nouvelles écoles de médecine de l'État de Rivers ont reçu un questionnaire structuré auto-administré pour apprécier leur perception des cours reçus.

Résultat: Soixante-quatre pour cent du total des étudiants étaient des femmes, 98,7 % étaient célibataires et appartenaient à la tranche d'âge de 18 à 24 ans. Une majorité, 69,3 % des étudiants ont trouvé les cours de dermatologie intéressants, 60 % ont compris la plupart du temps ce qui était enseigné, 97,3 % ont vu leurs connaissances augmenter et 81,3 % ont gagné en confiance. Cependant, seuls 18,6 % considèrent la dermatologie comme un choix de spécialisation. La même proportion (18,6 %) a été influencée par les conférences reçues pour prendre cette décision, une plus grande majorité (78,6 %) de ces derniers considérant positivement la dermatologie comme choix de spécialisation.

Conclusion: Les cours de dermatologie reçus par les étudiants pionniers se sont révélés intéressants et ont accru leurs connaissances et leur confiance dans la gestion des maladies de la peau; cependant, peu d'entre eux

envisageaient la dermatologie comme un choix de spécialisation.

Mots-clés: Évaluation, spécialisation en dermatologie, perception des étudiants

Introduction

Students' choice of specialization is influenced by the amount of exposure they have to the particular topic.[1] This can come via the books they read and the amount of understanding they receive from being taught during tutorials and lectures. The foundation of understanding dermatology depends on the extent of the amount of exposure they have as students.

Perception of people about things can influence their decision-making and behavior.[2] Perceptions are influenced by beliefs, values, experiences, and biases, and can significantly impact decision-making processes.[2] Lectures received by medical students form part of their experiences. This can ultimately influence their choice of specialization.[3] This is important to the general growth of dermatology as medical students are the future dermatology educators.

This study aims to find out the general perception of pioneer medical students about the dermatology lectures received and how this influenced them in considering dermatology as a choice of specialization. The pioneer students are important in starting up a good foundation in dermatology hence their responses would be taken into consideration in future planning.

Methods

This is a cross-sectional descriptive study. The study population is the pioneer students of the two new medical schools in Rivers State. They were given a self-administered structured questionnaire to seek the students' perception of the lectures received after consent was obtained from participants. Questionnaires were given to the students after the dermatology posting. Data was entered into a data sheet and proportions were calculated. Tables were used to aid visualization. Inferential statistics using X^2 was employed to find the degree of association between the students who considered dermatology as a choice of specialization and those who did not in the two schools. The p-value was set at <0.05.

The rights of the respondents were respected and confidentiality was maintained. Post-assessment of students is part of educational development and it is encouraged by the Department of Internal Medicine in both universities.

Results

There was a high response of 85.3%: 75 out of 88 students filled out the questionnaire. Females were 64 % (48) of the total students. The majority of them were single 98.7% (74) and within the 18-24 years age group. About 74.7% (56) of the total pioneer medical students found the lectures interesting, 5.3% (4) of the students understood the lectures all the time, 60% (45) of the students understood what was taught most times, while 34.6% (26) understood sometimes. 97.3% of the students had their knowledge increased, and 81.3% had gained more confidence following the lectures; however, only 18.6% (11) considered dermatology as a choice of specialization.

All the students who considered dermatology as a choice of specialization also noted that their knowledge of dermatology improved upon receiving the lectures. They also agreed that their confidence in making diagnoses of skin lesions had improved when compared to the time they did not have any formal dermatology lectures. They all enjoyed the lectures.

The M: F was 2:5 for those who considered dermatology as a choice of specialization. The same proportion (18.6%) was influenced by the lectures to make this decision with a greater majority (78.6%) of these medical students positively considering dermatology as a choice of specialization; a lesser proportion (21.4%) not considering dermatology as a choice of specialization.

There was no significant difference between the students who considered dermatology as a choice of specialization and those who did not in the two schools (X^2= 0.9687, p-value =0.325008; Yates corrected X^2=0.4714, p value= 0.492352). There was no significant association between the students who were influenced by the lectures to consider dermatology as a choice of specialization and those who were not influenced by the lectures to consider dermatology in the two schools (X^2= 0.1414, p-value =0.706879; Yates corrected X^2=0.0795, p value=

0.777914). The reasons for finding or not finding the lectures appealing were categorized into 9; which are appreciation and correlation, interest, knowledge, lecture notes, lecturer's attitude, nil response, teaching aid, time, and understanding as seen in tables 2 and 3 below.

Retrospective analysis of lectures received: The two sets of dermatology students received lectures from the same lecturers except that the government-owned school had two extra dermatology educators. The lectures received were within two weeks excluding weekends with an average of 3 lectures per day. However, due to suddenly declared public holidays, some lectures had to be shifted to other days with not more than 4 lectures per day. The lectures received were in accordance with the approved medical curriculum with slight differences in administration.

The lectures were received from the morning hours to early afternoon with 1 hour break in between. Each lecture was slated for 1 hour, with a question-and-answer session inclusive. The lectures are physical and delivered via PowerPoint presentations while the students receive the soft copy after the lectures. Some dermatology lectures were included in the general medicine lectures, particularly for the government-owned school.

The students also learned dermatology from patients in the wards during calls and outpatients during clinics. In-patient dermatology cases are fewer when compared to outpatient cases seen in the weekly clinic. The cumulative dermatology exposure (CDE) which is defined as the number of years which the dermatology educators have been exposed to acquiring dermatology knowledge was more than 10 years for each. The CDE time typically would coincide with years that have been spent in clinical classes in medical school, years spent in residency, or any other postgraduate dermatology training and post-training experience.

Discussion

This study shows a higher number of female students in the pioneer set of two new medical schools in Rivers State. This is a shift from the male dominance in medical schools as seen in other studies with a lesser female population - Bakare (39.6%) and Statista, HPM (35%).[4,5] But it is similar to the study done by Statista E&S (67.4%) which had a high female population.[6] Majority were single and fell within the 18-24 years age group. This finding was similar to that of Bakare (90.8%).[3]

The majority of the students found the lectures interesting and appealing. Interest in the specialty has been known to influence the choice of medical education as noted by Teclessou et al.[3] The majority of the respondents understood what was taught most times while none of the students claimed a lack of understanding of all the lectures throughout the posting. The understanding of the lectures contributed to making the lectures appealing as seen in this study. The major reasons for finding the lectures appealing were the time-friendly nature of the lectures, the increased knowledge acquired, the visual aids used, and the lecturers' attitude. These reasons are similar to that in a study by Wittbecker et al.[7] The reasons why the lectures were not found pleasant were mainly the short time they had to assimilate the dermatology lectures. Alajmi et al and Ulaman et al. also noted this in their studies.[8,9]

Poor confidence in making dermatology diagnoses was seen in 89% of US medical students, and 95.1% were noted to have poor exposure to dermatology lectures in the study carried out by Ulman et al.[9] It has been noted that participating in dermatology activities such as clerkship and receiving of dermatology lectures have increased the interest in dermatology as seen in the study by Teclessou et al and the review done by Abdelwahab.[10,11] The increased confidence and knowledge gained by the students was noted in the majority of students. It has been shown that active face-to-face interactions such as receiving lectures in the classroom increase knowledge and interest in the subject.[9,10,11]

The fraction of students who considered dermatology as a choice of specialization was small. Studies carried out by other researchers showed variable figures as noted by Alajim et al. (6.6%), Teclessou et al (37.2%), Oche et al (3.8%), Hajizadeh & Mahmoodian (20.4%) and Levaillant et al (2.1%).[8,10,12,13,14] Although the reasons were not explored in this study, the reasons noted in other studies were the appeal of being a dermatologist, the

media portrayal of different specialties, and the likelihood of dermatologists' influence on patients' lives.[7,10,13]

The reasons for not opting for dermatology have been attributed to negative perceptions such as dermatologists being lazy and it not being the career choice ab initio.[11,12,15] In this study one participant had indicated one of the reasons of not finding the lectures pleasant was because it was not the participant's choice of specialization. Parental medical careers have also influenced their medical children's choice of specialty.[13]

Gender has been noted to affect the choice of specialization, with females more attracted to dermatology.[11,13,14] This study had more females wanting to do dermatology but the female predominance in the study may explain this as it is being increasingly noted that more females are getting into medical school.[6,15] A great majority of students were not influenced by the lectures which supports the observation that specialty choices are sometimes made before the commencement of training.[12] It is interesting to also note that a greater fraction of those who considered dermatology as a choice of specialization were positively influenced by the lectures received. This also goes to support the finding that specialty choices of medical students constantly change as they make progress in training;[11,13,14] although this study did not determine the previous specialties considered by them.

The retrospective analysis of the lectures received showed the administration structure of the two different schools was similar, with the same lecturers which is understandable since dermatology educators are scarce within the region.[4] It is noted from studies that there is no particular approach to teaching dermatology that is superior however a combination of enlightening and instructive methods is more successful.[16] A study revealed a positive relationship between teacher specialization relevant to the grade and subject taught and student reading achievement;[17] hence it is quite understandable that the teacher should be well versed as the study showed that a great majority understood the lectures as they were taught by certified professionals.

Conclusion

Dermatology lectures received by the pioneer students were found to be interesting and increased their knowledge and confidence in the management of skin diseases in the majority of them, however only few considered dermatology as a choice of specialization. Majority of the students who considered dermatology as a choice of specialization were influenced by the lectures received.

Recommendations

Dermatology educators should not be discouraged by the few numbers that are interested in the field of dermatology but should keep improving their practical and teaching skills. Dermatology should also be introduced early to the students. This may encourage more positive perceptions as their knowledge increases and they become more confident in diagnosing dermatology conditions.

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Table 1: Comparison of the students of the two schools

Characteristics	School A	School B
Ownership	State Government owned	Privately owned
Year of Dermatology Study	5th year	6th year
Response Rate	85.4%, 41 out of 48	85 % (34 out of 40)
Dermatology Educators:	4	2
M: F Ratio	3:5 (36.6%:63.4%)	6: 11(35.3%: 64.7%)
Dermatology as a choice of specialization	6 out of 41(14.6%)	8 out of 34(23.5%)
Influenced by lectures (those who chose dermatology)	5 out of 6 (83.3%)	6 out of 8 (75%)

Table 2: Positive responses from pioneer students (Lectures were appealing)

APPRECIATION & CORRELATION Could relate clinical cases to lecture (1)g (2)p Could relate with skin diseases that have also affected the individual (1)p	**INTEREST** Fun 1(p) Less tedious (1)g Creative (1)	**KNOWLEDGE** Enlightened on the management approach (1)p Informative (1)p Increased knowledge (1)p
LECTURE NOTES Simplified (1)p	**LECTURERS' ATTITUDE** Easy going (1)p Friendly (1)g 1(p) Interactive Q&A (1)p Punctual (3)g	**NIL RESPONSE** Nil response (1)p
TEACHING AID Good examples (1)g Pictures (5)g Poetry (1)g	**TIME** Enough time for other personal issues (1)g Enough time to cover topics (1)p Exclusively taught alone (1)p Short time of lecture (2)g Time-friendly lecture schedule (1)g	**UNDERSTANDING** Content of teaching (2)g Increased understanding (1)p

g- Government, p-Private, Q&A-Question and Answers

Table 3: Negative responses from pioneer students (Lectures were not appealing)

APPRECIATION & CORRELATION Cases on clinic days (Friday) are predominantly skin cases (1)p Difficulty in pronouncing terms (1)p Few dermatology cases admitted (1)p	**INTERESTS** Boring (1)g Not interested in the topics taught (1)p Not the choice of specialization (1)p Sleepy (1)g	**KNOWLEDGE** -
LECTURE NOTES Too many lecture slides (1)p	**LECTURERS' ATTITUDE** Lecturers were too fast (1) p	**NIL RESPONSE** -
TEACHING AID -	**TIME** Clash of priorities (re-sit exams on going with lectures (1)g Long lecture time (1)g (1)p Not enough time to assimilate (2)g (4)p Rushed lectures due to short time (5)p	**UNDERSTANDING** Complex topics making it difficult to understand (1)p Impaired by not having enough time (2)g (4)p Too many terms (4)p

Table 4: Analysis of lecturers

	Highest qualification	CDE (years)	NOL (G)	NOL (P)	Average lecture slides
1st	Fellow WACP, Consultant Dermatologist	28	11	11	90
2nd	Masters in Dermatology, Specialist Registrar Dermatology	19	13	7	29
3rd	Member WACP, Specialist Registrar Dermatology	15	5	-	28
4th	Member WACP, Specialist Registrar Rheumatology	13	1	-	41

WACP- West African College of Physicians, NOL- Number of Lectures, CDE- Cumulative Dermatology Exposure

APPENDIX 1: QUESTIONNAIRE

ASSESSMENT OF STUDENTS' PERCEPTION OF DERMATOLOGY LECTURES

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Kindly fill in the biodata and respond to the questions

Biodata

1. Gender: Male ☐ Female ☐
2. Age: 18-24 ☐ 25-34 ☐ >35 ☐
3. Marital status
   Single ☐ Married ☐ Separated ☐ Divorce ☐

Main Questions

4. Did you enjoy the dermatology lectures during the internal medicine and dermatology posting?
   Yes ☐ No ☐
5. State the reasons for your answer

   _____

   _____
6. Did you understand what was taught during the dermatology lectures?
   Always ☐ Most of the time ☐ Sometimes ☐ Never ☐
7. Did your knowledge and management of skin lesions improve from the lectures received?
   Yes ☐ No ☐
8. Have you gained more confidence in making the diagnosis of skin lesions? Yes ☐ No ☐
9. Do you consider dermatology as a choice of specialization in the future? Yes ☐ No ☐
10. Did the lectures that you have received influence you in considering dermatology as your choice of specialization? Yes ☐ No ☐

Thank you for your time,

Weber-Christian disease, A Rare disease, and Successful Treatment Using Prednisolone and Colchicine:

A Case Report from Nigeria and Literature Review

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Abstract

Weber Christian disease (WCD) is a rarely reported medical condition. It is an idiopathic lobular panniculitis, which is characterized by subcutaneous nodules, inflammatory cells in the fat lobules, and systemic symptoms. The literature has a handful of reports of WCD from different regions of the globe since the first descriptions by Pfeifer in 1892 and later in the 1920s by Weber and Christian. We report the first Nigerian case from the South East region of WCD. Being a rare entity, there were challenges with arriving at a diagnosis and successful treatment eventually with colchicine and low-dose prednisolone. Hence this report.

Keywords: Weber Christian Disease, Treatment, Colchicine, Prednisolone

Traitement de la maladie de Weber-Christian par la prednisolone et la colchicine : à propos d'un cas au Nigeria et revue de la littérature

Résumé

La maladie de Weber Christian (WCD) est une affection rare. Il s'agit d'une panniculite lobulaire idiopathique, caractérisée par des nodules sous-cutanés, des cellules inflammatoires dans les lobules graisseux et des symptômes systémiques. La littérature rapporte une poignée de cas de WCD provenant de différentes régions du globe depuis les premières descriptions par Pfeifer en 1892 et plus tard dans les années 1920 par Weber et Christian. Nous rapportons le premier cas de la région Sud-Est de la WCD du Nigéria Poser le diagnostic est difficile ainsi que sa prise en charge, d'où l'intérêt de notre cas qui a eu une évolution favorable avec la colchicine et la prednisolone à faible dose.

Mots clés: Maladie de Weber Christian, traitement, colchicine, prednisolone

Introduction

Weber-Christian disease (WCD) was first mentioned in 1892 AD by Victor Pfeifer.[1] It was also described in 1925 by Weber[1] and later by Christian. It is an idiopathic lobular panniculitis, which is characterized by subcutaneous nodules, inflammatory cells in the fat lobules, and systemic symptoms. Weber-Christian disease is a rare condition in adults all over the world, and even rarer in Africans.

There are few reports of WCD. In one cohort,[2] a total of 13 WCD patients' data were analyzed. Of the thirteen patients diagnosed with WCD, the majority were female, male to female ratio was 2:11, with a mean patient age of 50.1 years.[2] White and Winkelmann's 1998 case record review of WCD at the Mayo Clinic found only 30 documented panniculitis cases in 28 years between 1960 and 1998.[3] There have been reports in the past of a lot of misclassifications of panniculitis.[2-5]

This rarity of reported cases may be due to poor understanding of WCD and failure on the part of previous investigators, medical practitioners, and authors to follow clear guidelines as originally described by Weber and Christian for diagnosis of WCD and thus inability to differentiate it from other

closely related panniculitis. There is still ongoing debate on whether WCD is a clinical entity or not. The work of White and Winkelmann made a significant attempt at a clearer uniform classification for this group of inflammatory disorders with primary inflammation of the subcutaneous fat as a common denominator.[3] However, none of their suggested classification or final clinicopathologic diagnoses fit into the original clinicopathologic description of WCD by Weber and Christian.

Wick also published an extensive summary attempt at the classification of the panniculitides because of these controversies surrounding Panniculitis.[5] However, he did not describe any finding of recurrent fever simultaneously with non-suppurative panniculitis in the patients. In that classification, none of the defined sub-classes of panniculitis fits into the original classification by Weber and Christian for WCD. From the report of Idiopathic Lipoatrophic panniculitis of children by Iliana et al,[6] it can be deduced that none of the subclasses of panniculitis, as described by Wick, fits the Idiopathic Lipoatrophic panniculitis of children in that case report, and can best be summarized as an attempt to rename WCD in a child. The combination of recurrent fever with other constitutional upset and idiopathic non-suppurative lipophagic panniculitis is the difference between erythema nodosa and WCD.

We looked at the available literature and the case reports and did a critique of the details of how the previous authors (that reported WCD) arrived at the diagnosis of WCD and found that many of these reported cases in literature still fitted into the original description of WCD. Thus, this eponym WCD is still relevant in the light of available literature and should still be used. The incidence and prevalence of WCD are unknown both in the United States and internationally. Many physicians worldwide have only seen one or a few cases in a lifetime[1,2] and older physicians in Nigeria said they have not made this diagnosis in their practice of more than 20 to 40 years (personal communication).

There are still challenges with proper evaluation, diagnosis, and treatment. There are currently no established treatment guidelines. We, therefore, decided to add to the available literature this interesting case of a young woman who had lots of diagnostic and treatment challenges. We believe this rare case that responded to Colchicine and low-dose prednisolone, rarely reported, merits report being the first to be reported from Nigeria. We also reviewed available literature and brought an update on the latest trend about WCD. Hence this case report and literature review.

Case Summary

Our patient is a 21-year-old tertiary student from Imo State Nigeria, Igbo by tribe, whose first presentation to the University of Nigeria Teaching Hospital, Enugu (UNTH) was on the 5th of June 2014. She presented with vomiting, intermittent high-grade fever, fatigue, weight loss, anorexia, bilateral leg swelling, painful red macules, papules, and painful subcutaneous nodules on her arms, legs, buttocks, and anterior abdominal wall. The subcutaneous swelling started with the left arm, and then progressively spread over the hands, forearms, arms, ankle, abdomen, and lower limbs. There was transient redness over the sites of the painful subcutaneous swellings.

There was no history of cough, urinary symptoms, vaginal discharge, abdominal pain, diarrhea, sore throat, central nervous systems and other systems complaints. She is not known to have Hypertension, Diabetes mellitus, or Sickle cell disease. She had been seen by physicians earlier before her referral to UNTH. She was first reviewed and managed by the Dermatologist because she presented with fever and red painful swellings on the skin. Histology was done. Her working diagnosis was Panniculitis and treatment given was an escalated dose of prednisolone but no remission. She was thereafter referred to and reviewed by a musculoskeletal physician outside Southeast, Nigeria.

The working diagnosis was Dermatomyositis / Systemic lupus erythematosus and the tests requested were Antinuclear antibodies (ANA) screen, Extractible Nuclear Antibodies (ENA), Serum Creatine kinase, serum aldolase, and lactate dehydrogenase. Drugs commenced were firstly, escalated doses of Methotrexate, folic acid, and prednisolone but with no improvement. She had a later review via telemedicine and was started on Azathioprine 50mg thrice daily and Hydroxychloroquine 200mg daily. With this there

was no significant improvement in her clinical state, hence her referral to the Rheumatology clinic UNTH for further evaluation and management.

On examination, she was found to be chronically ill-looking and lethargic. She had pallor and bilateral pitting leg edema. She was febrile with a temperature of 38.6^{0}C. She had no jaundice or lymphadenopathy. Examination of the skin revealed discrete exquisitely tender plaques and subcutaneous nodules, scars, and a few superficial ulcerations on the forearms, buttocks, and thighs. She had tachycardia but her blood pressure was 110/50 mmHg. She had firm, mildly tender, smooth surface, hepatomegaly. The musculoskeletal system, nervous system, and chest examinations were normal. The working diagnosis was Panniculitis / Undifferentiated Connective Disease.

She had pulse IV methylprednisolone 500mg daily for 3 days, intravenous (I.V) antibiotics, and was started on Hydroxychloroquine and leflunomide. She showed remarkable improvement clinically and 2 weeks later was discharged home on oral low-dose prednisolone, Hydroxychloroquine, and leflunomide.

This improvement was short-lived and she represented 2 months later with another major flare with facial and lower limbs edema, reduction in urine output, crops of panniculitis lesions, pyrexia, anorexia, fatigue, abdominal pain, hepatomegaly, and elevated Blood Pressure. Her urinalysis showed proteinuria only and the renal function test showed mild azotemia. She was managed with pulse 2 weekly intravenous cyclophosphamide 500mg x 6 doses, pulse intravenous soluble methylprednisolone 500mg daily for 3 days, intravenous frusemide, and thereafter maintained on oral methylprednisolone, azathioprine, dapsone, and Hydroxychloroquine. She improved and was back on her feet.

However, in May 2015, she had another major flare with vomiting, intermittent high-grade fever, painful red macules, papules, and painful nodules on her arms, legs, buttocks, and anterior abdominal wall, fatigue, weight loss, and anorexia, and bilateral leg swelling. She was given a subcutaneous injection of Etanercept (Enbrel) 50mg weekly for three weeks in addition to oral Methotrexate 7.5mg weekly, folic acid 10mg weekly, and Prednisolone 15mg daily. Her clinical state improved but this was short-lived; in June 2015, after completing the last dose of Enbrel, she became very ill again.

The decision to repeat the serology tests and repeat the biopsy for histology was made. Serologic tests (Rheumatoid Factor, Anti-Cyclic Citrullinated Peptide, ANA / CTD screen, ANCA) and serum lipase tests came out negative and normal respectively, but the histology was highly suggestive of Panniculitis. Hence the diagnosis of Idiopathic lobular Panniculitis (Weber-Christian disease; WCD) was made. She was started this time only on Colchicine and 10mg daily of oral prednisolone and calcium and vitamin D supplements and all other previous medications were withdrawn.

She had a sustained remission of WCD to date. She later developed end-stage renal failure that required haemodialysis in 2020 and had a successful kidney transplant in Europe in 2022. Figures 1,2 and 3 show the pictures of the patient: spared face and healing panniculitis on both arms, patient's both healing active panniculitis on the right arm, and patient's active panniculitis on the left arm respectively.

Discussion

Weber-Christian disease is a rare disease. It is one of the diseases that share a common denominator, panniculitis. Panniculitis is a term for localized inflammation within the subcutaneous fat tissues. Distinctively it is called Weber-Christian disease when it is an idiopathic, non-suppurative aggregate of inflammatory cells within the fat lobules in the subcutaneous tissues and with constitutional symptoms, particularly fever.

Weber-Christian disease is rarer in children. At least two studies suggested its rarity in the population.[6,7] In Brazil, over 20 years (1983-2002) only 35 pediatric and adolescent cases of panniculitis were found, with only 6 cases met the description for Weber-Christian disease.[6] White and Winkelmann's 1998 case record review of Weber-Christian disease at the Mayo Clinic found only 30 cases in 28 years between 1960 and 1998.[3] However, at a critical review, many were found not to be definite WCD, but other diagnoses such as factitious panniculitis, erythema nodosum, and leukemia.

We presented a young woman, 21 years old, who developed symptoms which were suggestive of WCD but because of the rarity of this WCD, it was not thought of at the outset despite visits and reviews by many physicians. The onset was earlier than most reported cases in adults. The skin manifestation usually makes consult to a dermatologist an early consideration which was the case with our patient. This diagnosis was missed because constitutional symptoms were not considered. We conducted a thorough review of the literature for Nigerian cases and did not find any reported cases. Additionally, discussions with experienced physicians yielded no recollection of encountering or managing cases of WCD in Nigeria. This case may represent the first reported instance of WCD in Nigerians.

Weber-Christian disease is characterized by cutaneous lesions that appear in crops and constitutional symptoms that may resolve within weeks to months[6]. The skin lesions are often symmetric in distribution, and the thighs and legs are most commonly involved. Individual nodules may regress over a few weeks. The most commonly reported constitutional symptoms are fever, malaise, weight loss, arthralgia, and myalgia. Where the skin lesions appear over or around a joint, the patient may report arthralgia; and lesions over the thighs could be reported as myalgia.

This is often a cause of confusion and may lead to the generation of a strong differential diagnosis of more common causes of arthralgia and myalgia such as Systemic lupus erythematosus and dermatomyositis. This was the case with our reported patient. She historically led us initially into thinking it was arthralgia and myalgia. However, a careful examination of the skin and musculoskeletal revealed the tenderness was from the involved skin as in panniculitis which has remarkable non-tenderness of non-involved skin. Nodules may also appear, which are usually symmetric and measure approximately 1-2 cm, in the lower and upper limbs and less frequently trunk and face.

Our patient presented with involvement of both her upper and lower limbs, with more pronounced severity in the arms. The lesions appeared in crops, and resolved, with residual depressed scars. Some authors have reported brown oily liquid discharge from the lesions[8] but this is absent in our patient. Such oily discharge has been attributed to liquefaction necrosis in the subcutaneous fatty layer of the skin. Abdominal pain, hepatomegaly, splenomegaly, and evidence of renal system impairment may be seen in patients with visceral involvement. These features were seen at a time in our patient and we believed then it was a manifestation of visceral involvement.

Verrilli et al[9] reported a case of a 20-year-old woman with WCD that presented with severe bilateral ocular inflammation. There are other reports of ocular affectation though extremely rare.[10] Our patient did not have a visual impairment history and was not examined comprehensively for this. Some authors have suggested ocular evaluation.[10]

Though lung involvement has been reported,[11] our patient had no evidence of lung involvement. Weber-Christian disease can also present with central nervous system manifestations. In a case report by Mangiardi et al,[12] one patient exhibited WCD presenting as a dural mass causing the signs and symptoms of increased intracranial pressure.

Skin biopsy plays a critical role in the diagnosis of panniculitis. The most common histopathologic approach to diagnosis relies on the differentiation between predominantly septal or lobular panniculitis, as well as making a distinction between lesions with and without vasculitis. It is also very important to submit a part of the skin biopsy for microbiological analysis and for T-cell clonal expansion if T-cell lymphoma is suspected. Pathologically, the panniculitis of WCD is typically lobular with a mononuclear or pleomorphic cellular infiltrate, fat-laden macrophages, and varying degrees of giant cells.[1,13]

The diagnosis of WCD is based on relapsing fever, systemic inflammation, histological demonstration of panniculitis that is lobular, and an early neutrophilic infiltrate with fat degeneration, foamy histiocytes, and giant cell formation. It is different from erythema nodosum in which the panniculitis is septal and there are no febrile and other constitutional symptoms. The differential diagnoses for WCD are many.[13]

Great care is required to exclude the differentials and to reach a diagnosis of WCD. The list of differentials includes SLE, alpha-1-antitrypsin deficiency, pancreatitis, erythema nodosum, malignancies, Rheumatoid arthritis, dermatomyositis, and vasculitis. The patient we reported had tests at different times in the course of evaluation. There were lots of diagnostic challenges and many tests were done looking for a definitive diagnosis. The auto-antibodies were all negative and thus made unlikely Rheumatoid arthritis, SLE, and connective tissue diseases. The serums Lactate Dehydrogenase, Creatine Kinase, and aldolase were almost normal thus excluding biochemical evidence of muscle inflammatory damage and could not account for her symptoms.

The histopathology report by the pathologist was that of reception of a cuboidal-shaped skin biopsy specimen measuring 2cm x 1.5cm x0.5cm with a solid cut surface and was yellow. The microscopy revealed a section of skin showing atrophy of the skin and increased fibrocollagenization of the papillary and reticular dermis. The subcutis showed necrosis with chronic inflammatory cells which form follicles in some areas. Multinucleate giant cells were also seen. These are typical features of idiopathic lobular panniculitis and exclude vasculitis and erythema nodosum.

Her serum lipase level was also normal, which was strongly against pancreatitis. Alpha-1-antitrypsin deficiency was not done because of unavailability; however, the presence of high fever and characteristic histology made further pursuit of this diagnosis unnecessary. A radiograph of the affected joint showing calcification within the necrotic subcutaneous fat nodules has been described in WCD[14]. This may help subtly to differentiate WCD from other causes of inflammatory arthritis.

The aetiology of WCD is unknown. Pongratz et al suggested it could be due to dysregulation in T cells because they found that the reported patient only responded to a calcineurin inhibitor; cyclosporine A.[15] However, others have found responses to different drug classes suggesting different aetiopathogenesis. The episodic fever, discrete localized inflammatory lesions, and response to colchicine in some cases suggested auto-inflammatory disorder.

Treatment of WCD has remained hugely challenging. This is evident in the management of this patient in which many medications were tried. Many medications have been tried in the past for the treatment of WCD which include corticosteroids, antimalarial, colchicine, cyclosporine, mycophenolate, NSAIDS, tetracycline, thalidomide, and amphotericin B. Many medications have been reported effective in patients with WCD.[10,15-28] Some case reports concluded that cyclosporine A and corticosteroids have the best evidence of remission in WCD.

Pongratz G et al[15] reported the rare case of a 64-year-old male patient, with WCD who had background Rheumatoid arthritis which responded to corticosteroids and different disease-modifying drugs (Leflunomide, Sulphasalazine, methotrexate). However, the manifestation of WCD persisted. Switching to Ciclosporin A led to the resolution of symptoms of WCD.[15] Weber Christian disease was reported by Wang Y et al in a patient who had lung nodules that dramatically improved with corticosteroid and cyclophosphamide therapy.[11] They were found effective during the following 27 months. Mavrikakis et al reported a case of Orbital lobular panniculitis in WCD.[10]

The orbital affectation did not respond to conventional synthetic disease-modifying anti-rheumatic drugs. Occular lesions are noted to have sustained response only to anti-TNF treatment and thus the use of anti-TNF blockers is recommended for them.[10] Baskan et al[25] reported an intractable case of idiopathic nodular panniculitis–with failed response to corticosteroid therapy, and this had to be discontinued because of serious adverse effects.

Our patient however had a remarkably rapid and good therapeutic response to mycophenolate mofetil (MMF) monotherapy. Subash et al in 2019 reported a case of a 66-year-old Caucasian who eventually had successful treatment of WCD using Mycophenolate.[26]Another success story with MMF was reported earlier by Enk A H et al.[18] However, more research is necessary to determine the long-term safety and effectiveness of these

pharmacological treatments for individuals with idiopathic nodular panniculitis. The treatment reported by Mangiardi et al was only surgical excision. Even though the skin lesion was highly suggestive of lobular panniculitis, no comment on the drug for the WCD was made in this report.[12]

There are currently no effective methods of prevention and the prognosis is highly variable. The clinical course may be characterized by exacerbations and remissions of the cutaneous lesions for several years before the disorder resolves. Patients with severe systemic disease have high mortality.

In conclusion, Weber-Christian disease is still rarely reported and can pose serious diagnostic and thus management challenges. A high index of suspicion in patients with recurrent fever and panniculitis is required. Awareness of this rarely reported disorder should be created hence this case report and literature review.

Figure 1: Shows the patient's spared Face and healing panniculitis on both arms (original)

Figure 2: Shows the patient's healing active panniculitis on the right arm (original)

Figure 3: Shows the patient's active panniculitis on the left arm (Original)

Learning Points

- Weber-Christian disease is a rare disease with challenging diagnosis and management
- can occur in blacks
- Diagnosis requires a high index of suspicion

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NAD ENUGU 2023

——————— Theme: ———————

SOCIAL MEDIA AND DERMATOLOGY PRACTICE: CHALLENGES AND OPPORTUNITIES

Date: Wednesday 21st - Friday 23rd June 2023

Venue: Best Western Plus Hotel, Plot 607 Nza Street, Independence Layout, Enugu

NJD 2023 BOOK OF ABSTRACTS

▪ SOCIAL MEDIA/ TELEDERMATOLOGY

001: Whatsapp for Health Education: Empowering People with Albinism through Digital Intervention

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Background: Oculocutaneous albinism is a congenital disorder that is characterized by hypopigmentation involving the skin, hair, and eyes, due to lack of production of melanin. Skin complications that can arise in persons with albinism (PWA) include solar keratosis and skin cancers which increase morbidity. Educating PWAs is an important part of the management of albinism and in this era of advancing information technology, WhatsApp applications can serve as an interventional tool for digital health education.

Objective: The main objective of this study is to assess the impact of WhatsApp as a tool for providing health education among PWAs.

Methods: The design of the study was interventional. The intervention consisted of weekly health education sessions conducted in a WhatsApp group over 4 weeks. These topics discussed are knowledge of albinism, sun protection practices, use of sunscreen, and myths of albinism. An online questionnaire was filled out before and after the intervention. Mann – Whitney U test was used to compare the pre- and post-knowledge scores. Spearman's correlation was used to correlate data.

Results: The mean age of study participants was 28.28 years. The number of participants in the pre and post-intervention period were 140 and 66 respectively. A statistically significant increase in knowledge was seen in post-intervention ($p = 0.01$).

Conclusion: WhatsApp is an effective tool for educating PWAs and can act as an alternative to the conventional methods of health education. It shows promising outcomes irrespective of the health literacy level of PWAs.

Keywords: WhatsApp, Oculocutaneous Albinism, Health education, Teledermatology, Digital Health

002: The Teledermatology Experience in Nigeria: A Perspective Study Over One Year

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Background: Teledermatology has existed in informal forms for several years, but the COVID-19

pandemic underscored the importance of out-of-clinic services and the unmet need for dermatologists in Nigeria. This paper presents findings from a 1-year study (March 2021-March 2022) on the pattern of dermatoses and epidemiological features of patients seeking Teledermatology services from a Nigerian Dermatologist. Consultations were via secure instant messaging platforms and health technology to improve healthcare delivery.

Methods: The study analyzed data on 130 new Teledermatology patients including age, gender, location, skin type, lightening practices, and diagnoses. Diagnoses were mostly clinical, with support from laboratory investigations and histopathology when necessary.

Results: The male-to-female ratio of patients was 1: 3.1. The mean ± standard deviation age was 27.3 ± 8.3 years and 83.8% of patients resided in Nigeria. A total of 38 diagnoses were recorded and most patients (60.2%) had more than one. Overall, the five most frequent dermatologic complaints were acneiform disorders: 79 (38.7%), pigmentary disorders: 77 (37.7%), allergic/hypersensitivity disorders: 20 (9.8%), cosmetic dermatology: 10 (4.9%) and infections: 9 (4.4%).

Conclusions: Teledermatology is a valuable tool for meeting the dermatological needs of underserved populations, particularly given the current estimated ratio of one dermatologist to one million people in Nigeria. The use of tailored technology platforms over instant messaging services provides a fast, secure, and flexible method for consultation. Consequently, Teledermatology has the potential to enhance access to dermatologists and should be integrated into the Nigerian healthcare system.

Keywords: Teledermatology, Telemedicine, Online Consultation, Social Media, Dermatology

003: Analysis of Nigerian Based Skincare and Dermatology Content Creators on Instagram

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Introduction: The internet has become the most popular way to access information, and social media has made it even more engaging. Social media is a network that enables the sharing of information with millions of users worldwide. Lately, the trend has shifted towards using social media as a platform for education. Facebook, Twitter, Instagram, Snapchat, and TikTok are the most popular social media sites. (1) The credibility of those disseminating this information on public platforms is a concern. Social media has facilitated easier access to platforms where individuals can disseminate information to large audiences, frequently without conducting fact checks. Particularly worrisome is cosmetic-related health information because not everyone is qualified to provide advice on the subject, and while some advice can be harmless, others can have much more severe consequences. (2) Few studies have been conducted to characterize the qualifications of those who create popular dermatology-related content on social media. This research intends to do so on Instagram, with a particular emphasis on Nigerian-based content creators.

Methodology: This study analyzed the top 100 posts for 15 hashtags to determine which accounts produced the most popular and most viewed dermatology-related content. We also used the Google search engine to determine the most influential Instagram accounts based in Nigeria as related to dermatology and the skin. We recorded their credentials, account names, and engagement rates.

Results: The majority of accounts creating dermatologic content lacked medical credentials; the accounts with the highest followers were not medical professionals but were either promoters of whitening and organic products or skincare product vendors; and the engagement rate of medical professionals was lower than that of nonmedical professionals.

Conclusion: This study goes to show that dermatologists and physicians need to find a way to become more visible on social media platforms so we can counter this.

004: The Professional Use of Social Media among Dermatologists in Nigeria: Practice, Benefits and Risks

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Introduction: Social media use in all aspects of human life has been gaining ground, with more than half of the population using one or other form of social media technology. The ever-increasing number of social media users makes it a fertile ground for disseminating skin health education and reinforcing public skin health awareness. While research has shown that a large percentage of people turn to social media to seek health education, an increasing amount of information dissemination and trendsetters in dermatology are not dermatologists, with the attendant proliferation of incorrect and misleading information.

There is a need to increase the presence of dermatologists on social media for the right knowledge dissemination and reinforcement of skin health awareness. This survey examines the use of social media for professional use by dermatologists in Nigeria and the benefits and risks associated.

Methods: Respondents were interviewed using a pretested questionnaire containing their biodata and information about which social media they preferred to use, how long they spent on social media per day, and the perceived benefits and risks of social media use.

Results: A large proportion of respondents were female, 63.2% had used social media for more than 10 years and also used social media professionally, instagram was the most frequently used app (61%), while all respondents agreed that social media had numerous benefits, violation of patient-physician boundaries was the most important risk of social media use and lack of time to engage plus lack of policy guidelines was the most frequent reason given as an obstacle. A large proportion of respondents (84%) agreed on planning to increase their social media use in the future.

Conclusion: Social media as a professional tool has many benefits, and the provision of clear-cut policy guidelines to use may help increase the engagement of dermatologists online.

005: The Professional Use Of Social Media Among Nigerian Dermatologists: Practice, Benefits And Risks.

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Social media use in all aspects of human life has been gaining ground, with more than half of the population using one or more forms of social media technology. The ever-increasing number of social media users makes it a fertile ground for disseminating skin health education and reinforcing public skin health awareness.

Social media refers to websites or applications (apps) wherein the general public can create and distribute content, share photos and videos, and build social networks by interacting with other users in real-time. The impact of social media in broadening interpersonal connections, encouraging inter-physician collaboration, and promoting learning is undebatable, while research has shown that a large percentage of people turn to social media to seek health education, an increasing amount of information dissemination and trendsetters in dermatology are not dermatologists, with the attendant proliferation of incorrect and misleading information. There is a need to increase the presence of dermatologists on social media for the right knowledge dissemination.

006: Leveraging On Teledermatology for Review of Family Tree in a Sporadic Case of Christ-Siemens Touraine Syndrome

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Background: Ectodermal dysplasias have been described for over a century. They constitute over 100 inherited disorders characterized by anomalies in at

least two structures that are derived from the ectoderm (for example: nails, hair, sweat glands, and teeth). Ectodermal dysplasias usually occur in persons with a family history. The index case is that of a hydrotic ectodermal dysplasia with no family history.

The subject's relatives are however in various locations and the use of telecommunication gadgets and social media applications were utilized to analyze pictures and videos of the skin of his family members. This was a very valuable step in the review of this case. Genetic sequencing could not be done as there was no genetic record available to us.

There are two broad classifications of ectodermal dysplasias; hydrotic and hypohydrotic. The hydrotic variant is more common though the condition remains a rare one. There is the involvement of several genes. The defective gene results in a protean of manifestations in the primary organ involved (the skin and its appendages). The hypohydrotic/ anhydrotic variant is also called Christ-Siemens Touraine syndrome while the hydrotic variant is known as Clouston syndrome. Ectodermal dysplasias are rare variants that are even much rarer.

A 5-year-old male presented to our Clinic with complaints of frequent bouts of fever, delayed eruption of teeth, and other complaints for which a diagnosis of Christ-Siemens Touraine syndrome was made.

007: Social Media as an Effective Tool for Skin Health Education: A Case Study of the Dermlink Virtual Skin NTDs Training

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Background: Social media platforms have emerged as powerful sources of information worldwide. While often associated with entertainment and political news, these platforms possess significant potential for disseminating various forms of health education, including skin health.

Objectives: In this case study, we aim to highlight the role of social media in the effective dissemination of skin health information using popular social media platforms. The barriers to social media use will also be discussed.

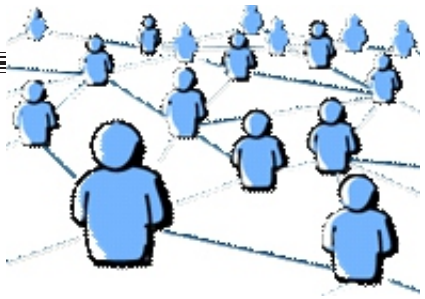
Methods: This was a cross-sectional study of health workers who registered for an online course using a virtual conference platform (Zoom) over three weeks, following information dissemination through popular social media platforms such as WhatsApp, Twitter, Facebook, Instagram, and LinkedIn using virtual posters and e-invitations. This study is part of the ongoing Virtual Skin Neglected Tropical Diseases (NTDs) training for health workers by the

Nigerian Association of Dermatologists from the International League of Dermatological Sciences (ILDS) DermLink Grant 2022/3.

Results: Over three weeks, the training received a total of 1,026 registrants from twenty-seven states across all six geopolitical zones of Nigeria. However, some participants were eventually unable to attend due to internet connectivity lapses.

Conclusion: Social media proves to be a valuable tool for skin health information dissemination and education, as demonstrated by the successful implementation of the Virtual Skin NTDs training. Recognizing the potential of social media in advancing dermatology education and utilizing it can significantly improve skin health outcomes in Nigeria and Africa as a whole.

Keywords: social media, skin NTDs, dermatology education



▪ DERMATOLOGY EDUCATION

008: Poetry: Response of Medical Students to Use in Teaching Dermatology

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Background: Poetry is one of the major categories of literature which is characterized by having a meter form, rhyme, rhythm, and other figurative expression. It can be incorporated in other forms of literature such as prose and drama as it was the focus of the World Poetry Day 2023 theme with the theme: 'Be a Poet even in Prose'. Poetry is being encouraged even in the teaching of medicine particularly in countries such as Australia, the United States of America, and the United Kingdom. This pilot study focused on the response of medical students to poems that were part of the lecture slides.

Method: Short excerpts of poems taken from a collection of poems 'Scar Songs' formed part of the lecture slides for two different topics on two different days during the dermatology posting for Year 5 medical students. The response of the medical students was judged by a voice note, hand count, body language, and attention paid to the poem during the reading.

Results: An average of 75 % raised their hands in the armature that they enjoyed the class. There were positive emotions such as smiles and laughter by the students. On the lecture assessment form a student stated the use of poetry aided his understanding.

Conclusion: The inclusion of poems in dermatology lectures was received with positive emotions by most of the medical students. Poetry is a useful tool in the teaching of skin disorders.

Keywords: Dermatology, Education, Medical, Poetry, Student

009: Assessment of Medical Students' Perception of Dermatology Lectures: Focus on Pioneer Medical Students

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Background: Students' choice of specialization has been noted to be influenced by the amount of exposure they have to a particular topic. This can come via the books they read and the amount of understanding they receive from being taught during tutorials and lectures. The foundation of understanding dermatology depends on the extent of the amount of exposure they have as students.

Aims: This study aims to find out the general perception of pioneer medical students regarding the dermatology lectures received and whether this has influenced them in considering dermatology as a choice of specialization.

Methods: Pioneer students of two new medical schools in Rivers State were given a self-administered questionnaire to seek the student's perception of the lectures received after oral consent was sought from participants.

Results: There was a high response (85.3%) rate to filling out the questionnaire. Females consisted of 64 % of the total students. A majority were single within the 18-24 years age group. A majority, 69.3% of the total pioneer medical students found the lectures interesting, 60% of the students understood what was taught most times, 97.3% had their knowledge increased, and 81.3% had gained more confidence however only 18.6% considered dermatology as a choice of specialization. A similar fraction (18.6%) was influenced by the lectures to make this decision with a greater majority (78.6%) of these persons positively considering dermatology as a choice of specialization.

Conclusion: Dermatology lectures received by the pioneer students were found to be interesting, and increased knowledge and confidence in the

management of skin in the majority of them however only a few considered dermatology as a choice of specialization. Overall, this choice was not influenced greatly by the lectures they received except for the few who considered specializing in dermatology.

Keywords: Assessment, Dermatology, Medical, Students, Perception

010: Behind the White Coat: Exploring Gambian Students' Perspective on Dermatology And Dermatologists

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Background: Perceptions of dermatology and dermatologists by medical students can vary widely depending on their personal experiences, exposure to the specialty, and cultural and societal beliefs. The lack of emphasis on dermatology in the medical curriculum can lead to misconceptions in the field. Therefore, medical students need to have a well-rounded understanding of dermatology and the role of dermatologists in the healthcare system.

Aim: Our study aimed to assess the medical students' perceptions of dermatology and dermatologists.

Methods: The study design was cross-sectional and was conducted in the School of Medicine and Allied Health Sciences, University of the Gambia, Banjul, Gambia. Participants were 700-level medical students undergoing their dermatology training. An online questionnaire was created which they filled out on both the first and last day of their dermatology training.

Results: A total of 72 responses were received in this research. The mean age of respondents was 25.69 years. Concerning their perceptions of dermatology, there was a statistically significant improvement in the etiology and treatment modalities of skin diseases at the end of their training. Additionally, a statistically significant increase was observed in the beliefs that dermatologists had high status, a high degree of responsibility, and free time for their patients after dermatology training.

Conclusion: Overall, there was a paradigm shift in the perceptions of the medical students towards dermatology and dermatologists. However, there is room for improvement in terms of reviewing the dermatology curricula, changing the pattern of training, and the employment of information technology.

011: Perception and Attitude of Medical Students to Dermatology Subspecialty in Tertiary Institutions in South-East Nigeria

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Introduction: Medical schools are responsible for delivering medical teaching to future physicians. Previous research has demonstrated that the teaching of dermatology in medical schools is highly variable, leading to low confidence among junior doctors in basic knowledge and skills such as skin lesion description.5,6 Early exposure to training in dermatology during medical school will enhance the preparation of future physicians to provide care for patients with skin disease. This study is aimed at determining the perception and attitude of medical students in training on dermatology as a subspecialty in tertiary institutions in Abia State South-East Nigeria.

Methods: This was a questionnaire-based descriptive cross-sectional study carried out on medical students in both the state-owned and private universities in Abia State.

Results: Three hundred and twenty-two (322) medical students participated in this study. The age range of respondents was between 20-37 years with a mean age + SD of 24.58 +2.98.

There were more females 181 (56.2%) than males 141 (43.8%). Out of the 322 respondents 96.6% have heard of dermatology, 87.6% knew it was a

subspecialty, 52.5% agreed to have been taught dermatology and 59.8% said they were taught in their final year.

About 32.9% have seen dermatology cases managed, 91% did not prefer dermatology as a subspecialty, 90.7% agreed that dermatology should be taught to all medical students, 85.7 % agree that they will have a better understanding of dermatology practice if taught and 81.4% agreed to confidence in managing simple dermatology cases if taught.

Conclusion: Improving baseline skills in dermatology for medical students through dermatology education will lead to an increased knowledge base and better management of skin diseases during their practices upon graduation.

Keywords: Perception, medical students, dermatology

▪ BIOLOGICS/THERAPEUTICS

012: BIOLOGICS IN DERMATOLOGY: AN UPDATE

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Background: Biologics are increasingly used in dermatological practice. More molecules are increasingly approved for use in a wide range of dermatological and non-dermatological disorders. Some of the biologics are important for causing a wide range of cutaneous adverse effects. As biosimilars become increasingly more affordable, more patients will be able to afford these medications. A thorough knowledge of these biologic medications including their adverse effect profiles is necessary for optimal dermatology practice in the years ahead.

Methods: A literature search on the subject using several search engines was conducted.

Results: Biologics in current use have been grouped into 7 classes viz tumour necrosis factor-a inhibitors, interleukin inhibitors, B-cell inhibitors, T-cell inhibitors, immune checkpoint inhibitors, interferon inhibitors, and a heterogenous group of all other uncategorized biologics. A review of these biologics including approvals, indications, and adverse effect profiles has been undertaken.

Conclusion: Biologics are increasingly being used in dermatology and providing excellent remission of many inflammatory and malignant skin diseases. Checkpoint inhibitors are notorious for many cutaneous adverse effects.

Keywords: Biologics, dermatology, update, tumour necrosis-an inhibitor, interleukin inhibitors

013: Therapeutic Advances in Dermatology: The Past Five Years

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Background: The past decade has witnessed an unprecedented addition of new therapeutic measures to dermatology care. Over the past five years, some of the older medications have gone out of favour primarily because of comparably lower potency or higher risk of adverse effects. Within this period, newer molecules with greater potency and lesser risks of adverse effects have been introduced into clinical dermatological practice.

Methods: A comprehensive search of literature on the subject was conducted and newer therapeutic molecules introduced over the past five years were identified.

Results: New medications licensed for use over the past five years include more potent biologics. Many small molecules for a wide range of dermatological disorders have also come into dermatological practice including Janus kinase inhibitors, phosphodiesterase inhibitors, androgen receptor inhibitors, and many more. Many other drugs are on the verge of being licensed.

Conclusion: The increasing number of new medications for the treatment of various dermatological disorders allows more options or even options where no reasonable ones existed previously. Dermatologists need to keep abreast of these newer options for therapy even though a small proportion of the population may afford them in Nigeria where payment for care is majorly out-of-pocket.

Keywords: Biologics, dermatology, update, Janus kinase inhibitors, phosphodiesterase inhibitors

014: Biologic Therapy in Inflammatory Dermatoses: Focus on Psoriasis and Atopic Dermatitis

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Psoriasis and atopic dermatitis (AD) are common chronic inflammatory diseases of the skin, with enormous cutaneous and systemic disease burden and significant impact on the health-related quality of life of affected persons. Both diseases result from a complex interplay of factors, a significant one being immune dysregulation. Appreciable degrees of success have been recorded in the control of AD and psoriasis using a robust array of conventional, complementary, and alternative therapeutic agents; however, the new kids on the block are biologics, which have revolutionized the management of these diseases.

Biologics are agents synthesized from products of living organisms, with activities that target specific molecular processes. Compared to conventional anti-inflammatory agents that suppress the overall immune system, biologics act more precisely by targeting specific inflammatory cells and/or mediators in the immune pathway.

The successful use of biologics in the management of AD and psoriasis attests to an improved understanding of the pathophysiology of these dermatoses, which in the long run portends a greater likelihood of disease prevention.

A couple of biologics are approved for the treatment of moderate-to-severe psoriasis, and fewer for AD. Due to the observed better risk-benefit ratios compared to conventional topical and anti-inflammatory systemic medications, they have become the mainstay of therapy in certain regions; and research is ongoing for the development of newer biologics, some of which are at different stages of clinical trials. The use of biologics in the treatment of patients in Nigeria is gradually gaining momentum; however, the cost implication as an out-of-pocket health expenditure remains a major deterrent.

▪ DERMOSCOPY

015: Dermoscopic features of Pityriasis Versicolor in University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu State

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Background: Pityriasis Versicolor [PV] is a common superficial fungal infection caused by organisms in the genus Malassezia. Patients often have hyperpigmented, hypopigmented, or erythematous macules and patches on the trunk, face, and proximal part of the upper limbs. Diagnosis can be made clinically; however, Wood's lamp examination, microscopy using potassium hydroxide [KOH], fungal culture, dermoscopy, and skin biopsy can be done to confirm the diagnosis. It is managed using antifungal agents. Dermoscopy is a noninvasive procedure that uses a handheld device to magnify and illuminate the skin. It can be used to visualize skin lesions in more detail than is possible with the naked eye. This can help identify subtle dermatological conditions, such as PV.

Objective: To assess dermoscopic features of Pityriasis Versicolor.

Methodology: The study was carried out at the Skin Clinic of the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu. It was a cross-sectional study. Patients with symptoms of PV such as hyperpigmented, hypopigmented, or erythematous macules and patches on the trunk, face, and proximal upper extremities were used. A total number of 113 individuals who met the inclusion criteria were consecutively recruited. Investigator-administered pretested questionnaires were used to obtain data. Patients' skin was examined in a well-lit room, followed by a dermoscopic examination. Data was analyzed using a statistical package for social science software (SPSS) version 23.

Results: There were more females affected than males with a ratio of 1.4:1. The most common dermoscopic finding in the study population was non-uniform pigmentation for both hypopigmented and hyperpigmented lesions, followed by perifollicular hyperpigmentation. The most common scaling pattern seen on dermoscopy was the patchy pattern in

hypopigmented lesions and the diffuse scaling pattern in hyperpigmented lesions. The most common vascular pattern seen on dermoscopy was the linear branching pattern in 69% of the participants.

Conclusion: Dermoscopy can be a useful tool in the diagnosis of PV. The dermoscopic features of PV can help to distinguish it from other skin conditions, such as tinea corporis, nummular eczema, and idiopathic guttate hypomelanosis.

016: Dermoscopic Patterns in Patients with Scabies in the University of Nigeria Teaching Hospital Ituku-Ozalla

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Introduction: Scabies is a highly contagious skin parasitosis caused by Sarcoptes scabiei var hominis.

The mode of transmission is by close physical contact with an infected person or contaminated material. Diagnosis can be made clinically and confirmed by light microscopic identification of the mites, larva, ova, or scybala in skin scrapings. It is managed using antihistamines and scabicidal agents. Dermoscopy is a noninvasive procedure that uses a handheld device to magnify and illuminate the skin. It can be used to visualize skin lesions in more detail than is possible with the naked eye. This can help identify subtle dermatological conditions, such as scabies.

Methods: This was a hospital-based cross-sectional study conducted at the dermatology clinic of UNTH, Enugu. A total of 170 patients were consecutively recruited into the study.

Results: The mean age of the patients was 26.95 ± 17.24, with more female participants (55.3%) than males (44.7%). The majority of the subjects (72.4%) had attained the secondary school level of education. Most of the patients were in the unemployed, student, and subsistence farming categories of occupational status. Direct visualization of the mite on dermoscopy was the most common finding in the study population at 86.9%, followed by the "delta wing jet" sign at 71.8%.

Conclusion: Dermoscopy is a useful tool in the diagnosis and follow-up of patients with scabies.

▪ PEDIATRIC DERMATOLOGY

017: Use of Moisturization in the Management of Lamellar Ichthyosis: A Case Report

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Background: Lamellar ichthyosis (LI) is a heterogeneous genetic disorder that is mainly inherited in an autosomal recessive pattern. LI presents at birth in a clear form with the characteristic collodion membrane (a parchment-like membrane) that covers the whole of the baby's body, which over the first weeks of life, is replaced by generalized brown to dark large plate-like scales that appear in a mosaic pattern. It may also be associated with minimal or no erythema, ectropion, and eclabium. There is currently no curative therapy for LI. The mainstay of treatment remains to alleviate symptoms, largely with the use of topical emollients and keratolytic agents such as urea, lactic acid, propylene glycol, tretinoin, and, in more severe cases, oral retinoids. Treatment is generally targeted at scale removal, restoring skin barrier function, and reducing trans-epidermal water loss (TEWL).

Case Summary: A 9-week-old male infant was brought to our dermatology clinic on account of generalized scaly skin lesions. The baby was observed to have presented at birth with a covering of the entire body by a taut translucent membrane which later developed into fissures and generalized plate-like scalings. There was also a history suggestive of bilateral ectropion and hair loss. Examination of the baby revealed generalized hyperpigmented thick scaly plaques worse on the trunk and distal limbs, bilateral ectropion, and generalized scalp hair loss (sparing the central frontoparietal area). The patient was managed with moisturizer and emollients (white soft paraffin and light liquid paraffin emollient *E45 CREAM) with resultant marked clinical improvement in skin lesions

Conclusion: Lamellar ichthyosis is a disorder of keratinization that manifests with lifelong widespread scaling, which is associated with cosmetic disfigurement with a resultant negative psychosocial impact. Topical agents with moisturizing, keratolytic, and emollient properties are the main long-term treatment options.

018: Fixed Drug Eruption to Griseofulvin in a Child: A Case Report and Review Of Literature

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Introduction: Griseofulvin is an antifungal medication most commonly used to treat fungal infections of the scalp such as tinea capitis in children but can also be used to treat other fungal infections of the skin and nails that do not respond to topical agents. In addition to its effect on the liver, it is associated with Fixed Drug Eruption(FDE) which is rare, especially in children.

Case Report: We present a case of a 3-year-old boy with FDE following ingestion of griseofulvin used for the treatment of tinea capitis. The patient was successfully treated with an alternative antifungal, the use of oral antihistamines and topical emollients, vitamins, and zinc. No topical steroid was used.

Discussion: Fixed drug eruption (FDE) is described as skin lesions that appear in the same part of the body due to repeated exposure to a drug. Griseofulvin is implicated in cases of drug hypersensitivity and it causes phototoxic and photo-allergic eruptions as well as serum sickness-like-reaction, acute generalized exanthematous pustulosis, subacute cutaneous lupus erythematosus, and toxic epidermal necrolysis which are well documented in adults. Our patient had griseofulvin-induced urticaria which metamorphosed into hyperpigmented macules and plaques ten days after taking the medication.

Conclusion: Fixed drug eruption to griseofulvin is a rare occurrence in African children and its cutaneous reaction is noteworthy. Griseofulvin though a mainstay of therapy for tinea capitis in children, an alternative is suggested in cases of fixed drug eruption.

▪ HAIR/SCALP DISORDERS

019: Syphilitic Alopecia and its Close Mimic: Navigating Diagnostic Challenges

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Background: Syphilis is usually referred to as the "great mimicker" in dermatology due to its varied clinical presentations that are similar to a wide range of conditions. Syphilitic alopecia, a non-cicatricial alopecia, is an uncommon feature of secondary syphilis. It is a very close mimic of alopecia areata both clinically and on trichoscopy. Previous studies have described that the absence of exclamation mark hairs which is a hallmark of alopecia areata on trichoscopy is an important pointer to the diagnosis of syphilitic alopecia. Here, we report a case of syphilitic alopecia with exclamation mark hair on trichoscopy highlighting the diagnostic dilemma in differentiating between syphilitic alopecia and alopecia areata by scalp examination and trichoscopy and the role of a holistic evaluation in improving diagnostic accuracy.

Case Summary: We present a case of syphilitic alopecia in a 26-year-old male heterosexual with Human Immunodeficiency Virus (HIV) who presented with patchy alopecia on the scalp and multiple scaly lesions on both palms and soles with complete resolution of symptoms after antibiotic treatment

Conclusion: There remains a diagnostic dilemma in distinguishing between syphilitic alopecia and alopecia areata both clinically and on trichoscopy. Exclamation mark hair which has been previously known to be the diagnostic hallmark of alopecia areata can also be seen in syphilitic alopecia. A holistic evaluation is vital in improving diagnostic accuracy, especially in a resource-poor setting.

Keywords: syphilitic alopecia, trichoscopy, exclamation mark hair.

020: Alopecia Totalis in a 10-Year-Old Girl Successfully Treated with Tofacitinib

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Alopecia Areata (AA) is an autoimmune disorder that results from T-cell mediated attack on hair follicles. This results in rapidly developing areas of non-scarring hair loss in the scalp and beard. It can progress to total scalp hair loss (alopecia totalis) and loss of eyebrows, eyelashes, and total body hair (alopecia universalis). The prognosis varies widely, and poor outcomes are associated with an early age of onset, extensive hair loss, the ophiasis variant, nail changes, atopy, and a family history of AA. Although there are several available treatment modalities for AA, the efficacy of most of them is not satisfactory in the case of alopecia totalis. JAK Inhibitors are remarkably effective in many autoimmune diseases including AA. Herein, we report a case of alopecia totalis in a 10-year-old girl successfully treated with tofacitinib.

▪ SEBACEOUS GLAND DISORDERS

021: Adolescent and Post-Adolescent Acne in Skin of Colour Individuals

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Background: There is an increasing incidence of post-adolescent acne but most of the literature on acne has been of adolescents. This study aimed to document the clinical profile of facial acne vulgaris and to compare post-adolescent to adolescent acne.

Methods: Prospective study of 261 patients who had facial acne vulgaris from February 2021 to March 2022. Socio-demographic parameters, type of acne lesions, BMI, and severity of acne were noted. Acne was classified as persistent, late-onset, recurring acne, and adolescent acne. In this study, patients aged 20 years and below were regarded as having adolescent acne, and those aged 25 years and above as having post-adolescent acne. Adolescent and post-adolescent acne individuals were compared.

Results: The prevalence of acne was 17.2%. The population was 75.5% female with a mean age of 24.5±7.5 years. The mean age at onset of acne was 18.1± 6.7 years with 69.7% having an onset at age 11 – 20 years. The severity of acne was mild, moderate, and severe in 44.8%, 48.3%, and 6.9% respectively. Acne was non-inflammatory in 69.7%, occurred on the whole face in 91.2%, and mean BMI± SD was 23.6 ± 4.5. Acne was adolescent in 38.7%, persistent in 27.6%, late-onset in 18.0%, and recurring in 15.7%. Differences between adolescent and post-adolescent acne included a higher BMI, inflammatory acne, and more severe acne in post-adolescent.

Conclusion: Acne occurs in all age groups and there are differences between adolescent and post-adolescent acne. These differences should be taken into consideration during treatment.

Keywords: Acne, Adolescent, Post-adolescent, Skin of color

022: Prevalence of Hidradenitis Suppurativa in an African Population: Validation of a Screening Questionnaire in Lagos, Nigeria

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Background: Studies of Hidradenitis Suppurativa

(HS) studies from Africa are few. This study aimed to determine the prevalence of HS in Lagos, Nigeria, and to validate an HS screening questionnaire.

Methods: This was a cross-sectional study of 802 healthy adult Nigerians who accompanied their relations to the outpatient Family Medicine clinic and the eye clinic of the Lagos State University Teaching Hospital in Lagos, Nigeria following ethical approval. The study was conducted using a validated screening questionnaire over three months in 2022. Screen-positive participants were clinically examined. Severity was assessed using the Hurley Score.

Results: The prevalence of HS was 2.2% with no gender predominance. The median age in the HS group was 34 years (IQR 28-42), and the median BMI of the HS patients was 27.0 (IQR 21.4-28.6). There was no significant difference in BMI between the HS and control group. The screening questionnaire had a sensitivity of 1 (18/18), a specificity of 0.8 (20/25), a positive predictive value of 0.8 (18/23), and a negative predictive value of 1 (20/20). The axilla was the predominant site of affection (66.7%), and all HS patients had mild disease severity (Hurley Score I).

Conclusion: The prevalence of HS is high and BMI was not a risk factor. The axilla was the most affected site and the severity of HS is mild(Hurley Score I). In addition, the HS screening questionnaire is suitable for population surveys.

023: Clinical Profile of Hidradenitis Suppurativa in Skin of Colour Individuals

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Background: Hidradenitis suppurativa is an uncommon debilitating skin appendage disorder. The result of this is that documentation of its prevalence and clinical features is rare.

Objectives: To document the hospital prevalence of hidradenitis suppurativa and its clinical features

Study design: This is a retrospective case review spanning six years. Records of all patients diagnosed with hidradenitis suppurativa at seven dermatology outpatient clinics between January 2017 and December 2022 were retrieved and relevant information was extracted using a study questionnaire.

Results: The prevalence of HS was 0.47% and the population was 75.7%. female. The age range and median (IQR) age of the patients was 12-59 years and 30 (24, 36) years. Median (IQR) age at onset was 26 (20.32) years and median (IQR) duration was 36 (12, 60) years. A delay in diagnosis was noted in 34.4%. Smoking was reported in 3 persons, acne in 29.7%, diabetes in 4.7%, and overweight/obese in 40.6%. Hidradenitis suppurativa was located in the Axilla in 85.9%, groin in 34.4%, genital in 20.3%, breast in 9.4%, buttocks in 18.8%, and atypical sites in 15.6%. Hurley stage was 0, I, II, and III in 1.6%, 42.2%, 35.9%, and 20.3% respectively.

Conclusion: Hidradenitis suppurativa is uncommon in Nigerians and when present is severe due to a delay in diagnosis

Keywords: Hidradenitis suppurativa, clinical features, Hurley's stage, co-morbidity

▪ INFECTIOUS DERMATOSES

024: The Role of Corticosteroid in a Case of Actinomycetoma in South-West Nigeria: A Case Report

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Background: Madura foot is a rare, chronic infection of the skin and subcutaneous tissue caused by filamentous bacteria (Actinomycetoma) or fungi (Eumycetoma). It commonly presents with the triad of painless swelling, sinus formation, and discharge of granules. Steroids are not routinely recommended in the treatment but could potentially shorten the clinical course of the disease. Mycetoma can result in foot amputation if diagnosis is not promptly made or if medical treatment fails which can negatively impact the patient's quality of life.

Case Presentation: We report a case of a 34-year-old petty trader who presented with a one-year history of

progressive swelling and pain in the right foot with sinuses discharging pus and grains. The histopathology report and radiograph of the right foot were consistent with that of Actinomycetoma. She had the modified two-step treatment with Clotrimazole tablets 960mg twice daily and Intravenous Gentamycin 160mg daily (4 weeks) and was maintained on Doxycycline 100mg twice daily and Clotrimazole 960mg twice daily for the later 6 months. She also had a short course of prednisolone for persistent pain and swelling in the initial 2 weeks of treatment with good and sustained clinical response by the second month of treatment.

Conclusion: Prompt diagnosis, and use of antimicrobial combinations and steroids have proven to be effective in the management of Actinomycetoma.

Keywords: Madura foot, Actinomycetoma, Steroid, Treatment.

025: Pattern of Infective Dermatosis in Diabetic Patients in Kaduna North-western Nigeria

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Background: Diabetes mellitus is the most common metabolic disorder whose initial presentation could be suggested by either recurrent or specific skin infections. Previous studies have shown skin infections as the most prevalent skin disorder among diabetic patients, affecting about 20% of these patients. Factors implicated in the increased susceptibility of diabetic patients to skin infections include hyperglycemia, immune dysfunction, microangiopathy, and macroangiopathy.

Aims and objectives: This study aimed to determine the spectrum of infections among Diabetic patients and the factors influencing their occurrence.

Materials and method: This was a cross-sectional study conducted at the medical outpatient clinic at BDTH Kaduna. Diabetics with skin disorders attending the clinic from June to July 2022 were included in this study. Records of the patient's age, sex, fasting blood sugar, body mass index, and duration of diabetes were documented. An evaluation of the type of skin infection was made clinically and confirmed in the laboratory in some cases. Data was analyzed using IBM SPSS Statistics version 25.

Results: A total of 125 diabetic patients were seen during the period. Thirty- five (28%) of the patients had skin infections,15 (42.9%) of whom had fungal infections. There was no significant relationship between skin infections, blood sugar, body mass index, and waist circumference.

Conclusion: Dermatophytes and candida infections are very common in diabetics. These commonly affect areas where there is close apposition of skin; as such these areas should be examined during routine clinic visits.

Keywords: Infective dermatosis, Diabetics, Pattern

026: Case Report: Atypical Presentation of Varicella as Acute Abdomen, Thrombocytopenia and ARDS in an Immunocompetent Adult

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Introduction: Varicella (chickenpox) is an infectious disease caused by the varicella zoster virus.

The incidence of chickenpox in adults has increased in recent years, with an attendant increment in morbidity and mortality. Pneumonia is a serious complication of varicella infection in adults usually seen in immunocompromised patients with a need for mechanical ventilatory support. Varicella can also present atypically with intestinal obstruction and peritonitis. We report a case of a 32-year-old immunocompetent adult with no identifiable risk factor who was referred to the general surgeons and Infectious diseases unit. Presenting symptoms were features of intestinal obstruction and atypical skin lesions, he developed thrombocytopenia, varicella pneumonia, and ARDS. Presenting symptoms were generalized vesicular, itchy rash involving the palms of two days

duration which was preceded by a four-day history of generalized abdominal pain, inability to pass stool, and fever. There was no history of contact or recent travel.

On examination, the patient had pyrexia with generalized vesicular rash at different stages of development with hemorrhagic crust. There was no peripheral lymphadenopathy. Abdomen was full, and mildly tender with diminished bowel sound, He developed acute onset breathlessness two days after admission and succumbed to the illness despite medical intervention.

027: Infectious Skin Disease Profile of Children Attending the Paediatric Dermatology Clinic at the University of Port Harcourt Teaching Hospital, Port Harcourt

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Background: Infectious skin diseases (ISDs) are common among children in our environment.

They constitute an important cause of morbidity in affected children.

Objective/Aim: To describe the prevalence and pattern of ISDs seen in our practice.

Methods: This was a prospective descriptive study of consecutive children aged 0-17 years presenting at the Paediatric dermatology clinic in UPTH over a two (2) year period (January 2021 – December 2022).

Results: Out of the 651 children seen within the period under review, 184 (28.3%) had ISDs. The mean age of the children with ISDs was 5.3 ± 1.8 years with a male-to-female ratio of 1.1:1. Fungal skin infections were seen in 59 (32.1%) children. Parasitic skin infections were found in 57 (31%) patients while viral and bacterial skin infections were diagnosed in 49 (26.6%) and 19 (10.3%)patients respectively. Based on the aetiologic group, the most frequently occurring ISDs were: Scabies in 52 (28.3%); Dermatophytoses in 32 (17.4%); Hand, foot, and mouth disease in 17 (9.2%), and Impetigo in 14 (7.6%).

Conclusion: Infectious skin diseases were common in our practice with Scabies and Dermatophytoses being the most common. There is a need for continued efforts to strengthen the prevention as well as early diagnosis and prompt treatment of ISDs to limit the morbidity associated with them.

Keywords: Infectious, Skin Diseases, Children, Port Harcourt.

028: Coinfection of Monkeypox (Mpox) and Chickenpox in an Immune-Compromised Adult Nigerian

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Monkeypox virus is an orthopox virus that is endemic in Central and West Africa. Its presentation is often confused with other rash illnesses such as Smallpox, Chickenpox, Measles, Scabies, and drug-associated allergies. A laboratory test is needed for a definitive diagnosis.

We describe a case of coinfection of Monkeypox with Chickenpox in an immunocompromised adult in Nigeria and highlight its severity.

Keywords: Monkeypox, Chickenpox, Immunocompromise.

029: Disseminated Kaposi Sarcoma without Cutaneous Involvement

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Background: In 1872, Moritz Kaposi first described Kaposi sarcoma (KS) as an idiopathic multiple-pigmented sarcoma of the skin. Over the decades, KS has been classified into classic, endemic, iatrogenic, and AIDS-associated with the AIDS-associated KS being the most common. The cutaneous features of KS are so characteristic; purplish, reddish blue, dark black macules, plaques, and nodules, that in the absence of cutaneous involvement, make the diagnosis of KS very cryptic. This can result in

delayed diagnosis and an increase in morbidity and mortality, especially in immunocompromised patients.

Methods: We describe a patient with disseminated AIDS-associated KS without the characteristic cutaneous manifestations.

Results: A 23-year-old female student presented with a six-month history of recurrent cough, multiple swellings around the head and neck, and a month-long history of bilateral leg swelling. She was diagnosed with HIV infection 3 months before presentation and commenced on ART but stopped due to poor tolerance. Clinical examination and preliminary investigations showed the involvement of the lung, lymph nodes, and pericardium. She was being managed for disseminated tuberculosis before the result of a lymph node biopsy revealed KS. In a large cohort of 5932 HIV-infected patients reported in the literature, 319 were identified with KS. Only 11 of the patients with KS (5.4%) had non-cutaneous involvement.

Conclusion: Non-cutaneous KS is easily misdiagnosed in HIV patients. This is because of their susceptibility to opportunistic as well as typical infections. This case highlights the need to expand and effectively rule out differential diagnosis in HIV/AIDS patients especially when they are unresponsive to treatment.

Keywords: AIDS-associated KS, non-cutaneous involvement, lymphadenopathy.

030: Knowledge of Nigerian Health Workers about Skin Neglected Tropical Diseases – The Need to Bridge the Gap

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Background: Nigeria carries a significant burden of Neglected Tropical Diseases (NTDs) in

Africa with an estimated 25% of all cases. Ten of the WHO-recognised NTDs are characterized by cutaneous manifestations. They are known as skin NTDs and some are prevalent in Nigeria. However, due to the limitations of diagnostic capabilities, they often remain undiagnosed, untreated, and unreported.

Objectives: This study aimed to assess the knowledge and perceptions of health workers in Nigeria regarding skin NTDs.

Methods: A cross-sectional observational study was conducted using data collected from the online (Google) registration form of an ongoing virtual skin NTD course. The form included demographic and occupational information, as well as ten questions rated over ten on skin NTDs. Microsoft Excel and Google Sheets were utilized for data analysis.

Results: A total of 871 health workers registered for the course and 52.7% were females. Of the participants, 54% were medical doctors, 11.5% were community health workers, 9% were nurses and another 9% were pharmacists. The overall average score for the pretest was 7.4 out of 10. Medical doctors had the highest average score of 7.9/10, whereas nurses had the lowest average score of 5.8/10.

Conclusion: Overall, the knowledge of health workers about skin NTDs was found to be above average. However, there was a significant knowledge gap among some cadres of health workers. Bridging this gap requires improving the diagnostic abilities of primary care providers, which is key to the effective management and control of skin NTDs in Nigeria.

Keywords: skin NTDs, dermatology education, health workers

031: Cutaneous Aspergillosis in an Indian Immigrant in Nigeria Immunocompetent Male - A Case Report.

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Background: Aspergillosis is caused by Aspergillus species which are ubiquitous molds found in our environment. It primarily affects the lungs but can disseminate to other organs causing syndromes like cutaneous aspergillosis. Primary cutaneous aspergillosis may also occur usually following traumatic inoculation. We present a 37-year-old man with a two-month history of generalized rash. Culture of skin lesions yielded Aspergillus niger. The patient was commenced on itraconazole which was followed by a resolution of rashes a month into therapy. Disseminated aspergillosis is commonly encountered in the immunocompromised but our patient was immunocompetent, HIV-negative, and had no other underlying morbidities. This increases the need for a high index of suspicion of fungal diseases in skin conditions at the outset when patients present regardless of their immune status.

▪ ECZEMATOUS DERMATITIS

032: Napkin Dermatitis: Skin Hydration Levels and Skin Care Practices amongst Children at Urban Comprehensive Health Centre, Ile-Ife, Nigeria

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Introduction: Napkin dermatitis (ND) means skin inflammation occurring within the napkin area. Skin care practices and skin hydration levels (SHL) are parameters of interest in the pathogenesis of ND.

Aim and objectives: To compare napkin area skin care practices and levels of skin hydration in children with ND and those without ND and to determine the predictors of ND in children.

Methods: This was a case-control study of 60 participants with ND and 60 age and sex-matched controls without ND, aged below 12 months that used napkins. Information on napkin area skin care practices was obtained from parents and diagnosis of ND was made clinically. Skin hydration levels were measured using a Corneometer®.

Results: The median age of children was 16 ± 17.1 weeks (range 2-48 weeks). Controls were more likely to use appropriate barrier agents compared with participants with ND (71.7% vs. 33.3%; p<0.001). There was no significant difference in the mean SHL ± SD of participants with ND and controls on the non-lesional (buttock) area (42.00 ± 19.71 vs. 43.46 ± 21.68; t= -0.384, p= 0.702). Controls who always used a barrier agent were 83% less likely to have ND than those who did sometimes and those who never used a barrier agent (OR: 0.168, CI: 0.064 - 0.445, p< 0.001).

Conclusion: Consistent use of an appropriate barrier agent could be protective against ND.

033: Erythroderma as a Manifestation of Hypereosinophilic Syndrome: A Case Report

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Background: Hypereosinophilic syndrome is characterized as persistent eosinophilia (absolute eosinophil count ≥ 1500 cells/uL) for more than six months, linked with organ involvement, excluding secondary causes. It is an uncommon, potentially fatal disease that should be evaluated in cutaneous diseases associated with hypereosinophilia. Early recognition and treatment are essential to prevent morbidity and mortality.

Case Report: We report the case of a 34-year-old male, who presented with a 3-month history of generalized exfoliative dermatitis, it was said to have started as generalized papules, which subsequently began to exfoliate. There was a history of associated swelling of the hands and face. He had a preceding history of fever, and weight loss before the onset of skin lesions. He also had accompanying pruritus. On examination, he had hyperpigmented plaques, with marked scaling and crusting, affecting up to 90% of BSA. There was involvement of the palms, soles, eyelids, and lips. He had lymphadenopathy (axillary, inguinal, epitrochlear, and supraclavicular groups), hepatosplenomegaly, and pleural effusion.

Skin histology showed pockets of inflammatory cells, and peripheral blood film showed an absolute eosinophil count of up to 23157 cells/uL, marked leucocytosis 74.7 x 109/L. Bone marrow histology showed marked cellularity, with an abundance of myeloid cells, and increased eosinophils (up to 20% of marrow element), all maturing in series and sequence.

Immunohistochemistry was strongly positive for CD99, Stool microscopy was negative for parasites and/or ova. He was commenced on tabs of prednisolone 60mg daily, emollients, and IV fluids with topical steroids, the patient however deteriorated while on admission and died.

Conclusion: Hypereosinophilic syndrome can have a range of cutaneous manifestations, among which is erythroderma. A thorough workup is needed for every presentation to avoid missed diagnoses and enable prompt treatment.

034: A Three-Year-Old Boy with Ricketts and Atopic Dermatitis

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Introduction: Ricketts is a condition associated with impairment of bone mineralization and it occurs uniquely in children and adolescents. This is due to the low extracellular concentration of calcium and phosphate ions. The causes include reduced synthesis of 1,25 dihydroxyvitamin D, hypocalcemia, and vitamin D-dependent ricket. The skin is important in vitamin D synthesis and severe skin disease can predispose to ricketts.

Methods: Here we present a three-year-old with Ricketts and atopic dermatitis and delayed milestones.

Conclusion: Ricketts and atopic dermatitis can occur in children and can have a lot of impact on the child's and parent's lives.

Keywords: Ricketts, Atopic dermatitis, Children

▪ CUTANEOUS MALIGNANCIES

035: Eccrine Angiomatous Hamartoma in an Adolescent Girl

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Introduction: Eccrine angiomatous hamartoma (EAH) is a rare benign malformation characterized by a proliferation of eccrine glands and capillary vessels with a predominantly congenital and adolescent occurrence. Eccrine angiomatous hamartoma is diagnosed based on its histopathological features.

Case report: We report the case of eccrine angiomatous hamartoma in a thirteen-year-old girl who was attended to at our clinic with a one-year history of painful plaques, patches, and hyperhidrosis on the left leg. She had a history of surgery on the same leg at the age of two years for an unknown indication by the mother with poor healing necessitating the use of crutches. Histopathological evaluation revealed a dermal proliferation of eccrine glands admixed with ectatic blood vessels. Therapeutic options in EAH include Lasers, botulinum toxin injection, and surgical excision. Our patient was offered surgery.

Conclusion: The prognosis for EAH is good: no malignant transformation although spontaneous regression does not occur. We have reported this case to highlight the importance of histopathology in the diagnosis of EAH.

Keywords: eccrine angiomatous hamartoma, telangiectasia, eccrine harmatomas

036: Fungating Diabetic Leg Ulcer: An Unusual Presentation of Mycoses Fungoides

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Introduction: Diabetic leg ulcers are a common complication of diabetes that can lead to significant morbidity and mortality if left untreated. These ulcers typically result from poor circulation and nerve damage, which can lead to reduced sensation and an increased risk of infection. On the other hand, mycosis fungoides a type of cutaneous T-cell lymphoma, although shown to be associated with metabolic disorders like Diabetes mellitus, is not commonly known to present as a diabetic leg ulcer.

Case Summary: In this report, we present a unique case of a 72-year-old woman known to have had Type 2 diabetes mellitus for the past 8 years with an index 2-year history of a fungating diabetic leg ulcer that was subsequently diagnosed as mycosis fungoides. We describe her clinical presentation, and diagnostic workup- highlighting the challenges in the diagnosis and treatment of this rare condition.

Conclusion: This case report underscores the importance of considering unusual etiologies in the setting of chronic or non-healing diabetic ulcers, particularly in cases with atypical or refractory features.

Keywords: Fungating, diabetic leg ulcer, mycosis fungoides

037: A Case of Malignant Peripheral Nerve Sheath Tumor: Emphasis on the Need for Follow-Up on Neurofibromatosis

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Background: Neurofibromatosis is an autosomal dominant neurocutaneous disorder. The neurofibromas are usually of cosmetic concern, they can however compress vital structures and also undergo a malignant transformation (malignant peripheral nerve sheath tumour). Malignant peripheral nerve sheath tumours mostly arise from plexiform neurofibromas. It should be suspected when a neurofibroma begins to grow rapidly in size and becomes warm to touch, tender, or warm to touch. The diagnosis is usually confirmed by taking a biopsy of the lesion.

Case Report: A 40-year-old female, diagnosed with Type 1 neurofibromatosis since childhood. She presented with an 8-month history of the rapid growth of the lumbar plexiform neurofibroma with tenderness, ulceration, and purulent discharge. Examination revealed a young woman with bilateral scoliosis, multiple café-au-lait macules, left axillary freckling, cutaneous and subcutaneous neurofibromas, and a plexiform neurofibroma in the thoracic region. She has a dome-shaped lumbar mass measuring 15cm×10cm×15cm, tender, warm with ulceration at the top and purulent discharge.

Result: The patient had a trucut biopsy of the lesion that revealed a low-grade malignant peripheral nerve sheath tumour.

Conclusion: Malignant peripheral nerve sheath tumours can arise from a plexiform neurofibroma. The lifetime risk for its development is 13% and the prognosis is very poor, hence the need for continuous monitoring of individuals with neurofibromatosis for prompt diagnosis and treatment of a malignant transformation.

Keywords: Malignant nerve sheath tumour, Neurofibromatosis, follow-up, biopsy.

038: Non-Melanoma Skin Cancer in a 32year Old Living with Albinism: A Case Report with Clinical, Dermoscopic and Histopathologic Correlates

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Background: Tumors composed of premalignant and malignant keratinocytes account for morbidity and some mortality in patients living with albinism. Due to the reduction or absence of melanin, albinos are highly susceptible to the harmful effects of ultraviolet radiation and are at increased risk of actinic damage and non-melanoma skin cancer. Approximately 75–80% of these malignancies are Basal cell carcinomas and up to 25% are Squamous cell carcinomas.

Ultraviolet rays can cause damage to exposed body parts, such as the face, ears, neck, and shoulders. Skin lesions include sunburn, blisters, solar elastosis/keratosis, ephelides, lentigo, and non-melanoma skin cancer. In these patients, they are multiple and biologically aggressive. They typically occur on the head or neck, areas usually more exposed to solar radiation. The extent of DNA damage can exceed the repair, with a major risk of malignant transformation. Reduced visual acuity, refractive errors, iris translucency, nystagmus, foveal hypoplasia, fundus hypopigmentation, and abnormal decussation of optic nerve fibers at the chiasm are common eye features in patients living with albinism.

The risk of skin cancer is increased in albinos who are ignorant about their condition, do not practice photoprotection, and are proportional to the accumulated amount of ultraviolet radiation absorbed by the keratinocytes; the potential for malignant alteration is determined by the number of genetic insults. Thus, a high frequency of shorter exposures to sunlight is more likely to be carcinogenic than less frequent longer exposures since each exposure event can potentially cause a change. The more genetic alterations that occur, the greater the chances of malignant transformation.

Case Report: We present the case of a 32-year-old Nigerian female, single, sports bet agent, living with albinism and chronic non-protective photo exposure who presented to the Dermatology clinic with a four-year history of a large nodule with a variegated appearance on the right temporal region and ulcerated plaques on the left temporal region, posterior auricle and dorsum of the right foot. There are also multiple hyperpigmented patches and erythematous plaques on the forehead, décolleté, upper limbs, and back. Dermoscopy showed a pigment network with globules, blue-grey pigmentation, and ulceration. Multiple excision biopsies with flaps and split-thickness skin grafts were done. Histopathology showed skin with epidermal ulceration. The dermis is infiltrated by epithelial cells arranged as nests and trabeculae with keratin pearl formation as well as foci of necrosis. The malignant cells have pleomorphic, hyperchromatic nuclei with increased nucleo-cytoplasmic ratio and eosinophilic cytoplasm. The stroma is fibrocollagenous and infiltrated by chronic inflammatory cells. The resection margins are free of tumour cells. The diagnosis is Squamous cell carcinoma.

Conclusion: Squamous cell carcinoma in patients living with albinism may develop de novo or from premalignant actinic keratosis, in which keratinocytes can undergo initial transformation induced by ultraviolet radiation. These lesions cause the patient to undergo multiple treatments, surgeries, and even disfigurements, which could be averted through prevention or early intervention. Given the high sensitivity of patients living with albinism to ultraviolet light, they need counseling, integration into support groups, total sun protection, and should undergo regular skin exams every six months or less.

Keywords: Albinism, Ultraviolet light, Squamous cell carcinoma

▪ OTHERS

039: Pyostomatitis – Pyodermatitis Vegetans Unveiling Cryptic Inflammatory Bowel Disease

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Background: Pyostomatitis-pyodermatitis vegetans is a rare condition associated with inflammatory bowel disease (IBD) in 75% of cases. It is a chronic inflammatory dermatitis characterized by pustular and vegetating mucocutaneous lesions. Vegetating plaques involve intertriginous areas of the skin while miliary pustules are seen in the oral mucosa. Extraintestinal manifestations complicate IBD in up to 40% of cases. The skin is one of the most commonly involved organs in greater than 10% of cases. The most common mucocutaneous lesions associated with IBD are erythema nodosum, pyoderma gangrenosum, and aphthous stomatitis.

Observation: A 23-year-old blue-collar worker, with a progressively evolving rash, which started on the upper lip, and involved the tongue and gingivae. The attendant swelling and painful fissures on the lower lip led to marked disfigurement which resulted in job loss. There were associated skin lesions on the buttocks and legs. Further probing revealed a history of weight loss and recurrent diarrhea. A thorough search of available literature shows IBD to be a rare, but progressively increasing disease entity in Nigeria, with only a solitary report of pyostomatitis vegetans without attendant skin lesions.

Key message: To highlight the rarity of pyostomatitis-pyodermatitis, and its role in unveiling a cryptic IBD; to emphasize the diagnostic challenges and psychosocial consequences of skin diseases in comparison to the often more common ominous underlying disease. We report this case to draw attention to a rare condition that may be the only presenting feature in the early or preclinical stage of inflammatory bowel disease.

040: Extensive Annular Cutaneous Sarcoidosis in a Young Nigerian Woman

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Background: Sarcoidosis is a granulomatous disorder of unknown etiology. Cutaneous involvement can occur either in isolation or in up to 25-35 % of multisystemic disease. The different cutaneous features of sarcoidosis make it a common differential diagnosis of various dermatoses. We report a case of extensive annular sarcoidosis with significant psychological effects in a young Nigerian woman.

Case report: A 20-year-old female presented with multiple annular rashes, which had been progressive for over 4 years. There were no other associated cutaneous or systemic symptoms. However, she had associated psychological effects. Examination revealed multiple erythematous, annular patches and plaques, and nodules on the face, ears, trunk, and extremities. Cutaneous sensation was preserved in affected areas. The differential diagnosis at presentation included generalized granuloma annulare (GGA), urticarial vasculitis, leprosy, and cutaneous sarcoidosis. The histology findings were consistent with a non-caseating granulomatous inflammation. Follow-up ophthalmologic assessment, chest x-ray, serum calcium, and other ancillary blood tests were unremarkable. A final diagnosis of cutaneous sarcoidosis was made. Treatment with oral prednisolone led to complete resolution of the lesions.

Conclusion: Sarcoidosis should be considered in the differential diagnosis of annular skin lesions. Early biopsy for confirmation of diagnosis and treatment will reduce the associated burden of the disease.

Keywords: cutaneous sarcoidosis, annular lesions, granulomas.

041: Pyoderma Gangrenosum – A Case Report

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Background: Pyoderma Gangrenosum (PG) is an Uncommon Neutrophilic Dermatoses that presents as an Auto-Inflammatory and Ulcerative Disorder of the Skin. It has an estimated incidence of 3-10 cases per million people per year. It is more common in young and middle-aged people, average age of onset-40-60years, although it can affect children. It has female preponderance and is characterized by painful papule, plaque or pustule that rapidly ulcerate with raised undermined borders on sites of normal or traumatized skin. It has no Pathognomonic diagnostic test.

Case report: A 67-year-old woman, Retired Immigration Officer, known to be living with Rheumatoid arthritis -38 years, Hypertension-15 years respectively. She presented on account of a 1-week history of painful right leg ulcers, which were initially managed on outpatient basis with no improvement. Upon presentation, with detailed history, physical examination, and histopathology, the diagnosis of Pyoderma Gangrenosum was confirmed. She made significant improvement following the commencement of Immunosuppressive (corticosteroid).

Conclusion: Pyoderma Gangrenosum (PG) is characterized by painful necrotic ulceration to previously normal or traumatized sites of trauma. It is associated with Pathergy and systemic Diseases (Rheumatoid Arthritis), amongst others. It is often misdiagnosed, early recognition and prompt management with immunosuppressive therapy are essential to improve the quality of life of affected individuals.

Keywords: Pyoderma Gangrenosum, Neutrophilic, Dermatosis, Auto-Inflammatory, Pathognomonic, Pathergy

042: Managing Pellagra in a Resource-Poor Setting

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Background: Pellagra is a multisystemic syndrome caused by a deficiency of niacin. Despite a potentially fatal outcome, diagnosis and cure are achievable, even in resource-poor settings. We report a case of clinically diagnosed pellagra in a woman who improved on an available multivitamin that had a sub-optimal dose of niacin.

Case report: A 42-year-old nomadic woman with a 4-year history of expanding well-demarcated scaly plaques, erosions, and ulceration on the lower neck and extremities.

Systemic review was significant for weight loss, diarrhoea, malaise, and episodic amnesia. Her diet over the years was corn-based. A diagnosis of pellagra was made based on the described 'Casal's necklace', photosensitive distribution of skin lesions, and other symptoms. Ancillary blood work was unremarkable and confirmatory assays for niacin deficiency were pended by limited resources. In contrast to the standard daily dosing of 300mg of niacin prescribed, she opted for an available over-the-counter multivitamin supplement that offered 36 mg of niacin daily. All symptoms improved within 2 weeks. She was maintained on the multivitamins and advised on dietary changes.

Conclusion: Considering the progression and fatal outcome of untreated pellagra, clinical diagnosis, and available niacin supplementation can be explored in resource-poor settings, where standard laboratory diagnosis and care are unavailable.

Keywords: Pellagra, niacin, casal's necklace

043: A Case of Familial Lichen Planus

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Background: Lichen planus is a cell-mediated immune response of unknown origin. It may be found with other diseases of altered immunity, such as ulcerative colitis, alopecia areata, vitiligo, dermatomyositis, morphea, lichen sclerosis, and myasthenia gravis. A rare type of lichen planus, familial bullous lichen planus, could be gene-related. It may be triggered by diuretics and antimalarials, metal fillings (causing oral lichen planus), stress, and infection. Lichen planus is associated with hepatitis C virus infection. Lichen planus is a non-infectious, itchy rash that can affect many areas of the body. Affected areas include the arms, legs, trunk, mouth (oral lichen planus), nails, and scalp. vulva, vagina, and penis. Lichen planus is thought to affect 1-2% of the worldwide population. It's more common in adults over the age of 40. Lichen planus of the skin affects men and women equally. However, oral lichen planus is more common in women. The mouth is affected in around 50% of all cases of lichen planus (oral lichen planus). Some physicians describe lichen planus with the six "Ps": pruritic, polygonal, planar (flat-topped), purple papules, and plaques. Some patients may be asymptomatic, and most experience intense pruritus, a hallmark of lichen planus. The exact cause of lichen planus is unknown. However, the condition isn't infectious and doesn't usually run in families. It can't be passed on to other people, including sexual partners.

Case summary: however, our case is a 23-year-old male who presented with skin lesions of 2 years duration associated with itching grade 5/10 located on the trunk and extremities. Patient-related symptoms as a cause of swimming in dirty rivers. On examination, hyperpigmented hypertrophic plaques were located sparsely on the trunk and extensor surfaces of the limbs. The father and his younger brother have similar lesions. Possible differentials entertained were lichen planus, psoriasis, cutaneous tuberculosis, and tertiary syphilis. Punch skin biopsy for histopathological study, showed hyperkeratosis, hypergranulosis, acanthosis, and pseudo-epitheliomatous hyperplasia with saw-toothed elongated rete ridges. There are dermo-epidermal chronic inflammatory infiltrates most of which are perivascular. They are composed of mainly lymphocytes. There are melanin deposits on the papillary dermis and among the inflammatory cells. Based on this a diagnosis of lichen planus was made. He is currently on topical corticosteroid ointment.

Conclusion: Thus, lichen planus can be familial and the percentage of familial lichen planus may be more than 2% as reported in previous studies.

044: Cronkhite-Canada Syndrome: Sudden Unexpected Fatality in a Black Female

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Background: Cronkhite-Canada syndrome (CCS) is a rare non-inherited disorder with dramatic gastrointestinal and dermatological manifestations. It is characterized by the presence of hamartomatous polyps in the gut, and a triad of cutaneous hyperpigmentation, alopecia, and nail dystrophy. Here we report a classic case of CCS but with delayed diagnosis and sudden unexpected fatality within eighteen (18) months. We discuss the clinical and endoscopic findings; diagnostic challenges, and probable cause of death.

Case presentation: A 52-year-old woman had been seen by several specialists with a constellation of symptoms including darkening of the skin, generalized abdominal cramps, hair loss, nail changes, the passage of blood in stool, diarrhoea, vomiting, weight loss, and marked oedema of the limbs. Diagnosis entertained ranged from adrenal disease, and haemochromatosis, through metastatic disease (probably colonic), to multiple endocrine neoplasias. She was serendipitously seen by the dermatologist about six months later, at which time the skin manifestations had resolved, but she had lost considerable weight (17kg in two months), with recurrent episodes of anaemia necessitating blood transfusions. A diagnosis of CCS was made following oesophagogastroscopy, and the patient was placed on corticosteroid. She defaulted and died within a year of the diagnosis.

Conclusion: To our knowledge, this is the first

reported case of CCS in Nigeria. It is presented to sensitize dermatologists about CCS; and highlight the challenge of lack of prompt referral of skin-related cases to the dermatologist. It also seeks to explore the probable cause of death.

Keywords: Cronkhite-Canada syndrome, Nigerian, diagnostic delay.

045: Assessment of Knowledge, Attitude, and Use of Sunscreen Among Health Workers in Abakaliki, Ebonyi State

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Background: Sunscreen is vital for protecting the skin from harmful UV radiation and associated health risks like skin cancer and premature aging. Previous research in Nigeria has mainly focused on specific groups, leaving a gap in understanding sunscreen use among healthcare workers. This study aims to bridge this gap, identify areas for improvement, and enhance sun safety practices among healthcare workers in Abakaliki, Ebonyi State, to ultimately improve public education on sunscreens. However, little is known about the knowledge, attitudes, and practices of sunscreen use among healthcare workers.

Methods: Data was collected using an online pretested questionnaire on socio-demographic parameters of participants, knowledge, attitude towards sunscreens, use of sunscreen, and factors that affect its use.

Results: A total of 165 respondents, female: 60.6%, males: 39.4%, with a mean age of 39.6 years, the majority of whom were Doctors working in tertiary public hospitals. 26.1%

heard of sunscreens on social media while 15.2% were taught in school. Although 97% had heard of sunscreens, only 40% use sunscreens and more than half of these apply "when they remember". The high cost of sunscreens and lack of time were cited as 'reservations' to sunscreen use.

Conclusion: This study highlights the low utilization of sunscreen among healthcare workers in Abakaliki, Ebonyi State, despite high awareness. Factors such as cost and lack of time hinder sunscreen use. Interventions should address these barriers and provide comprehensive education to improve sun safety practices.

Keywords: Health workers, Sunscreen, Ebonyi,

NAD NEWS
JUNE—AUGUST, 2023

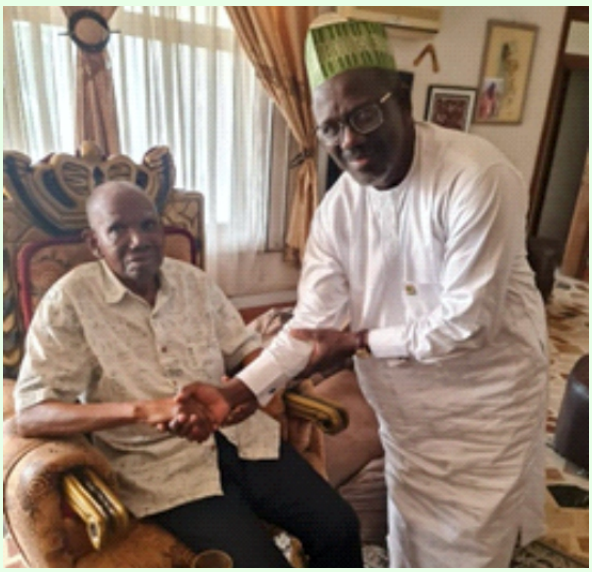
WORLD SKIN HEALTH DAY CELEBRATIONS

The Nigerian Association of Dermatologists celebrated World Skin Health Day in the first week of June 2023 with activities across the country including skin health outreaches to communities in Lagos and Enugu, radio, and press interviews.

NAD ENUGU JUNE 2023

The 17th Scientific Conference and Annual General Meeting of the Nigerian Association of Dermatologists was held in Enugu from the 20th to the 23rd of June, 2023. It was well attended by dermatologists from all over Nigeria. The theme, "Social Media and Dermatology Practice" was extensively discussed.

During the conference in Enugu, the NAD Exco also paid a courtesy visit to a pioneer Nigerian dermatologist and member of the NAD Board of Trustees, Prof Anezi Okoro, in his home.



WCD SINGAPORE JULY 2023

The NAD was well represented at the 25th World Congress of Dermatology in Singapore from the 3rd to the 8th of July, 2023. Over 20 dermatologists from Nigeria attended the congress and made poster and oral presentations.


ILDS


25th World Congress of Dermatology


25th World Congress of Dermatology
SINGAPORE 2023
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NEW DERMATOLOGY FELLOWS

Congratulations to the new fellows of the Postgraduate Medical Colleges in Internal Medicine and the subspecialty of Dermatology

- **Dr Aliyu Abdullah** - Usmanu Danfodiyo University Teaching Hospital, Sokoto
- **Dr Utane Adama** – University of Nigeria Teaching Hospital Enugu
- **Dr Christabel Ovesuor**- University of Nigeria Teaching Hospital Enugu/ Federal Medical Centre Asaba