



Original Research Article

A clinical study of pattern of geriatric dermatoses

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ABSTRACT

Introduction: Geriatric health care has assumed worldwide importance due to increase in the life expectancy during the last few decades. Aging skin has a marked susceptibility to dermatologic disorders due to the structural and physiologic changes that occur as a consequence of intrinsic and extrinsic aging.

Objectives: To study the spectrum of various dermatoses and the factors contributing to those dermatoses amongst the geriatric patients in a Tertiary care hospital.

Materials and Methods: one hundred and eighty consecutive patients aged more than 60 years of age attending the outpatient clinic or admitted as inpatients in the Department of Dermatology, STD and Leprosy at Silchar Medical College and Hospital were subjects for the study. Detailed history taking followed by general, systemic and cutaneous examination, and relevant investigations were carried out. The findings were recorded in a proforma for analysis and interpretation of data.

Results: A total number of 180 patients were enrolled in our study, out of which 108 (60%) were males and 72 (40%) females with male to female ratio was 1.5:1. Xerosis was the most common physiological condition and benign tumour followed by infection was the most common pathological conditions.

Conclusion: Geriatric dermatology is an emerging branch in dermatology, and an update on this, will go a long way to effectively manage these patients. A thorough knowledge of the epidemiology as well as gender distribution of dermatological diseases in geriatric population in the tertiary care hospital will help in assessing health status and health care needs related to skin for better allocation of resources, distribution of material and manpower, and help health care providers in better decision-making resulting in higher client's satisfaction.

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1. Introduction

Aging is a process of progressive decreases in the maximal functioning and reserve capacity of all organs in the body, including the skin.¹ Diseases of the aged are becoming increasingly important, as the gradual increase in the life expectancy in the last few decades. This has led to greater interest in the diseases of the aged. The present study gives an insight into different types of dermatological problems of the aged, their incidence, the various factors contributing to it and the association with systemic diseases.²

United Nations defines elderly as those of more than 60 years of age.³

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2. Materials and Methods

One hundred and eighty consecutive patients aged more than 60 years of age attending the outpatient clinic or admitted as inpatients in the Department of Dermatology, STD and Leprosy at Silchar Medical College and Hospital were subjects for the study. Detailed history taking followed by general, systemic and cutaneous examination, and relevant investigations were carried out. The findings were recorded in a proforma for analysis and interpretation of data.

2.1. Inclusion criteria

Patients above 60 years of age of either sex who attended the dermatology out-patient department and referred patients

from other departments for dermatological opinion were included in this study.

2.2. Exclusion criteria

1. Patients who did not give consent for examination.
2. Diseases of nails, hairs and mucosa were not included in the study.

3. Results

A total number of 180 patients were enrolled in our study, out of which 108 (60%) were males and 72 (40%) females (Figure 1). The male to female ratio was 1.5:1. Maximum patients 94 (52.2%) were in the age group 60-69 years and 70(38.8%) patients belonging to 70-79 age groups and only 16 (8.8%) patients were above 80 years age. The oldest patient was a 92 years male.

All the patients had physiological changes and the commonest was xerosis. The physiological changes were tabulated in a bar diagram (Figure 2).

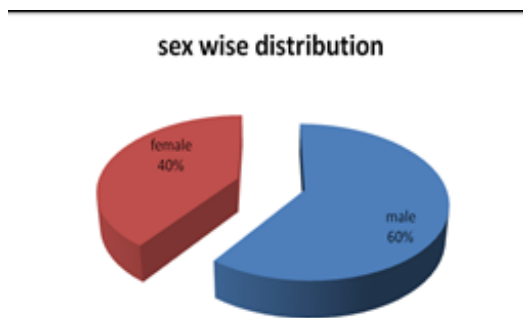


Fig. 1: Sex incidence

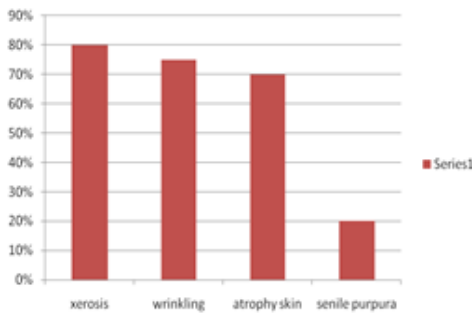


Fig. 2: Physiological changes

Pruritus was the commonest complaint (60%) observed. Of which 10% of the patients had senile pruritus and the rest were associated with cutaneous dermatoses (85%) and systemic diseases (5%).

Amongst the various pathological conditions observed, benign tumours were seen in 120 patients (66.6%), infections and infestations in 65 patients (36.1%), eczematous

disorders in 55 patients (30.5%), papulosquamous disorders in 25 patients (13.8%) and other miscellaneous conditions in 25 patients (13.8%).

Among benign tumours seborrhoeic keratosis was the commonest seen in 40 patients (22.2 %) followed by cherry angioma in 35 patients (19.4 %) then dermatosis papulosa nigra in 15 patients (8.3%). These were tabulated in table (Table 2).

Infections and infestation s were seen in 60(36.1 %) patients which were tabulated in (Table 3). Of the various infections, fungal infection was the commonest.

Papulosquamous disorders were seen in 25 patients (13.8%). 20 patients (11.1 %) had psoriasis, and 5(2.7 %) had lichen planus.

Eczema was present in 55 patients (30.5%). Among the various types of endogenous eczema s, lichen simplex chronicus was the commonest, seen in 15(8.3%) patients. 11 patients (6.1%) had seborrhoeic dermatitis, 8 patients (4.4%) had stasis dermatitis, 6 patients (3.3%) had asteatotic and 5 patients (2.7%) had nummular eczema. (Table 4)

Among exogenous eczema s, contact dermatitis was seen in 6 patients (3.3%) and photodermatitis were seen in 4(2.2%) patients. (Table 5)

3.1. Miscellaneous disorders

Pigmentary disorders were observed in 10 patients (5.5%); Idiopathic guttate hypomelanosis being the commonest seen in 6(3.3%) patients, followed by vitiligo found in 4(2.2%) patients.

Trophic ulcer was seen in 5 patients (2.7%) and 5 patients (2.7%) presented with bullous pemphigoid.

Erythroderma seen in 5 (2.7 %) cases.

Associated systemic diseases were recorded in 72(40%) patients, of which hypertension (40; 22.2%) was the commonest. These were tabulated in a bar graph (Figure 3).

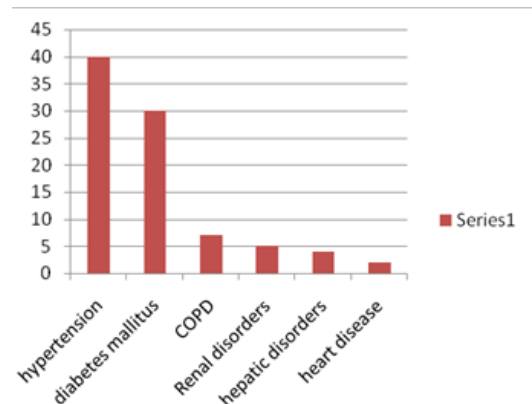


Fig. 3: Associated systemic conditions in geriatric patients.

Table 1: Incidence of different pathological conditions among geriatric population

S.No.	Diseases	No. of cases	Percentage
1	Benign tumours	120	66.6%
2	Infections and infestations	65	36.1%
3	Eczematous disorders	55	30.5%
4	Papulosquamous disorders	25	13.8%

Table 2: Benign tumors of the skin.

S. No.	Diseases	No. of cases	Incidence
1	Seborrhoeic Keratosis	40	22.2%
2	Cherry Angiomas	35	19.4%
3	Achrochordon	20	11.1%
4	Dermatosis Papulosa Nigra	15	8.3%
5	Senile lentigines	6	3.3%
6	Senile comedones	4	2.2%

Table 3: Infections and Infestations

S No.	Diseases	gender				Total	
		Male		Female		No.	Percentage
		No.	Percentage	No.	Percentage	No.	Percentage
1	Fungal	20	11.1%	10	5.5%	30	16.6%
	Dermatophytic Infections (Tinea Corporis, Tinea Pedis, Onychomycosis)	15	8.3%	6	3.3%	21	11.6%
	Candidiasis	5	2.7%	4	2.2%	9	5%
2	Bacterial	13	6.1%	6	4.4%	19	10.5%
	Furuncle	4	2.2%	2	1.1%	6	3.3%
	Folliculitis	3	1.6%	2	1.1%	5	2.7%
	Cellulitis	3	1.6%	1	0.5%	4	2.2%
	Leprosy	3	1.6%	1	0.5%	4	2.2%
3	Viral	5	2.7%	5	2.7%	10	5.5%
	Herpes zoster	3	1.6%	4	2.2%	7	3.8%
	Viral wart	2	1.1%	1	0.5%	3	1.6%
4	Parasitological	2	1.1%	4	2.2%	6	3.3%
	Scabies	2	1.1%	4	2.2%	6	3.3%

Table 4: Endogenous eczema

Eczematous conditions	Gender				Total	
	Male		Female		No.	Percentage
	No.	Percentage	No.	Percentage	No.	Percentage
Lichen simplex chronicus	9	5%	6	3.3%	15	8.3%
Seborrheic dermatitis	6	3.3%	5	2.7%	11	6.1%
Stasis dermatitis	4	2.2%	4	2.2%	8	4.4%
Asteatotic eczema	2	1.1%	4	2.2%	6	3.3%
Nummular eczema	3	1.6%	2	2.2%	5	2.7%

Table 5: Exogenous eczema

Eczematous conditions	Gender				Total	
	Male		Female		No.	Percentage
	No.	Percentage	No.	Percentage	No.	Percentage
Contact dermatitis	3	1.6%	3	1.6%	6	3.3%
Photodermatitis	3	1.6%	1	0.5%	4	2.2%



Fig. 4: Male with psoriasis



Fig. 7: Female with hansen's disease



Fig. 5: Female with lichen simplex chronicus



Fig. 8: Male with herpes zoster



Fig. 6: Male with seborrheic keratosis



Fig. 9: Female with tinea corporis

4. Discussion

A total of 180 patients aged 60 years and above were examined over a period of one year of which males outnumbered females with male to female ratio 1.5:1. In this study, most common age group was 60-69 years (52.2%). The oldest patient was a 92 years male.

Pruritus was the commonest symptom seen in this study found in 108(60%) patients Of which 10% of the patients had senile pruritus and the rest were associated with cutaneous dermatoses (85%) and systemic diseases (5%). In other studies, pruritus has been the commonest complaint noted varying from 12%⁴ to 44 %.⁵ About 72(40%) patients in this study had co-morbid conditions like diabetes mellitus, hypertension, chronic renal failure, hepatic disease, heart disease, chronic obstructive lung disease etc with multiple drug usage which may have contributed to development of pruritus.

In older person's skin it is difficult to decide what is abnormal and what is physiological. Many changes and lesions are normal, except occasionally in degree and number. In this study we considered xerosis, wrinkling, atrophy of skin, senile purpura as physiological changes.

This study represents benign tumours as the most common dermatoses followed by infections and infestations, eczema and papulosquamous disorders.

Xerosis was the commonest physiological change seen in the present study 144 (80%). Similar findings have been reported in other studies also.⁵ The high incidence of xerosis could be attributed to less use of emollients and usage of harsher soaps by the subjects of the study who mostly hail from semi rural and village area.

Wrinkling was seen in 75% (135) patients in this study. Few studies like Goyal et al,⁶ Pavithra S et al⁷ have reported wrinkling as the commonest physiological changes. The incidence of atrophic skin changes was 70% and senile purpura observed in 20% of patients. Grover et al⁸ and Raveendra L.⁵ reported these in 10% and 15% patients respectively.

Skin tumours were noted in 120 patients (66.6%) and tabulated in (Table 2). No malignant or premalignant tumours were seen in this study. Seborrheic keratosis (Figure 6) was the most common type of benign condition (22.2%), cherry Angiomas (19.4%), achrochordon (11.1 %).

Talukdar et al⁹ (23.3%), Pavithra S et al⁷ (27.5%), Sanjiv Grover et al⁸ (43%), Leena Raveendra⁵ (56%) shows higher prevalence of seborrheic keratosis.

Infectious dermatoses was observed in 36.1 % of our study population. It is comparable with the study by Sahoo et al.¹⁰ (30%), Patange and Fernandez² (34.5%). Geriatric people are most commonly affected by infectious dermatoses. Several factors, including impaired immune function, thinning of skin, dryness, decreased blood flow, associated medical conditions like diabetes, variety of drugs used to treat these conditions lead to delay in the healing

process.

Among the infective disorders, fungal infections (16.6%) was the common disorder in our study. The high prevalence of mycosis, when compared to bacterial or viral infection, is mainly due to the hot, humid climate of our place. Fungal infections were mainly represented by *Tinea corporis* (7.2 %) in our study which is comparable to study by Talukdar et al.⁹ (7.5%). Fungal infections were common in males in comparison to females as males do more outdoor activities than females.

Bacterial infection was seen in 10.5% of our study population which is comparable with Goyal A et al.⁶ (10.2%). Furuncle (3.3%) and folliculitis (2.7%) were the most common bacterial infection in our study and the predisposing factors are xerotic skin, diabetes and compromised circulation. Bacterial infections are second most common as most of the patients has lower socioeconomic lifestyle and food habits predisposing for malnutrition and decreased immunity.

The frequency of viral infection in our patients (5.5 %) was in concordance with Raveendra L.⁵ (8%). Herpes zoster was the most common viral illness in our study (3.8%) which is comparable to Raveendra L. (4%).⁵

Leprosy cases were seen in 2.2 %, of our study population which is close to the study by Goyal A et al.⁶ (2.3%).

Among 180 cases, eczematous conditions were found in 55(30.5%) cases in our study. Of the endogenous eczemas lichen simplex chronicus was found in 15 (8.3%), seborrheic dermatitis in 11(6.1 %) cases, stasis dermatitis in 8 (4.4%) cases, asteatotic eczema was found in 6 (3.3%) cases and nummular eczema in 5(2.7 %) cases.

Of the exogenous eczemas, contact dermatitis in 6(3.3%) cases, photodermatitis in 4(2.2%) cases.

Ravindra L⁵ in her study found lichen simplex chronicus in 10%, stasis eczema and seborrheic eczema in 5%, contact dermatitis 3%. Asteatotic eczema was found to be in 2.5% and atopic dermatitis in 0.5%.

Kshetrimayum S et al.¹¹ found lichen simplex chronicus in 6%, contact dermatitis 4.8%, seborrheic eczema in 4%, nummular eczema in 4% and asteatotic eczema was found to be in 2%.

In our study, the incidence of endogenous eczema is higher than exogenous eczema. This may be due to the elderly group of patients mostly remain indoor and is not expose to the external environment. The geriatric skin becomes pruritic as a result of excessive dryness, lack of application of emollients and decrease in functions of the glands. Scratching leads to development of lichen simplex chronicus in predisposed individuals. Improper hygiene and decrease in immunity are the precipitating factors for different endogenous eczema. In addition, the difference in finding with other authors may be due to difference in number of patients enrolled in the study. Exogenous

eczemas are more predominant in males as compared to females because males are more exposed to exogenous elements. Health education regarding proper skin care like avoidance of local irritants, self-medication, appropriate use of emollients would lessen the incidence of eczemas.

Papulosquamous disorders constituted 13.8% of the study population (25 cases) out of which psoriasis was commonest and found in 11.1% of study population (20 cases) which is comparable to that reported by Grover and Narasimhalu⁸ in (12.5%), Kshetrimayum S et al.¹¹ (10.4%).

Lichen planus was seen in 2.7% (5 cases) of study population which is comparable with the study by Sahoo A.¹⁰ who reported 5% incidence of lichen planus in geriatric age group patients and Raveendra L.⁵ reported lichen planus in 5% of cases.

Pigmentary disorders were observed in 10 (5.5%) cases; idiopathic guttate hypomelanosis being the commonest seen in 6 (3.3%).

Sahoo A. et al.¹⁰ found IGH in (6.5%), Vargese, A. E. et al.⁴ found IGH in 5.6%.

Vitiligo was seen in 4 (2.2%) cases in present study which is comparable with study of Sayal SK¹² who reported vitiligo in 3.75% cases. Kshetrimayum S et al.¹¹ reported vitiligo in 2% cases.

Bullous pemphigoid was the only bullous disorder encountered in this study, seen in 5 (2.7%) patients which is close to (2.8%) as reported by Talukdar et al.⁹ Leena Raveendra⁵ (1.5%) and Chopra A et al.¹³ (2.9%).

Trophic ulcer was seen in 5 cases (2.7%).

In our study erythroderma was found in 5 (2.7%) cases which is comparable with the study of Chopra A¹³ in (2.3%) and Najdawi F¹⁴ in (0.43%).

The elderly population is often afflicted with multiple systemic co-morbidities and skin findings can be a sign of internal disease.

Diseases such as hypertension and hyperlipidemia decreases blood flow to skin decreasing the ability of the elderly to fight the infection, decreased blood flow slows wound healing, increases xerosis and allows pathogens to enter the broken skin.¹⁵

The cause of the intense itching experienced by diabetic patients is unclear, but it may be related to secondary conditions such as xerosis or infection. Systemic diseases tend to lower the threshold for itch. Even a mild stimulus can also trigger an exaggerated pruritic response in some patients. Other contributory factors are poor glycemic control, poor microcirculation, peripheral vascular disease, peripheral neuropathy, and decreased immune response which have been implicated in increased susceptibility to infections among elderly.

Systemic inflammation and dysregulated immune function in COPD and renal failure also predispose patients to conditions like xerosis, pruritus, herpes zoster etc. The

most common cause of Xerosis in patients with renal failure is secondary to dialysis, is due to imbalance of calcium, magnesium, and phosphorus. This makes it important to identify them and proper correlation is mandated in deciding therapeutic care.¹⁵

In this study associated systemic diseases were observed in 72 (40%) patients. Hypertension (22.2%) was the commonest followed by diabetes (16.6%) which is close to study of Goyal A et al.⁶ who reported hypertension in (15.7%) and diabetes in (9.7%).

5. Conclusion

With the expected increase in the geriatric population in the coming years due to improvement in health care services, the dermatological problems in geriatric population are of great relevance. Benign tumours (66.6%), infectious conditions (36.1%), and eczema (30.5%) occupied the top three common dermatoses in our geriatric study population. Hence, it can be seen that although old age has a large number of cutaneous diseases associated with aging, the skin of these individuals are also prone to external insults as the nature of the skin changes with age. A proper knowledge of the physiological and pathological skin changes in the elderly may aid the dermatologist in the better management of the cases and also help in controlling the extrinsic factors such as sunlight, pollution, contact allergens and irritants, dietary factors responsible for different geriatric dermatoses, which will be helpful in prevention of diseases in elderly.

6. Source of Funding

None.

7. Conflict of Interest

None.

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