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Original Article

Novel trends in cutaneous manifestations of geriatric dermatoses in a tertiary care hospital, South India

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Abstract

Introduction Cutaneous manifestations of geriatric dermatoses in elderly are the most common reason for the older population to come to outpatient department. According to 2011 population and census elderly people visiting hospital for skin changes was is 8.6% and is expected to come to 19% by 2050 due to increased life expectancy. This study aims to evaluate various skin presentations in older individuals.

Objective To evaluate the prevalence of various geriatric dermatoses in patients attending Dermatology, Venereology and Leprosy of GGH, Kakinada.

Methods This is an observational study carried out on 395 consecutive patients aged 60 years and above between october2020 to march 2021 in Department of Dermatology, Venerology and Leprosy in East Godavari district Hospital.

Results Out of 395 patients studied with male to female ratio of 1.3, mean age group was 60-65 years. Infections and Infestations (36%) were the most common followed by Physiological changes (26%), eczema (14.65%) Few rare cases were observed during the study.

Conclusion Cutaneous manifestations in elderly people have to be given more priority to differentiate between Physiological and Pathological changes. This will help them to lead a better social, emotional and healthy life. From our study we found that infectious diseases followed by senile pruritus are the most common skin diseases among elderly patients.

Key words
Cutaneous changes, Tinea, elderly, xerosis.

Introduction

Ageing is a continuous and irreversible process resulting in decline of functioning of all systems including the skin, thereby predisposing the elderly people to develop various skin conditions.[1] The changes in skin responsible for aged appearance cannot entirely be attributed to pathological changes.[2]

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With time all organ systems undergo decreased functional abilities. Skin is the boundary between external world and internal organs making it vulnerable to various harmful effects. Skin becomes withered structurally with advancing age which is also accompanied by the functional decrease in protective function and decreased capacity to repair when there is injury. This makes it susceptible to infections, dryness, and pruritus.[3]

Cutaneous manifestations in elderly are the most common reasons for the older population to come to outpatient department. According to 2011 censes is 8.6% it is expected to come to 19% by 2050 due to increased life expectancy.[4]

In India, there are 138 million elderly persons as of 2021 and is further expected to increase by around 56 million persons in 2031. With better medical facilities lifespan has increased and expanded the elderly population, resulting in a greater need for evaluation of various skin conditions in the growing older individuals.[5] The challenges faced while evaluating geriatric dermatoses is to decide between physiological and pathological. Many skin changes are considered normal, except that they vary in degree and number.[6] The present study aimed at studying the different skin diseases prevailing among the elderly population.

Materials and Methods

This study is a descriptive analysis carried out on 395 patients aged 60 years and above out-patient Department of Dermatology, Venerology and Leprosy at a District care Hospital after meeting the inclusion criteria of age 60 years and above. All the patients underwent a detailed medical history, including demographic data, history of present illness, and history of associated medical disease. All patients underwent complete general and dermatological examination, including skin, mucous membrane, hair and nail. Diagnosis of skin diseases in the elderly was based on clinical presentations. The skin diseases in elderly are categorized into infections and infestations, physiological conditions, inflammatory dermatoses, Photo dermatoses, pigmentary disorders, immunobullous disorders, papulosquamous disorders, and miscellaneous.

Results

A total of 395 patients were included in the study. Out of 395 majority of patients were in the age group 60-65 years (69.2%). In our study 56% were male and 44% were females and the sex ratio was 1.27.

From our study we found that Infections and infestations (36%) were the most common followed by physiological conditions (26%), eczematous disorders (14.65%), papulosquamous disorders (11.36%), inflammatory dermatoses (3.79%), pigmentary disorders (3.5%), photo dermatoses (1.76%), immunobullous disorders (0.75%) and miscellaneous (2.19%) **(Table 1 and 2)**.

Among the infections and infestations, Fungal infections is the most common of which Tinea corporis (17.46%) is predominantly seen followed by Bacterial infections (10.96%), Scabies (2.53%), Herpes zoster (1.78%), Hansen (0.25%) and Verruca (0.25%) **(Figure 1 and 2)**.

Out of 395 patients, 105 patients had physiological changes (26%), senile pruritis (14.17%) is the most common manifestation. A rare presentation of Favre racouchet syndrome was observed **(Table 3 and F igure 3)**.

Table 1 Prevalance of geriatric dermatoses.

Infections and Infestations	36%
Eczematous disorders	14.65%
Immunobullous disorders	0.75%
Pigmentary disorders	3.5%
Papulosquamous disorders	11.36%
Photodermatoses	1.76%
Physiological changes	26%
Inflammmatory dermatoses	3.79%
Miscellaneous	2.19%

Table 2 Physilogical changes in elderly

1.	Senile pruritis	13.17%
2.	Wrinkles	4%
3.	Seborrheic keratosis	1.03%
4.	Ecchymosis	0.25%
5.	Fissured Foot	0.76%
6.	Xerosis	3%
7.	Canitis	1%
8.	Idiopathic guttate hypomelanosis	1.54%
9.	Favre racouchet syndrome	1.25%

Figure 1 Tinea corporis.

Figure 2 Herpes zoster.

Figure 3 Favre Racouchot syndrome.

Table 3 Pathological changes in elderly

Infections and infestations	
Dermatophytosis	17.46%
Bacterial infections	10.96%
Onychomycosis	1.26%
Scabies	2.53%
Herpes zoster	1.78%
Candiasis	1.51%
Hansen	0.25%
Verruca	0.25%
Eczematous disorders	
LSC	7.59%
Allergic contact dermatitis	3.03%
Asteaotic eczema	1.26%
Stasis eczema	2.02%
ICD	0.25%
Atopic dermatitis	0.25%
Pompholyx	0.25%
Immunobullous disorders	
Bullous pemphigoid	0.25%
Pemphigus vulgaris	0.5%
Pigmentary disorders	
Vitiligo vulgaris	3.25%
Lip vitiligo	0.25%
Papulosquamous disorders	
Psoriasis vulgaris	5.56%
Scalp psoriasis	0.75%
Lichen planus	1.51%
PPP	3.54%
Photodermatoses	
PMLE	1.26%
Photocontact dermatitis	0.5%
Inflammatory dermatoses	
Urticaria	1.26%
Seborrheic dermatoses	1.78%
Prurigo nodularis	0.75%
Miscellaneous	
Benign Tumors	0.25%
Malignant conditions	0.69%
Nutritional dermatitis	0.75%
Vasculitis	0.25%
Erythroderma	0.25%

Among the Eczematous conditions, Lichen simplex chronicus is the predominant presentation (7.59%), followed by allergic contact dermatitis (3.03%), stasis eczema (2.02%), asteotatic eczema (1.26%), pompholyx (0.25%).

Among the inflammatory dermatoses, urticaria (1.26%) is predominant, followed by seborrheic dermatoses (1.78%) and prurigo nodularis (0.75%).

Out of 395 patients attending the OPD, 3 patients had immunobullous disorders, pemphigus vulgaris (0.5%) is the most common followed by bullous pemphigoid (0.25%) **(Figure 4)**.

14 patients attending the OPD had pigmentary disorders of which vitiligo vulgaris (3.53%) is seen commonly followed by lip vitiligo (0.25%). Among the papulosquamous disorders, psoriasis vulgaris (5.56%) is the most common, followed

Figure 4 Bullous pemphigoid.

Figure 5 Psoriasis vulgaris.

by scalp psoriasis (0.75%), lichen planus (1.51%) and palmoplantar psoriasis (3.54%) **(Figure 5)**.

Out of 395 patients 8 patients had photo dermatoses, PMLE (1.26%) is the most common followed by photo contact dermatoses (0.5%).

Among the miscellaneous conditions' Nutritional disorders (0.75%) were seen, benign and malignant conditions were also seen. Among the malignant condition basal cell carcinoma was seen. Few cases of erythroderma and vasculitis were seen **(Figure 6)**.

Discussion

With advancing science and technology there is better medical health care. This contributed to increased average life span of man.[7] With the increased proportion of elderly population, the percentage of dermatological diseases in the elderly is also increasing. Geriatric dermatology is an upcoming branch in dermatology, which have greater impact on providing better quality of life in elderly population.[8]

Majority of the cutaneous findings are due to cumulative solar exposure occurred during their lifetime.[9] Dermatoheliosis was superimposed physiological aging. Most of the cutaneous changes studied were harmless to elderly, but actinic dermatitis and cutaneous malignancy like Squamous cell carcinoma, Basal carcinoma can occur in certain predisposed individuals.[10] A lower age limit of 60 years was taken as the inclusion criterion in our study, which was similar to the study done by Chopra *et al.* and Nair *et al.* The age group of patients with a majority of cutaneous manifestations in our study is comparable to the study conducted by Leena Raveendra *et al.*[6]

Infections and infestations

Cutaneous infections formed the largest group of skin disorders seen in geriatric population. Among which tinea corporis is the major cutaneous manifestation.[11] Decrease in personal care, hot and humid climate, self-medication (Steroid usage) and comorbidities were the possible reasons for high prevalence rate of fungal infections Disappearance of antibodies to common infections.[12] Moreover, Raveendra et al reported that skin infections and infestations were seen in 32% of elderly patients.

Tinea incognito was originally described in 1968 by Ive and Marks. Tinea incognito is the atypical clinical presentation of dermatophytic infections caused by prior use of topical or systemic steroids.[13]

Herpes Zoster (HZ) presents as a dermatomal skin rash which occurs due to reactivation of latent varicella zoster virus (VZV) and is frequent among most older adults. Post-herpetic neuralgia (PHN) is a common sequela; presenting as severe pain that persists after the rash has resolved. It occurs more commonly in older age and can be very debilitating.[14]

Scabies caused by the itch mite *Sarcoptes scabiei*, is a parasitic infestation seen in the elderly population because of decreased protective function of skin. Other factors include decreased mobility, living in grouped facility, and treatment options resulting in increased

transmission among themselves and their caretakers.[15]

With advancing aging, the immunity of body decreases making the skin xerosis with altered skin barrier function. This causes increased frequency of cutaneous infections in elderly.

Eczematous disorders

The second most common group of skin diseases in elderly was allergic and eczematous diseases

Eczematous diseases in elderly have shown different rates from 1.5 to 58.7% in different studies. In addition, Reszke *et al*. reported that eczematous lesions were present in 27.3% of elderly patients. These lesions were presented as atopic dermatitis, asteatotic eczema stasis dermatitis, and photosensitive eczema.[16]

Physiological changes in elderly

Senile pruritus is the most common physiological condition due to xerosis of skin, decreased elasticity, increased susceptibility to infections.

A Rare condition of Favre Racouchet syndrome was seen which is also referred to as senile comedones, was originally described in 1932 by Favre and later reviewed in detail by Favre and Racouchet in 1951.[17]

Skin disorders caused by external agents especially detergents and sun exposure are common due to increased permeability of skin. These substances enter aged skin better than younger skin, and are removed slowly into circulation because of changes in the dermal matrix and reduction in the vasculature.

Pigmentary disorders

Pigmentary disorders are less common due to less attending to OPD for such complaints to Government hospital.

Immunobullous disorders

Immunobullous disorders commonly include pemphigus group and pemphigoid group. The main pathogenesis includes loss of adhesion between keratinocytes or between keratinocytes and underlying basement membrane. It affects both skin and mucous membranes causing major cause of hospital admission, morbidity and mortality.[18] Pemphigus in Indian population has unique genetic, clinical and epidemiological differences when compared to western population. Dietary advise plays a major role in preventing relapses and maintaining remissions.[19]

Conclusion

Cutaneous manifestations in elderly people have to be given more priority to differentiate between Physiological and Pathological changes. This will help them to lead a better social, emotional and healthy life. From our study we found that infectious diseases followed by senile pruritus are the most common skin diseases among elderly patients.

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