



Biological and Social Challenges of the Aging Skin in Older Africans

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

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Complete Peer review History: <http://www.sdiarticle4.com/review-history/65547>

Received 18 December 2020

Accepted 22 February 2021

Published 13 March 2021

Review Article

ABSTRACT

Despite the overall increase of the population of older adults in Africa, these senior citizens still have a lot of challenges regarding their health including skin disorders. The health seeking efforts as regards to skin disorders is relatively lower when compared to other common old age diseases despite serious effects on the quality of life. The burden of the aging skin can have both biological and social consequences on the older African. This is further worsened in some by socio-cultural skin practices such as scarification, skin lightening, tanning and tattooing which may have been done at an earlier age or still occurring due to perceived benefits. The COVID-19 pandemic has also left its burden on the older African with the reports of increased skin disorders among the senior citizens. This review aims to highlight the biological and social impact of skin disorders on the older African with a reflection on the anatomy of the aging skin, common skin disorders, management and basic preventive measures.

Keywords: Biological; challenges; common; older African; skin disorders; social.

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1. INTRODUCTION

As the world's population is increasing in size, so is the proportion of older adults. In the world as at 2019, there were about 700 million persons aged 60 years and above. In 2050 it is expected to rise up to 2 billion. Thus those at this age and older would constitute one-fifth of the world's human population [1]. The number of elderly persons in the Sub Saharan Africa is escalating from an estimate of 43 million in 2010 and to almost four times this number in another forty years [2]. With the exception of North Africa, the proportion of those from 65 years and above in Africa is about 3.0%, while North Africa has almost double of this number [3]. In realization of the burden of elderly problems including skin diseases the United Nation has stipulated that the International day of older persons should be celebrated on the 1st October and this has been marked from the year 1991 as it declared by the resolution 45/106 passed by the United Nations General Assembly on December 1991 [1]. Coincidentally, the first of October is the day for celebrating independence in Nigeria, the country with the highest number of senior citizens in Africa. Skin problems are assuming a greater importance in the world today. In recognition of this, World Skin Health Day is celebrated by different dermatological societies around the world on a chosen date as convenient for the organization [4].

2. SKIN NOMENCLATURE

Peau de beau- Beautiful skin! [5]. There are different words in Africa for the word skin- *akpukpo* (Igbo), *ara* (Yoruba), *fata* (Hausa), *Isikhumba*(Zulu), *Khungu*(Chichewa), *letalo*(Sesotho), *maqaarke*(Somali), *ngozi* (Swahili) [6], *ozu* (Izon) and *aju kiri* (Kalabari). The word *aju kiri* directly translates into English as body land or body ground which actually refers to the skin. In English, words that connote the outer covering of the skin can be remembered by the mnemonic – 'DISC'- Dermal- This is relating to the skin particularly the dermis, Integumentary: This refers to the entire skin system and the functioning, Skin: The outer covering of the body and Cutaneous: pertaining or affecting the skin [7].

3. THE COMPONENTS OF THE SKIN

The skin is the largest organ of the human body, enveloping the internal system. The genesis of

the integumentary system commences at the 3rd week with two major forms of tissues- the ectoderm which gives rise to the epidermis and the mesenchyme which gives rise to the mesoderm connective tissue, hypodermis and dermis. There is extensive migration of melanocytes and sensory nerve endings that arise from the neural crests [8]. The skin comprises of three layers which are the epidermis, dermis and subcutaneous skin [9,10]. The epidermis is the outermost layer which acts as a waterproof barrier and is a major contributor in maintaining skin tone. The dermis is the middle layer of the skin and is considered as the true skin because it is the most active part of the skin. It consists of a greater number of cellular structures found in the skin such as blood vessels, lymph vessels, nerves, fibroblasts, sweat glands, collagen bundles, hair follicles [9]. The fibroblasts are responsible for the production of collagen which is a major component of the skin matrix, constituting about four fifths of the skin. There are other proteins that are found in the skin such as elastin which gives tensile strength to the skin; keratin which is a component of the skin appendages like the nails and hair in addition to the outermost layers [10,11]. Other proteins that are contributory to tensile strength are filaggrin, involucrin and metalloproteinases. The subcutaneous layer is the deepest layer of the skin that contains fat cells and nerve bundles. It serves as a heat conserver and a shock absorber thus regulating body temperature and aid in preventing severe injuries on the body [8, 11]. It is important to note that there are variations in the human skin in terms of texture, thickness and tone (colour) throughout the body. The head has majority of the hair follicles, the soles and palms are the thickest parts with no hair follicles at all; and the eyelids are the thinnest parts of the skin [6]. The skin can also be divided anatomically into four compartments [12]:

4. FUNCTIONS OF THE SKIN

The skin has several functions which include biological and social functions. The biological functions are protective and immunological function; the skin has both innate and adaptive immunity to fight infections. Others include temperature regulation, tactile response and production of hormones such as melanin; vitamin D and testosterone [13].

Table 1. The anatomical compartments of the skin and its components

Anatomical compartment	Components of the skin
First	The epidermis, the papillary dermis, superficial vascular plexus
Second	The reticular dermis and the deep vascular plexus
Third	The pilosebaceous units, the eccrine glands, the apocrine glands
Fourth	The subcutaneous tissue , also called the panniculus

The social function of the skin are for identification and expression. The amount of skin pigment is a means of identifying and classifying people into different races. The skin serves as means of expressing beauty. It serves as a means of expressing emotions through the sense of touch and by the inscription of tattoos. It serves as a means of expressing individual affiliations for examples tattoos and scarification marks [14].

5. A GLANCE AT THE GERIATRIC SKIN (THE AGING SKIN)

Aging is defined as the process of becoming older. It is a process which is determined genetically and modulated by the environment [15]. It is the progressive decline in optimal functioning and reserve capacity of all systems of the body including the integumentary system [16]. Aging is an ongoing process due to many factors both intrinsic and extrinsic (environmental). The aging skin process consists of two types- the chronological (intrinsic or endogenous) and photo aging (environmental, extrinsic or exogenous) [17]. The cellular processes involved include DNA mutations,

reactive oxygen species and telomere shortening. It is also influenced by genetics, hormonal changes; metabolic processes of the individual and behavioral lifestyles such as smoking, excessive alcohol intake, poor nutrition and chronic exposure to the sun. Chronic sun exposure is the most significant extrinsic risk for aging [16,17].The characteristic histological finding in the aged skin is the loss of collagen while wrinkling and pigment changes are the most salient cutaneous manifestations. This is clearly seen in Fig. 1 where there is marked loss of thickness of the skin due to loss of collagen and acquisition of solar lentigenes(age spots). Other characteristic features are epidermal and dermal atrophy, flattening of the epidermal rete ridges, as well as reduced numbers of fibroblasts and mast cells; increased number of collagen fibrils as well as increase in the ratio of collagen III to collagen I. The photo aged skin is mainly characterized by elastosis [16]. The physiologic activities that deteriorate with aging are barrier function, cell replacement, chemical clearance, DNA repair, epidermal hydration, immune responsiveness, mechanical protection, sebum and sweat production, thermoregulation, vitamin D production and wound healing [16,18].

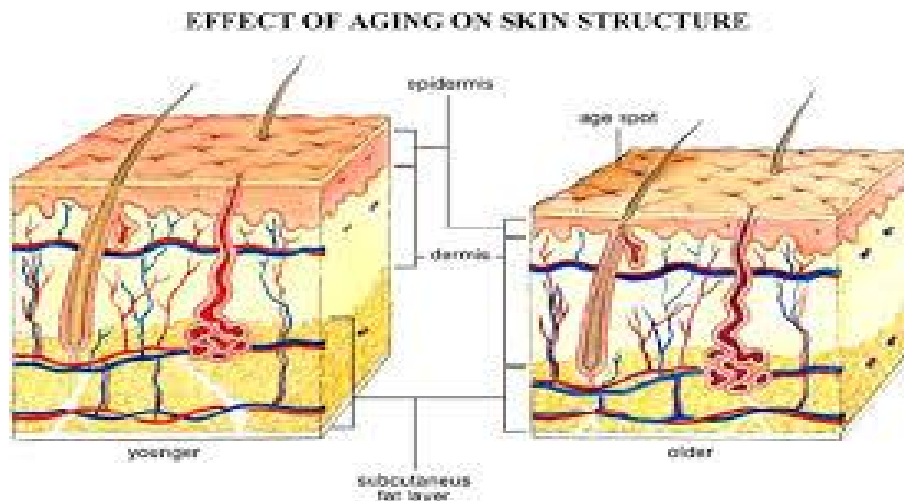


Fig. 1. The structural differences between the normal younger skin and the older skin
(Courtesy researchgate.net)

The characteristics and differences between chronological and photo aging has been summarized in Table 2.

5.1 Dermatoporosis

Dermatoporosis is a term describing the chronic cutaneous fragility of the aging skin. It is also called chronic cutaneous insufficiency syndrome, conveying the vulnerability in the skin similar to the way osteoporosis does in bones and the necessity for prevention [19,20]. Key features of dermatoporosis include atrophic skin with solar purpura, white pseudoscars on the extremities, skin lacerations and delayed healing, bleeding complications and cutaneous infections. Skin dissecting haematoma, a medical emergency is also functional manifestation of dermatoporosis and is seen to be on the increase [19,21,22]. The prevalence of dermatoporosis was reported to be about 31% in an elderly population from Finland and was associated with topical ultra-potent steroid use, concomitant oral corticosteroids, anticoagulant use and chronic renal failure. The upper limb was mostly affected and those with bullous pemphigoid had the highest manifestation of dermatoporosis [23]. In a French elderly population of about 200 persons, aged 60

to 80 years the prevalence of dermatoporosis was reported to be 32 % [24].

6. SKIN TYPES IN AFRICA

6.1 Geographical Representation

Different skin types according to the Fitzpatrick classification exist in Africa [25]. In West Africa, especially Nigeria being the most populous black nation with the predominant skin type VI characterized as having dark brown or black skin, that never burns but always tans darkly [26]. There are also pockets of those with brown pigment and lighter brown pigments of mixed racial descent. Moving toward North Africa where we have persons of the Arab extraction and Ethiopians that are of varying shades of lighter brown with thick curly hair and also those with black skin and kinky hair. In central Africa there is a large population of darker skin types. In the eastward of Africa is Seychelles where persons are majorly of mixed heritage with foreign immigrants such as white British, French, Chinese and Indians amongst several others making about 7-10% of their population [27].

Table 2. Characteristics and differences between chronological and photo aging [16,17,28]

Chronological aging	Photo aging
Cumulative damage as a result of continuous production of free radicals leading to increased vulnerability and eventually ends up in apoptosis i.e. programmed cell death or senescence.	A result of ultraviolet light producing a cascade of super oxidative reactive species; the effect is seen mainly on the skin. It worsens the intrinsic aging.
Characterized by increased collagen products with hypocellularity	An outstanding feature is the presence of elastosis characterized by yellow discolouration and pebbly surface.
The degree of acanthosis is less with more of atrophy and loss of polarity. There is decrease in the number and function of Langerhans cells.	There is marked reduction in fibrillin in the dermoepidermal junction, very marked increase in glycoaminoglycans(GAGs) and proteoglycans, increased atypical cells, increased hyperelastic fibroblasts as well as increase in inflammatory cells such as mononuclear cells, mast cells leading to the term heliodermatitis or dermatoheliosis which means skin changes due to the sun.
The laxity and loss of elasticity is not as intense as seen in the photo aged skin.	More of dyspigmentation , freckles(ephelides), thick skin, deep wrinkles, melasma, citrine skin, senile purpura, pseudostellate scar, acrokeratoelastoidosis marginalis, and lentiginos
The features are more of thin skin, fine wrinkles, xerosis, and loss of elasticity.	
Occurs in all skin types.	Occurs in all skin types but is more marked in Caucasians and fair skin individuals like people with albinism

Then moving down to the southern part of Africa and in particular South Africa where there is a myriad of skin types as result of migration, integration and cross fertilization which some decades ago created racial discrimination. Amongst all these are older Africans with albinism being born from parents of initial black, white or mixed races [29].

6.2 Variations in Different Skin Types

The black skin and white skin are basically the same. However physiologically it has been proven there are differences in both types of skins [30]. The black skin is known to have greater amounts of melanin deposition [16,18, 26,30,31]. In a study led by Nicholas Crawford, 4 million points of a genome of about 1,600 volunteers from the countries of Botswana, Ethiopia and Tanzania were studied. It was found out there are four key areas of the genome variation closely associated with the differences in skin color. The two major genes looked at were the MFSD12 gene which has been implicated in a variety of shades of skin color in Africans depending if it is mutated or expressed. It has also been implicated in the expression of vitiligo. The SLC24A5 is another gene that has been associated with African populations and it manifests as a lighter skin pigment [26,32]. The black skin has more compact layers in the stratum corneum with 20 layers as against 16 in the white skin, with a higher lipid content, a higher electrical resistance thus making the black epidermal layer less hydrated when compared to white skin and the skin being less permeable to certain chemicals [18,31]. The hair of blacks is also known to be more brittle and also more susceptible to breakage and spontaneous knotting than that of whites [31]. The differences between the dark skin pigment and the white skin seem to have conferred some advantages to each of them. The black epidermis is known to have a sun protection factor about 4 times more than the white skin [16,18]. The black epidermis transmits 5 times less of UVB light to the dermis when compared to the white skin and 3 times less of UVA to the dermis when compared to the white skin [16]. The black skin is less likely to age faster intrinsically when compared to the white skin. The darker skin pigments have stronger barrier function, more resistance to mechanical or chemical challenge and better intercellular cohesion. The white skin is more subjected to acquisition of pigmented spots called senile lentigo commonly known as age, liver or sun spots and is subject to more wrinkling

and sagging [18]. In turn the darker skin pigments are subject to losing some of their melanocytes as result of aging similar to the greying of the hair. This process can also occur in the lighter skin types [33]. All skin types are susceptible to both chronological and photo aging but worse in some skin types as discussed above.

This variation in skin types has an implication in terms of disease pathology. Blacks are said to be genetically susceptible to keloids and hypertrophic scar formation. They are 20 times more likely to form keloids and hypertrophic scar than whites. The pathogenesis has to do with stimulation of fibroblasts to produce elevated levels of the pro-collagen mRNA which leads to excessive production and secretion. Any form of injury such as dog bites, injections or incisions can predispose to keloids and hypertrophic scar formation. Other dermatological disorders which the black skin is more predisposed to are post inflammatory pigmentation and mycosis fungoides [27].

7. SOCIAL CHALLENGES OF DIFFERENT SKIN TYPES IN THE OLDER AFRICAN ADULT

Social problems with regards to various skin types which occur in early age still persist into older age. Nevertheless how the persons see themselves might not be perceived by those around them. This will lead to prejudice and discrimination. Old age in itself is associated with a lot of stereotypes but the peculiar challenges which the older adult of the major obvious skin types will be discussed below:

7.1 Albinism in the Aged African

June 13 is recognized by the United Nations as the International Albinism Awareness Day [34]. Older persons with albinism have peculiar challenges. These challenges rise from being born with albinism and being older. Under the tropical sunshine, their melanin-deficient skin develops wrinkles, lentigines, actinic keratosis, epitheliomata and skin cancers from which they may die of in early adult life or in middle age. Those who live up to older years such as 60 years are most likely to be faced with both chronological and photo aging complications causing them to age faster than their peers [29,32,35]. Albinism is not as rare as people think. The prevalence of oculocutaneous albinism (OCA) is as high as 1 in 1000 to 7000 in Africans

in the Sub Saharan African region [32, 35-39]. Fitzpatrick skin types are yet to be fully associated with the oculocutaneous types, however depending on the type of oculocutaneous albinism the Fitzpatrick skin types can range from type I-V particularly as some African persons tend to become darker brown as they grow in age [32]. The different forms of albinism commonly seen in the aged African is summarized in Table 3. Eye problems can be a risk factor for worsening skin problems since they may not see skin lesions that develop on time to seek care. Social challenges in the older adult with albinism are not different from other age groups. Their being old makes them more vulnerable to them. These challenges include ritual killings, verbal abuse, social discrimination in terms of making friends, marriage and sometimes they can suffer from jealousy or envy from siblings, relatives or others due to preference, pampering and protection from parents, care givers or the society and government [29,32,35]. Registering albinos early in life, assuring their families that albino defects are confined to the skin and eyes, advising on protective clothing and sun-screening agents, correcting myopia, assisting with indoor occupations and early treatment of actinic keratoses and skin cancer would help many albinos to attain social acceptance and a ripe old age [39].

7.2 The Dark Skinned Senior

The dark skinned senior is subject to racial discrimination depending on his environment like any other black person in a predominantly Caucasian or Asian environment. They might be subject to physical abuse and job discrimination due to age even within similar racial environment. It is known that age affects a person's mental and physical response to racism and this can limit their access to physical and social amenities [40]. The strive for beauty and social acceptance as perceived by one's skin can influence the older adult to still engage in harmful skin practices such as skin lightening (bleaching) with exogenous products such as hydroquinone and kojic acid. This is particularly worse with persons of skin of color. A study done in the southern part of Nigeria showed 9.5% of older patients were using skin lightening creams and 50% of these patients had already developed exogenous onychosis. Males are not exempted from using them and about 25% of these older patients were males but the side effects were more noticeable in females (Oti-

Odibi, B. & Amadi E. University of Port Harcourt Teaching Hospital (UPTH), unpublished study). Another study done in another tertiary centre showed 3% of the elderly presenting with exogenous onychosis [41].

7.3 The Light Skinned Older Adult

The light skinned older adult being of Asian or European descent might also face social stigmatization and racial resentment and discrimination as a reverse of the prejudices held by the predominant black people from colonization by the white lords or from the apartheid period particularly in the Southern parts of Africa [42]. They are also likely to be engaged in social activities such as tanning and sun bathing that easily predisposes them to cancers. Their need to socialize outside during sunny periods might also be hindered for the same reason. Finding the right type of sunscreen to use can raise great concerns for them. They can also be targets of unlawful men such as kidnappers and extortionists particularly in predominant black developing nations where people may have a misconception of them having great wealth.

7.4 The Mixed Race Older Adult

Although not many studies have focused on the social challenges in the older African of mixed heritage, they are often perceived to have the best of both worlds. A study done in America amongst younger persons including African Americans showed that they can also have social challenges as a result of their skin color. These include feelings of being disconnected, shifting identities and feelings of being unaccepted [43]. They are also subject to misidentification and can be targets of miscreants like kidnappers who perceive them to be Caucasians.

7.5 Skin Health Seeking Behavior in the Older African Adult

It may be falsely perceived by other age groups that the elderly patients may not be concerned about their skin disorders but this is not true as proven by studies done in the older adults using Dermatology Life Quality Index [44]. Older adults are not left out in their share of facing the devastating psychological and social impact of chronic skin diseases.

Table 3. The common oculocutaneous skin types and corresponding Fitzpatrick Skin types in the Aged African with Albinism in descending order of frequency [26, 36-39,34,45-48]

OCA type	Genetic defect	Characteristics at birth	Characteristics during aging	Fitzpatrick class
OCA type 2 –the white form (In black Africans).	A single 2.7kb deletion allele resulting in P allele mutation on chromosome 15q.	Hair is yellow at birth, creamy white skin, blue gray to light tan eyes.	Hair becomes whiter, eyes remain same and no development of skin tan Pigmented nevi, ephelides and lentigines occur frequently with age.	Class II- fair skin, blue eyes, burns easily, tans poorly
OCA type 2 (in Caucasians).	A single 2.7kb deletion allele resulting in P allele mutation on chromosome 15q.	Hair pigment varies in the various ethnic groups, from light yellow or blond to golden blond or red hair, Skin is creamy white Irises are bluish grey to tan.	Albinism may be difficult to identify until visual problems set in. The hair may gradually get darker.	Variable-Fitzpatrick type I, II or III. Type I- pale white skin, blue/green eyes, blond / red hair, skin always burns and never tans. Type II- Fair skin, blue eyes, burns easily and poorly tans, Type III- Darker white skin, tans after initial burn
OCA type 2- brown form (Black Africans).	P mutation allele is heterozygous on chromosome 15q. The eumelanin is reduced but not absent.	Hair and skin are light brown; the eyes are grey to tan at birth.	Hair becomes darker, the skin becomes darker and tans with sun exposure, irises are the same.	Class-IV-Light brown skin, doesn't burn, tans easily
OCA type 3 –brown form.	Tyrosine related protein on chromosome 9p23.	Hair and skin are light brown; the eyes are grey to tan at birth.	Hair becomes darker; the skin becomes darker and tans with sun exposure. The irises may become darker.	Class-IV-Light brown skin, doesn't burn, tans easily
OCA type 3- Rufous oculocutaneous albinism.	Tyrosine related protein on chromosome 9p23.	Reddish bronze skin, blue or brown irises, ginger red hair or brown hair.	Hair becomes darker, the skin becomes darker and tans with sun exposure,	Type IV, V Type IV-Light brown skin, tans dark easily

OCA type	Genetic defect	Characteristics at birth	Characteristics during aging	Fitzpatrick class
OCA type 1 (Worldwide, rare in Black Africans).	<p>This is due to loss of function of the melanocytic tyrosinase resulting in mutation of the TYR gene. Two types exists OCA1A- Null mutation-no pigment is produced(tyrosinase negative)</p> <p>OCA1B- missense mutation, some pigment accumulated (tyrosinase positive) It has a variant which is described as temperature sensitive. Gene location on chromosome 11q14.2</p>	<p>OCA1A –The hair and skin are white from birth. Irises are translucent.</p> <p>OCA 1B No hair pigment at birth. In first year of life can be light yellow, light blond or golden blond.</p> <p>Minimal skin pigment at birth. Irises are translucent.</p>	<p>and irises may become darker or remain the same.</p> <p>OCA1- the hair may turn slightly yellow on exposure to sun or shampoo.</p> <p>Irises turn bluish grey with age.</p> <p>No skin pigment on exposure to sun. Can suffer from amelanotic nevi.</p> <p>OCA 1B- As patient ages hair becomes dark blond or brown.</p> <p>Temperature sensitive has hair of arms and legs pigmenting with age. Scalp hair remains white Skin does not tan</p>	<p>Type V- Brown skin, rarely burns, and turns dark easily.</p> <p>Fitzpatrick type is variable OCA1A- Type I White hair, white skin will always burn and not tan.</p> <p>OCA 1B- Type II or Type III depends on the amount of pigment. as stated above{delete}.</p> <p>Temperature sensitive OCA1B is Type I Fitzpatrick- The skin does not tan.</p>

Chronic mucocutaneous diseases have been recognized as established non communicable disease (NCD) and were reported in 5% of household who lived in a region of Malawi with older African adults being part of the household. Higher socio-economic status and literacy level is associated with seeking formal care [49]. A study done amongst rural and urban dwellers in Kano, Nigeria which included older adults showed no statically significant difference between the two groups for skin disorders. The majority of skin ailments in both settings were seen by auxiliary health workers, medicine vendors or traditional healers have knowledge gaps in dermatology skills [50]. The study done by Otike- Odibi, B. & Amadi, E.(Unpublished work) showed that only 7.1% of admitted older adults from different wards have ever had a skin complaint requiring intervention. More than half of them visited the dermatologist. Only about 4% had skin biopsy done for their skin condition. Chronic illnesses like dementia, increasing rigidity and frailty may limit their access to skin care clinics [51].

8. COMMON SKIN DISEASES IN THE OLDER AFRICAN

8.1 Extrinsic Versus Intrinsic

Although data is scanty on the exact composition of older blacks, whites and Hispanics that are in Africa, it is known that the African skin is predominantly a skin of color [25,30]. Aging can be described clinically as features of wrinkles, sunspots, uneven skin color, and sagging skin. These cutaneous effects are influenced by both intrinsic (chronological) and extrinsic (photo aging) factors and often are varied based on ethnic origin given underlying structural and functional difference [52]. People of darker pigments show less severe intrinsic facial aging with signs appearing a decade later than lighter skin types. Common clinical signs of photo aging include lentiginos, rhytides, telangiectasias, dark spots, and loss of elasticity. Skin of color is less susceptible to sun-induced damage so these clinical manifestations of aging are less severe and typically occur 10 to 20 years later than those of age-matched white counterparts. The accumulation of sun radiation is the most important extrinsic factor in aging skin. In skin types III to VI, dyspigmentation is one of the most common features of photo aging. Skin lesions in the older African could be benign or malignant. Some of these lesions are preventable while

others are genetic but can also be managed adequately [52]

8.2 Common Benign Lesions Seen In the Older African Adult

The benign ones include eczema, pruritus, xerosis (dryness), infections and ulcers [16,41]. There are others that are common within these age groups but are not in themselves common such as immunobullous diseases like bullous pemphigoid and pemphigus vulgaris [41,53-57]. A study conducted in one of the Nigerian tertiary health institutions showed that eczema, fungal infections and vitiligo were the commonest skin manifestations in the elderly [56]. This finding of eczema being the leading cause of skin disorders in the elderly was also seen in a study done in Tanzania [57]. Another study conducted in the elderly in Nigeria, showed fungal and parasitic infections like scabies as the most common infectious causes while neurocutaneous disorders such as senile pruritus, lichen simplex chronicus and post herpetic neuralgia are the common causes seen [58]. Xerosis, pruritus, benign tumours, actinic, keratosis, ulcers, senile purpura, idiopathic hypopigmented melanosis nail disorders and neuradermatitis have also been seen commonly in the older Africans which is similar to findings done amongst the elderly from other parts of the world [52-57]. Benign tumours include acrochordons(skin tags), papillomas, cherry angiomas, dermatofibromas and seborrhoeic keratosis [52-57].

8.3 Common Premalignant and Malignant Lesions in the Older African Adult

With advancing age, the ability to repair damaged cells is reduced resulting in increase in formation of tumors. The common premalignant lesions in the elderly include actinic keratosis, Bowen's disease, keratoacanthomas and lentigo maligna. The malignant lesions are mostly induced by the ultraviolet radiation and defective DNA repair of cells leading to lesions like melanoma, squamous cell carcinoma and basal cell carcinoma [52,59,60].The incidence of skin tumors other than melanoma is about 200 times more common in whites when compared to other skin colour types such as Blacks, Hispanic or Asians [59]. Kaposi sarcoma was the highest occurring malignant tumour in a study conducted in a Nigerian tertiary institution [41].

8.4 COVID 19 Pandemic: Focus on the Senior African's Skin

The year 2020 saw a rise of the older population worldwide as rightly projected years prior but it also a year that the older adults suffered great mortality from the pandemic that first arose from the Asian continent [61]. There have been reported cases of dermatological lesions in COVID 19 caused by SARS-CoV-2. There has been a proposal by some scientists that COVID-19 dermatological manifestations may present in 2 mechanistic patterns: immune response to viral nucleotides causing clinical features similar to viral exanthemas and dermal eruptions secondary to COVID-19 systemic consequences, especially vasculitis and thrombotic vasculopathy. The clinical manifestations in most cases, occur concurrently with other COVID 19 symptoms or after. Skin manifestations that have been reported include chilblains, pernio like lesions, erythema, papulosquamous and retiform papules, acral desquamation, livedo reticularis, retiform purpura, bullous lesions, petechiae, erythema nodosum, miliria rubra, pressure injury, acneiform lesions and multisystem inflammatory syndrome [62]. There seems to be a paucity of data of COVID 19 in darker skin types particularly Fitzpatrick type V and VI [63]. Vascular rashes that look like livedo reticularis, purpura and necrosis have been seen more in older adults [64,65].

9. PREVENTIVE MEASURES OF THE AGING SKIN

The general measures in preventing dermal disorders in the elderly include maintaining a humidified environment, adequate hydration and nutrition, use of emollients and moisturizers daily, avoidance of very hot showers, minimal preservatives and fragrances in bathwater and maintenance of good hygiene. The use of barrier creams, air mattresses, ambient clothing and frequent change of position for those that are immobile to prevent decubitus ulcers [54,57,66,60]. Strategies aimed at preventing photo aging include avoidance of the sun, use of sunscreens to block or reduce skin exposure to radiation, the use of retinoid to inhibit collagenase synthesis and promote collagen production and the use of antioxidants in combination to reduce and neutralize free radicals [10,66,60].

Some recommended home remedies for the elderly include eating a diet with lots of fruits and

vegetables. These contain vitamins, antioxidants and water that help the skin. Keep bathing or showering time short. Pat water gently on the skin after bathing, leaving a bit on the skin to help absorb the emollient such as petroleum jelly when applied. The use of hand gloves is recommended while doing household chores or gardening [67]. Aloe vera, coconut oil, olive oil, and vitamins are some of the natural remedies that are useful in reducing skin disorders such as wrinkles and eczema which are common in the aging skin [68,69].

10. TREATMENT OF THE SKIN LESIONS IN THE AGING SKIN

The treatment would be targeted at the local lesion using antihistamines, steroids both topical and systemic, analgesics antimicrobial and anti-parasitic agents; as well as treatment of underlying systemic illnesses as specified [52-60,66]. Surgical interventions, chemotherapy and radiotherapy can be used for the different tumors depending on the type and stage of the tumors [52,54]. Cosmetic camouflages can be useful for those with hyperpigmented lesions and cosmetic interventions can be done for lesions such as wrinkles, rhytides, skin sagging and also for solar lentigines but caution must be taken in the different skin types as the skin of color is more prone to hypertrophic scarring [54,66].

11. CONCLUSION

The skin of the older African adult is the protective covering that he or she has against the external environment and can be affected with several dermatological disorders. It can as well be a source of stigmatization posing both biological and social challenges to his or her unique personality hence affecting their quality of life [70].

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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