

Original Research Article

Skin disorders among elderly population without comorbidities: a hospital based study

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ABSTRACT

Background: Aging is a permanent and progressive degenerative process which affects all organs of the body, including skin. There is a structural and physiologic transformation that arises as a result of intrinsic aging along with extrinsic damage which makes elderly skin more vulnerable to dermatologic disorders. In this study, we set out to determine the frequency and pattern of dermatological diseases in geriatric patients without chronic systemic illness and comorbidities like diabetes mellitus, hypertension and cardiac illness.

Methods: We enrolled 350 patients of the age 60 years and above who were not suffering from any chronic systemic disease for the study. Baseline information and clinical examination were done to make the diagnosis.

Results: The male: female ratio in our study was 1.14:1. The mean age of presentation was 68 year. The minimum age of patient was 60 years and maximum was 92 years. The most frequently encountered diseases in patients were eczematous dermatitis, fungal infections, scabies, xerosis and pruritus. Among eczemas, seborrheic dermatitis was the most common. Very few patients of solar lentigenes, skin tags and seborrheic keratosis came for dermatological consultation.

Conclusions: Eczemas were the most common dermatological disease in elderly in our study and pruritus was the most frequent complaint for which elderly visited skin Out Patient Department. Most of the diseases could possibly have been prevented.

Keywords: Geriatrics, Skin aging, Comorbidities, Eczema

INTRODUCTION

Aging is a process of progressive decrease in the maximal functioning and capacity of all organs of body including skin.¹ The various functions of skin which decrease with aging include cell replacement, DNA repair, barrier function, immune response, epidermal hydration, decrease in epidermal fillagrin and epidermal turnover rate.¹ The reasons for this are complex and not well understood. Elderly people are more prone to a number of dermatological diseases and infections due to

degenerative changes in skin along with various systemic illness and decrease in immunity.² The elderly are more prone to both malnutrition and obesity, factors that facilitate the entry of pathogens into the skin.³ The large spectrum of geriatric dermatological diseases lead to significant morbidity and affect the quality of life in elderly population. This study was done with the aim to determine the characteristic pattern and frequency of dermatological diseases in patients aged 60 years and above who were not suffering from any chronic systemic illness.

METHODS

This was an observational study. There were a total of 1100 geriatric patients who visited our Out Patient Department from January to July 2017, out of which 350 patients of the age 60 years and above were enrolled for the study. The inclusion criteria were (i) absence of chronic systemic illness including diabetes mellitus, hypertension, coronary artery disease and cardiac illness (ii) absence of any regular medication-desi, ayurvedic or allopathic. A detailed history was taken from patients regarding history of any chronic systemic illness. Diagnosis of cutaneous diseases was made on basis of history and clinical examination. Patients were explained the purpose of the study and an informed consent was taken. Demographic characteristics like age, sex, address were recorded. The investigations included fasting blood sugar, complete haemogram, fasting lipid profile, electrocardiogram, fasting thyroid profile, liver function test and renal function test. Blood pressure and weight were recorded at the time of presentation. All the calculations were done on SPSS (Statistical Package for Social Sciences). Descriptive statistics were calculated.

RESULTS

The 350 patients constituted 3.5% of the total attendance in the OPD and 32% of the geriatric patients in the OPD during the study period of 7 months. The mean age of presentation was 68 year. The minimum age of patient was 60 years and maximum was 92 years. Most of the patients (61.7%) belonged to age group 60-69 year followed by 25.7% between 70-79 year, 11% were of 80 years and 5 patients of 90 years and above (Table 1). There were 187 males and 163 females with male:female ratio of 1.14:1 The most common presenting and

associated complaint was pruritus which was present in almost 65% of this population. Eczematous condition were the most common presenting disorder seen in 26.5%, followed by infections and infestation in 25%, papulosquamous diseases in 10%, xerosis in 7.5% and generalized pruritus of unknown cause in 4.6% patients (Table 2). Among the eczematous conditions, seborrheic dermatitis was the most common (23.6%), followed by allergic contact dermatitis (19%) and hand eczema (17%), others were asteatotic dermatitis (10.7%), photodermatitis (8.6%) and air borne contact dermatitis in 6.4% (Table 3). The infectious diseases encountered in decreasing order were dermatophytic infections (55.6%) followed by Scabies (25%). Tinea corporis was the commonest among dermatophytic infections. Viral infections contributed 11% of the infections including herpes zoster, warts and molluscum contagiosum. Herpes zoster was the most common viral infection (70%). Bacterial infections were present in three cases and one patient presented with body lice. The other commonly seen group of disease was papulosquamous diseases including psoriasis and lichen planus in 35 patients (10%), xerosis in 26 patients (7.5%), Pruritus of unknown cause in 4.5%, pigmentary disorders including vitiligo and idiopathic guttate melanosis in 3.4% patients, drug rash in 2.8%, immunobullous disorders in 1.14% and hair loss in 2.8% patients. Miscellaneous diseases which contributed 14.6% of cases included seborrheic keratosis, skin tags, ecchymosis, senile comedones, xanthelasma, callosity as the most common (Table 4). Nail involvement was observed in 8% of patients with various patterns like onychomycosis, paronychia and subungual hyperkeratosis. Among ten cases of drug rash, there were two cases each of Steven-Johnson syndrome and fixed drug eruption, three of maculopapular rash, one of phototoxic rash and two of lichenoid drug eruption.

Table 1: Gender distribution according to age group (n=350).

Age groups (in years)	Male	Female	Total	
			Number	Percentage (%)
60-69	109	107	216	61.7
70-79	47	43	90	25.7
80-89	29	10	39	11.1
>90	2	3	5	1.4

Table 2: Distribution of skin dermatoses according to sex.

Disease		Male	Female	Total		
				Number	Percentage (%)	
Eczema		50	43	93	26.5	
Infection and infestation	Fungal	28	24	52	14.8	25.14
	Scabies	12	10	22	6.3	
	Viral	6	4	10	2.8	
	Bacterial	2	1	3	0.8	
	Body lice	1	0	1	0.3	
Papulosquamous diseases	Psoriasis	11	9	20	5.7	10
	Lichen planus	8	7	15	4.3	

Continued.

Disease	Male	Female	Total		
			Number	Percentage (%)	
Xerosis	14	12	26	7.5	
Generalized pruritus	9	7	16	4.6	
Pigmentary diseases	Vitiligo	3	4	7	3.4
	Idiopathic guttate hypomelanosis	1	4	5	
Hair loss	3	7	10	2.8	
Drug rash	6	4	10	2.8	
Vesiculobullous diseases	2	2	4	1.14	
Miscellaneous disorders	28	23	51	14.6	

Table 3: Prevalence of different types of eczema in elderly.

Type of eczema	Total number of patients	Percentage (out of total cases of eczema) (%)
Seborrheic eczema	22	23.6
Allergic contact dermatitis	18	19
Hand eczema	16	17.2
Asteatotic eczema	10	10.7
Photodermatitis	8	8.6
Air borne contact dermatitis	6	6.4
Lichen simplex chronicus	5	5.3
Irritant contact dermatitis	5	5.3
Atopic dermatitis	3	3.2

Table 4: List of miscellaneous dermatological disorders (decreasing frequency).

Miscellaneous dermatological disorders	Male	Female	Total number of patients (n=51)	Percentage out of total cases of miscellaneous dermatological disorders (%)
Seborrheic keratosis	4	3	7	13.7
Skin tags	4	3	7	13.7
Ecchymosis	4	2	6	11.7
Xanthelasma	1	4	5	9.8
Callosity	2	3	5	9.8
Post herpetic neuralgia	2	2	4	7.8
Solar lentigenes	2	1	3	5.8
Senile comedones	3	1	4	7.8
Wrinkles	1	2	3	5.8
Keloid	1	0	1	1.9
Pyogenic granuloma	1	0	1	1.9
Scrotal calcinosis	1	-	1	1.9
Apthous ulcer	1	0	1	1.9
Rhinophyma	1	0	1	1.9
Keratoacanthoma	1	0	1	1.9
Lichen sclerosus et atrophicus	0	1	1	1.9

DISCUSSION

The number and population of elderly are increasing in both developed and developing countries. In India, the percentage of elderly is expected to go up from 8% in 2015 to 19% in 2050.⁴ In terms of absolute numbers of adults 60 years and older, India is currently second only to China.⁴ This demographic shift has made increased

emphasis on geriatric medicine inevitable. In our study, we found eczema as the most common disease (26.5%) in both males and females. This observation is similar to that observed by Thapa et al where eczema (35.8%) was most common.⁵ Bilgili et al and Liao et al also reported higher incidence of eczema at 32.7% and 58.7% respectively.^{6,7} In elderly population, contact dermatitis and seborrheic dermatitis are more commonly seen. In

our study seborrheic dermatitis was the most common type of eczema. Thapa et al also reported seborrheic dermatitis as the most common eczematous dermatitis in 40.67% of eczema patients.⁵ Contact dermatitis is an important medical problem in elderly patients who have increased sensitivity to the irritants and allergens due to epidermal barrier dysfunction.⁸ In our study allergic contact dermatitis was the second most common eczema. The frequency of allergic contact dermatitis was detected from 4.2% to 72% in previous studies.^{5,7} There are several factors, including impaired immune function, thinning of skin, dryness and decreased blood flow which lead to increased frequency of eczemas in elderly.⁶ Hand eczema was observed in 16 patients with a significant female preponderance at 75%, because of more exposure to soap and detergents. Infections were the second most frequent group of disorders in our study which follow the pattern as seen by Thapa et al, Bilgili et al and Liao et al.^{5,7} Among infections, dermatophytic infections had a high incidence in our study corroborating the current alarming situation of increase in incidence and prevalence of superficial dermatophytosis in India. The most common dermatophytic infection was tinea corporis followed by tinea cruris, tinea pedis and tinea unguium in decreasing order of frequency. Studies by Bilgili et al and Yalcin et al reported tinea pedis to be the most common dermatophytic infection.⁹ In viral infections, herpes zoster was the most common as seen in other studies done in the past. The number of patients suffering from scabies in our study was high and many had frequent relapses as patients mostly belonged to lower socioeconomic status and overcrowded houses. The factors like decrease in personal care and neglect can also contribute to repeated episodes of scabies in elderly in our study. The number of patients with bacterial infections like folliculitis, carbuncle and cellulitis was very low in our study as we had excluded diabetic patients and patients with other predisposing conditions. This is very low in comparison to the incidence of 7% observed by Bilgili et al and 7.3% by Yalcin et al as their study group included patients with various comorbidities.^{6,9} The category of generalized pruritus in our study include patients in whom underlying dermatological disease or systemic illness was ruled out as cause of pruritus. 4.6% patients belonged to this category in our study. The patients with xerosis in our study represented 7.5% of the patients. In old age, due to decreased secretory activity of adipose tissues and sweat glands, skin dryness increases.⁶ The xerosis worsens in winters due to frequent and warm baths and less use of moisturising creams. The ways to prevent skin dryness include decreasing the frequency of having baths, minimising the use of soap and using moisturising cream after having baths, but caution is needed as bath oils can make the bath very slippery, which has its risks in the elderly and frail patient.¹⁰ Study by Darjani et al and Thapa et al on elderly people had 11.6% and 5.9% cases of xerosis.¹¹ In our study, the frequency of premalignant and malignant skin tumours was lower than the previous studies.^{5,11} The number of elderly patients with seborrheic

keratosis, solar lentigenes and wrinkles was low, may be because of the acceptance of these dermatological conditions as a normal occurrence in old age. Many of the skin problems that are found most commonly on random examination of elderly people are not those for which elderly patients necessarily seek consultation from a dermatologist.¹⁰ To improve the health standards in geriatric population, it is needed to conduct more studies to assess the burden of disease in this age group.

CONCLUSION

In our study, the incidence and pattern of diseases was in accordance to the previous studies done in elderly population. Since this study was conducted within a limited time period and with fewer subjects, more studies of the same kind are needed in our population to establish a proper data base for the skin disorders in the elderly population.

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