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Original Research Article

Pattern of geriatric dermatoses at a tertiary care center in North-East India

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ABSTRACT

Background: The aging population is dramatically increasing with the increase in the average life. It is faced with different health problems which include skin as well. The aim was to study the clinical pattern of geriatric dermatoses and associated systemic diseases.
Methods: A cross-sectional study was conducted for a period of 18 months to study the pattern of geriatric dermatoses on 250 geriatric patients aged above 60 years attending Dermatology OPD, RIMS, Imphal.
Results: Out of 250 patients 136 were males and 114 were females. The mean age was 67.28 years and the male to female ratio was 1.19:1. Majority of the patients belonged to the 60-69 age group (66%). 63.2% had the dermatosis for more than 1 month before presentation. The most common dermatoses were: infections (26.4%), eczemas (22.4%), papulosquamous (10.4%), photodermatoses (8.0%) and infestations (6.8%). Herpes zoster (13.2%) and superficial fungal infections (7.6%) was the most common infections. Lichen simplex chronicus (6%). was the main form of eczema. Psoriasis (6%) and lichen planus (4.4%) were the common papulosquamous disorders. Chronic actinic dermatitis (6%) represented as the main pattern of photodermatoses. Uncommon disorders were tumors (4%), immunobullous (2.6%), drug reaction (2.4%), vitiligo (2%) and alopecia areata (0.8%). Main co-morbid systemic diseases were hypertension (16.4%) and diabetes mellitus (6.8%).
Conclusions: Different disease entities in the elderly demands different approach to management. Contributing factors like neglect, delay in seeking treatment, co-morbidities have to be properly addressed. Health education on proper skin care, avoidance of irritants and self-medication etc would help reduce the incidence of common dermatoses.

Keywords: Geriatric, Dermatoses, North-East, India

INTRODUCTION

The geriatric population is composed of persons above 60 years of age.[1] Higher standards of living together with improvement in health care services have meant that the average life span has increased considerably over the years. India crossed the United Nations definition of an aging country when of persons aged older than 60 years exceeded 7%.[2] As the age increases, patients experience more illnesses and this applies in particular to skin as well. Various studies have been conducted in different parts of India to understand the skin problems in geriatric population which have shown varying patterns. In view of paucity of data from North East India the present study was carried out to evaluate the pattern and frequency of skin diseases of the geriatric population in this part of the country.

METHODS

Inclusion criteria

Inclusion criteria were patients above 60 years of age of either sex who attended the dermatology out-patient department; referred patients from other departments for dermatological opinion.

Exclusion criteria

Exclusion criteria was age related skin changes as the primary diagnosis.

A cross-sectional study was conducted in out-patient department of Dermatology, RIMS, Imphal for a period of 18 months (December 2013 to May 2015). Two hundred and fifty patients aged above 60 years of either sex were subjects for the study. A detailed history was taken and general, systemic and cutaneous examination was carried out. Diagnosis was made on clinical grounds and relevant investigations were performed. The data collected was tabulated in Microsoft Excel Worksheet and computer-based analysis was performed using the SPSS software (version 21).

RESULTS

Out of the 250 patients, there were 136 (54.4%) males and 114 (45.6%) females (Table 1). Male to Female ratio was 1.19:1. The mean age was 67.28 years ranging from 60 to 96 years. Sixty four percent (160 patients) of the study population belonged from the urban region. According to education level 44.4% were literate and almost all women were housewives (44.8%) and males were farmers (22%). Summer (40.4%) was the most common season of presentation. Different form of addictions like smoking, betel chewing, tobacco and alcohol was observed in 119 patients (47.6%). Majority of the patients had the dermatoses for more than 1 month (158; 63.2%) before presentation. Pruritus was the commonest complain in 149 patients (59.6%) and all were associated with cutaneous disorders. Age and sex wise distribution of patients is given in Table 1. Pattern of dermatoses is given in Table 2.

Table 1: Age and sex wise distribution.

Age group (years)	Sex		Total (%)
	Male	Female	
60-69	77	88	165 (66)
70-79	41	22	63 (25.2)
>80	18	4	22 (8.8)
Total	136	114	250 (100)

Overall the five most common dermatological diseases in this study were infections (66; 26.4%), eczemas (56; 22.4%), papulosquamous (26; 10.4%), photodermatoses (20; 8%) and infestations (17; 6.8%). Infectious, non–infectious and less common entities given in (Table 3 to 5) respectively.

Table 2: Pattern of geriatric dermatoses.

Disease category	Age group			Total (%)
	60-69	70-79	>80	
Infections	45	16	5	66 (26.4)
Infestations	8	9	0	17 (6.8)
Eczemas	36	10	10	56 (22.4)
Papulosquamous	17	6	3	26 (10.4)
Connective tissue disease	12	3	0	15 (6.0)
Immunobullous	3	1	0	4 (1.6)
Hair disorders	4	0	0	4 (1.6)
Photodermatoses	13	4	3	20 (8.0)
Pigmentary	3	2	0	5 (2.0)
Pilosebaceous	2	0	0	2 (0.8)
Tumors	7	3	0	10 (4.0)
Drug reaction	3	3	0	6 (2.4)
Miscellaneous	12	6	1	19 (7.6)
Total	165	63	22	250 (100)

In the miscellaneous category: Post herpetic neuralgia (11; 4.4%), idiopathic urticaria (3; 1.2%), pellagra (1; 0.4%), granuloma annulare (1; 0.4%), colloid millium (1; 0.4%), reactive perforating collagenosis (1; 0.4%) and erythroderma (1; 0.4%) (Figure 1-7).

Associated systemic illnesses in the study population were observed in 78 patients (31.2%). Hypertension (41; 16.4%) followed by diabetes mellitus (17; 6.8%) were the most common ones. Eight patients (3.2%) had both hypertension and diabetes mellitus. There was one case each of hepatitis C infection and HIV infection.

Table 3: Infectious dermatoses.

Infections (n=66; 26.4%)	Total (%)
Viral (n=37)	
Herpes zoster	33 (13.2)
Genital wart	1 (0.4)
Molluscumcontagiosum	1 (0.4)
Verruca plana	1 (0.4)
Herpes genitalis	1 (0.4)
Fungal (n=22)	
1) Superficial fungal	
Dermatophytosis	9 (3.6)
Candidial	4 (1.6)
Pityriasisversicolor	2 (0.8)
Onychomycosis	4 (1.6)
2) Deep fungal	
Sporotrichosis	3 (1.2)
Bacterial (n=5)	
Furunculosis	5 (2.0)
Mycobacterial (n=2)	
Hansen's disease	2 (0.8)
Infestations (n=17)	
Scabies	17 (6.8)

Table 4: Non-infectious dermatoses.

Diseases	Total (%)
Eczemas (56; 22.4%)	
lichen simplex chronicus	15 (6)
Contact dermatitis	12 (4.8)
Seborrhoeic dermatitis	10 (4)
Nummular eczema	10 (4)
Asteatotic eczema	5 (2)
Pompholyx	4 (1.6)
Papulosquamous (26; 10.4%)	
Psoriasis	15 (6)
Lichen planus	11 (4.4)
Photodermatoses (20; 8%)	
Chronic actinic dermatitis	15 (6)
Pmle	4 (1.6)
Actinic cheilitis	1 (0.4)
Connective tissue disorders (15; 6%)	
Dle	7 (2.8)
Lsa	6 (2.4)
Scleroderma	2 (0.8)

Table 5: Less common diseases.

Diseases	Total
1) Tumors	(10; 4)
i) Premalignant	(6; 2.4)
• Bowens disease	(3; 1.2)
• Keratoacanthoma	(2; 0.8)
• Cutaneous horn	(1; 0.4)

ii) Malignant	(4; 1.6)
• Squamous cell carcinoma	(2; 0.8)
• Basal cell carcinoma	(1; 0.4)
• HIV related kaposi sarcoma	(1; 0.4)
2) Drug reactions	(6; 2.4)
i) FDE	(2; 0.8)
ii) Drug induced urticaria	(1; 0.4)
iii) Ten	(2; 0.8)
iv) Bullous hemorrhagic dermatoses	(1; 0.4)
3) Immunobullous disorders	(4; 1.6)
i) Pemphigus vulgaris	(3; 1.2)
ii) Pemphigus foliaceus	(1; 0.4)
4) Pigmentary disorders	(5; 2.0)
i) Vitiligo	(5; 2.0)
5) Pilosebaceous disorders	(2; 0.8)
i) Rosacea	(2; 0.8)
6) Hair disorders	(4; 1.6)
i) Alopecia areata	(4; 1.6)

Table 6: Comparison of most common dermatoses in present study with other studies.

Disease category	Manipur Present study 2015	Mysore Raveendra et al[13] 2014	Gujarat Nair et al[4] 2013	Goa Pavithras et al[12] 2010	Nepal Thapa et al[15] 2012
Infections	26.4	29	21.45	28.7	30.6
Infestations	6.8	3	1.75	4.9	4.5
Eczemas	22.4	31	31.29	19.2	35.8
Papulosquamous	10.4	12	7.43	12.3	3.3
Photodermatoses	8	Nil	Nil	2.4	4.5

Table 7: Pattern of infections in comparison to other studies.

Infections	Manipur Present study 2015	Mysore Raveendra et al[13] 2014	Gujarat Nair et al[4] 2013	Goa Pavithra et al[12] 2010	Nepal Thapa et al[15] 2012
Viral	14.8	8	7.1	3.4	7.3
Fungal	8.8	11	11.59	20.7	13.6
Bacterial	2	4	1.96	3.9	2.1
Leprosy	0.8	6	0.87	0.7	7.6

Table 8: Comparison of pattern of eczemas with different studies.

Type of eczema	Manipur Present study 2015	Goa Pavithras et al[12] 2010	Taiwan Liao et al[8] 2001	Mysore Raveendra et al[13] 2014	Puduchery Durai et al[14] 2012
Lichen simplex chronicus	6.0	3.9	5.4	10	7.4
Contact dermatitis	4.8	2.4	0.3	3	10.6
Nummular eczema	4.0	2.2	Nil	Nil	1.4
Seborrhoeic dermatitis	4.0	Nil	8.8	5	Nil
Asteatotic eczema	2.0	5.6	5.5	2.5	3
Pompholyx	1.6	Nil	1.2	Nil	Nil

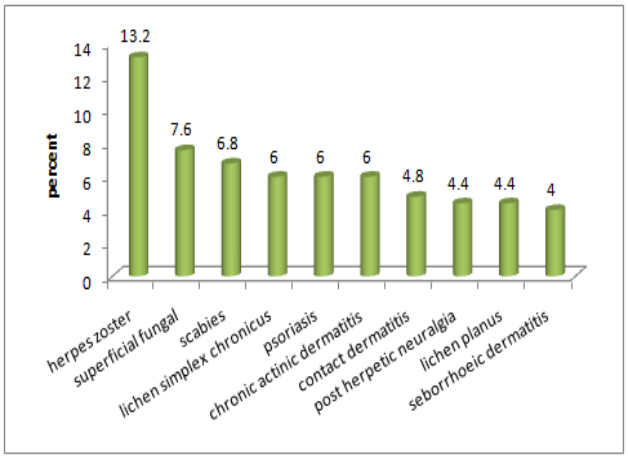

Figure 1: top ten geriatric dermatosis.

Figure 2: Herpes zoster.

Figure 3: Candidial balanopostitis.

Figure 4: Psoriasis.

Figure 5: Pemphigus vulgaris.

Figure 6: Erythroderma.

Figure 7: Bullous hemorrhagic dermatosis due to heparin.

DISCUSSION

Discoveries in medical sciences and improved health care services have increased the average life span of man. With the increase in the percentage of geriatric patients the burden of dermatologic diseases in the elderly is also increasing. Because of both physical and mental disability which account for poor attendance of such cases, the dermatologic demands are largely unmet. This makes it imperative to study in detail the problems of the aged so that proper dermatological care can be provided to them. Several studies on geriatric dermatoses have been conducted in India and across but no such study has been undertaken in this part of the country.

The present study was conducted on 250 patients aged above 60 years. A lower age limit of 60 years was considered as the inclusion criterion which was similar to the studies done by Chopra and Nair et al.[3,4] In this study, geriatric dermatoses was most common in the age group of 60-69 years (66%). Similar finding was also observed by Sheethal et al, but these findings could not be compared with other studies as they used varying range for age group and age limit.[5] Majority of patients (63.2%) had the dermatoses for more than one month before presentation which is attributable to the fact that most of the elderly are often debilitated and dependent on others to avail medical services, the skin condition is generally neglected and considered trivial as compared to other systemic co-morbidities.

Pruritus is a very common dermatological problem of the elderly and the causes can be varied. In the absence of skin lesions, underlying systemic illnesses, medications, nutritional status, occult malignancy and psychological factors should be considered while evaluating a patient presenting with pruritus. In this study, pruritus (59.6%) was the most common presenting complaint. Patange and Fernandez noted pruritus in 78.5% of their patients which was higher than the finding of this study.[6] In this study all cases of pruritus was secondary to associated dermatoses.

This study represents infections as the most common dermatoses followed by eczemas, papulosquamous, photodermatoses and infestations. The comparison of most common dermatoses in the present study with other studies (Table 6).

This difference in the pattern of dermatoses could be due to regional variation in the distribution of skin diseases. Eczemas was found to be the most common dermatosis in some studies done outside India with prevalence ranging from 20.4% to 58.7%.[7-10] This shows that developed countries have higher prevalence of eczematous dermatoses compared to infections because of higher standards of living, difference in lifestyle and lesser population.

Skin infections formed the major group of skin problems in the elderly. Elderly individuals have an increased susceptibility to skin infections because with age, immunity and integrity of skin declines which predisposes them to infections.[11] In this study, infections comprised 26.4% of the study population which was comparable with other Indian studies, but a higher prevalence was reported by Durai et al (46.8%).[4,12-14] Viral infection (14.8%) followed by fungal (8.8%) were the common ones. This is different from the findings observed by other studies which reported fungal cause as the predominant infection (Table 7).[4,12,13,15]

Herpes zoster (13.2%) was the most common infection and overall the most common dermatosis. This is in contrast to other studies which reported the prevalence ranging from 0.9% to 8%.[3,4,7,13,14,16] The finding of high prevalence in this study could be due to the painful nature of the disease which prompts the patient to seek medical advice at the earliest. Post herpetic neuralgia which is a painful complication of herpes zoster accounted for 4.4% of all dermatological consultations. This distressing sequelae can be prevented if prompt referral and proper treatment is given at the early stages of the disease. Majority of the infections were also contributed by poor hygiene, overcrowding, neglect, delay in seeking treatment and self medication. Most of infections were also readily treatable and could have been managed at the level of primary health giver.

Fungal infections (8.85%) was the second most common infection; this finding is slightly lower than the incidence observed by Nair et al (11.59%).[4] Dermatophytic skin infections (3.65%) was the commonest in this category which was in concordance with the findings reported by two studies.[4,8] However, Durai et al found onychomycosis to be more common.[14]

Scabies (6.8%) was the only infestation observed in this study. This finding was higher as compared to results reported by other studies.[4,12,13] Poor personal hygiene, overcrowding as many of the study population were joint families and similar history in other family members were the positive findings in these patients. From the

clinical history majority of the patients had contracted the disease from contact with other family members at home.

This study represents eczema as the second most common dermatosis which constituted 22.4%. Comparable findings were observed in the study conducted by Yalcin et al (20.4%) and Durai et al (24.2%).[9,14] Elderly patients are more prone to minor ailments for which they apply irritants in the form of creams, herbal products and also the age-related epidermal barrier dysfunction and associated xerosis is responsible for the higher frequency of eczemas in this age group. Health education regarding proper skin care like avoidance of local irritants, self-medication, appropriate use of emollients would lessen the incidence of eczemas. There is a great difference in the pattern of eczemas in different regions (Table 8). This can be due to the genetic predisposition and environmental allergens in the locality.

Papulosquamous disorders constituted 10.4% of the study population which is comparable to that reported by Elfaituri (9.7%).[16] Chronic plaque type was the only clinical type of psoriasis observed in the study and all cases with< 10 BSA involvement.

Photodermatoses was one of the common dermatosis encountered in this study. The incidence observed was 8% which is concordant to the finding reported by Sheethal et al (7%).[5] The cumulative effect of sun exposure with age may be the responsible for the higher incidence of sun-related diseases in elderly people.[17] The reason for such high incidence was that majority of the patients in the study group were farmers with outdoor activities involving prolonged sun exposure and also the older age group who become home bound spent their leisure time sun bathing. Proper education regarding the deleterious effects of sun with age should be addressed while dealing with such patients.

Connective tissue disease which is relatively an uncommon disease of the elderly was observed in 6% of the patients, which is quite high as compared to other studies which reported prevalence rate ranging from 0.8% to 3.5%.[16,18] The frequency of drug reaction is generally increased in the elderly population because of multiple drug use.[19]In this study, the drug reaction was 2.4% which is higher than that reported by other studies with incidence ranging from 0.2% to 0.87%.[4,8-10] The overall prevalence of vitiligo in India is 3-4%.[20] This study showed 2% patients with vitiligo which is comparable to that reported by Nair et al (1.53%).[4] However, Patange and Fernandez (19%) found a much higher incidence.[6] This variation could be due to ethnic and racial factors. There was no positive history of any other autoimmune disease and diabetes mellitus. Vesiculobullous disorders constitituted1.6% of the study population. In various studies the incidence of bullous disorders have ranged from 0.5% to 4.4%.[8,12-16,18] This finding was concordant with that reported by Thapa et al (1.8%) and Raveendra (1.5%).[13,15]

The incidence of tumors in this study was 4%. This finding is close to that reported by Yalcin et al (5.2%).[9] Since the risk for skin malignancy increases with age, it is important to identify them early so that proper treatment can be provided to prevent serious complication. Some studies have not reported a single case of malignancy.[4,13]

The elderly population is often afflicted with multiple systemic co-morbidities and skin findings can be a sign of internal disease. This makes it important to identify them and proper correlation is mandated in deciding therapeutic care. In this study associated systemic diseases were observed in 78 (31.2%) patients. This finding was close to that reported by Patange and Fernandez (35%).[6] Hypertension (16.4%) was the commonest followed by diabetes (6.8%) which was much lower than the findings observed by Nair et al.[4]

CONCLUSION

Distinct differences exist in the pattern of dermatoses in comparison with the general population. The pattern observed in this study was different from those reported from different regions of the country as well as beyond it. Majority of the disease were contributed by poor hygiene, neglect, delay in seeking treatment and self-medication. Many of the diseases were readily treatable and could have been managed at the level of primary health givers. Health education programmes about skin diseases need to be shaped to include general awareness and preventive information. As the proportion of geriatric population is increasing, the demand to their health care needs is becoming a challenge and addressing to it will have a great impact on the quality of life of the aged so that they can grow old gracefully and with dignity.

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