

A Study of Common Dermatoses among the Geriatric Patients in Salem; a Region of South India

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Abstract

Introduction: Ageing is an irreversible and continuous process which results in a decline of functioning in all systems including the skin, thereby predisposing the elderly persons to develop various skin ailments. Proper knowledge of different dermatoses prevalent in this population in different geographic regions help the health care providers in better health care policymaking.

Objective: The present study was conducted to delineate the spectrum of various dermatoses and the factors contributing to those dermatoses amongst the geriatric patients in a Tertiary care hospital, Salem.

Material and Method: This was a cross-sectional prospective study, conducted in Dermatology Out-Patient department in a tertiary care hospital between March 2015 and June 2016. A total of 250 patients of age sixty years and above were included in the study. They were examined for diseases of the skin and appendages. Data were coded and analyzed.

Results: Almost 84 types of skin lesions were identified among the geriatric age group. Nail disorders (48.8%), Degenerative conditions (42.4%) and Eczema (29.2%) occupied the top three common dermatoses in our study. Regarding specific disorders loss of nail lusture (17.6%) was the most common dermatoses followed by Allergic contact dermatitis (16%), Seborrhoeic keratosis (14.8%), Pruritus (12%) and Fungal infections (11.6%).

Conclusion: Nail disorders(48.8%), Degenerative conditions(42.4%), and eczema(29.2%) occupied the top three common dermatoses in our geriatric study population.

Keywords: Ageing, Eczema, Geriatric dermatoses, Pruritus.

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Introduction

Ageing is a natural process. In the words of Seneca; "Old age is an incurable disease". But more recently, Sir Sterling Ross has said in his quote that "You do not heal old age. You protect it; you

promote it; you extend it"¹. The geriatric population (>60 years) in India was 6.9% of total population as per Family Welfare Statistics and will contribute 12.4% of total population by 2026. This is due to the better medical facility, better socio-economic conditions and increased awareness of their health.²

Skin ageing can be divided into Intrinsic ageing (Changes due to normal maturity and occur in all individuals) and Extrinsic ageing (Induced by extrinsic factors such as ultraviolet light exposure, smoking and environmental pollutants).³ Due to the degenerative and metabolic changes that occur in

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the skin layers during the ageing process, elderly people are vulnerable to a wide variety of dermatological conditions. There is an accumulation of senescent cells which lead to hyperproliferative disorders including cancer and also leads to a decline in several functions of the human skin, including barrier efficacy, wound healing, immune responsiveness and DNA repair. The impact of these changes varies from cosmetic to life-threatening disorders. Though differing in severity, all may adversely affect an older person's health and quality of life.⁴

Common skin manifestations in old age group include xerosis, infections, infestations, eczematous reactions, photodermatoses, neoplasms, immunological disorders, vascular changes, drug reactions, nutritional dermatoses, various psychodermatoses and pressure sores.⁵ To improve the quality of life in old age it is imperative to study in detail the problems of the aged. In our country, problems of the aged have not received the attention deserved. In this backdrop, the primary goal of the study is to throw light on the incidence of geriatric dermatoses in the elderly patients presenting to our Skin & STD department.

Objectives

The objective of the study was to know the clinical pattern of dermatological diseases in elderly patients attending to Outpatient department and to look for the factors contributing to those dermatoses among them.

Materials and Methods

This was a prospective cross-sectional study conducted in the Skin & STD Outpatient Department after getting approval from the ethical committee of our institution. The study population included 250 geriatric patients (all patients of age 60 years and above) who attended our Outpatient department during the study period of March 2015-June 2016.

Each patient was interviewed for age, residence and the specific complaint related to skin. Then the patient was evaluated for hygiene status and cleanliness. Each patient was examined under bright natural light to look for any changes in the skin and its appendages. The diagnosis was made based on clinical features and relevant dermatological investigations (KOH mount, Biopsy, Dermoscopy, Wood's lamp, Gram stain). All the patients were treated accordingly. Digital photographs were taken after obtaining the consent.

After the screening, skin diseases were classified under the following headings for the purpose of analysis: 1. Degenerative conditions 2. Infectious dermatoses 3. Pigmentary disorders 4. Cutaneous neoplasm 5. Adnexal disorders 6. Papulosquamous disorders 7. Eczema 8. Keratinization disorders 9. Miscellaneous disorders

The clinical findings with relevant dermatological investigations were recorded in the pre-designed proforma for analysis and interpretation of data. It was tabulated and analysed using the chi-square test to study the association between various factors. SPSS version 16 statistical software was used for data analysis. Level of significance was estimated with 95% confidence intervals and a P value <0.05.

Results

A total of 250 geriatric patients were included in the study. Of the 250 patients, the majority of the study subjects were in the age group of 60 – 65 years (56.8%). The mean age of the study population was 64.30±4.37. In our study 145 (58%) patients were males while 105 (42%) patients were females and the sex ratio was 1: 0.7 (Table 1).

Table 1: Age and sex distribution of the study population:

Age group	60 – 65 yrs	66 – 70 yrs	71 – 75 yrs	76–80 yrs	>81 yrs	Total
Males	69 (27.60%)	35 (14.00%)	26 (10.40%)	6 (2.40%)	9 (3.60%)	145 (68.00%)
Females	73 (29.20%)	16 (6.40%)	10 (4.00%)	3 (1.20%)	3 (1.20%)	105 (42.00%)
Total	142 (56.8%)	51 (20.4%)	36 (14.4%)	9 (3.6%)	12 (4.8%)	250 (100.00%)

Out of 250 study subjects, 156 (62.4%) patients had only one dermatosis. In that 90 (57.7%) were males and 66 (42.3%) were females. Fifty-seven patients(22.8%) had two dermatoses, twenty-six patients(10.4%) had three dermatoses, seven patients (2.8%) had four dermatoses and four patients (1.6%) had five dermatoses. Chi-square value is 7.042 and P value is 0.036 which is statistically significant. Prevalence of the number of dermatoses in our study has been found to be more common in males which is statistically significant.

Almost 84 types of skin lesions were identified among the geriatric age group. Nail disorders, Degenerative conditions and Eczema occupied the top three common dermatoses in our study. 122

(48.8%) patients had nail disorders, 106 (42.4%) patients had degenerative conditions, 73 (29.2%) had eczema, 53 (21.2%) had infectious dermatoses, 38 (15.2%) had pigmentary disorders, and 27 (10.8%) had papulosquamous disorders (Table 2).

Table 2: Category-wise distribution of all the dermatoses among males and females:

S.No	Category	Males	Females	Total n(%)
1	Nail disorders	77(30.8%)	45 (18%)	122 (48.8)
2	Degenerative conditions	57(22.80%)	49(19.60%)	106(42.4%)
3	Eczema	47(18.8%)	26 (10.4%)	73(29.2)
4	Infectious dermatoses	31(12.45)	22(8.8%)	53(21.2)
5	Pigmentary disorders	17 6.8%)	21 (8.4%)	38(15.2)
6	Pruritus	14(5.6)	16(6.4%)	30(12%)
7	Papulosquamous disorders	20(8.00%)	7 (2.8%)	27(10.8)
8	Xerosis	11(4.4)	7(2.8%)	18(7.2)
9	Benign neoplasm	7 (2.8%)	6 (2.8%)	13(5.2)
10	Malignant neoplasm	0	2 (0.80%)	2(0.8)
11	Hair disorders	2(0.80%)	3 (1.2%)	5(2)
12	Sweat gland disorders	5 2.00%)	3 (1.20%)	8(3.2)
13	Hypersensitivity disorders	2 0.80%)	3 (1.20%)	5(2)
14	Genodermatoses	1(0.40%)	1 (0.40%)	2(0.8)
15	Vesiculobullous disorders	3(1.20%)	1 (0.40%)	4(1.6)
16	Drug-induced disorders	3 1.20%)	0	3(1.2)
17	Erythroderma	1(0.40%)	1 (0.40%)	2(0.8)
18	Autoimmune disorders	1(0.40%)	3 (1.20%)	4(1.6)
19	Keratinization disorders	1 0.40%)	2 (0.80%)	3(1.2)
20	Metabolic disorders	4 (1.6%)	4 (1.6%)	8(3.2)
21	Vasculitis	1(0.40%)	1 (0.40%)	2(0.8)

Regarding specific disorders loss of nail lusture (17.6%) was the most common dermatoses followed by allergic contact dermatitis(16%), Seborrhoeic keratosis (14.8%), Pruritus (12%) and Fungal infections (11.6%). Nail disorders (Table 3) were more common in males, and the P value is 0.046 which is statistically significant. Degenerative conditions (Table 4) were more common in males, and the P value is 0.085 which is statistically not significant.

Table 3: Distribution of nail disorders among males and females

S.N.	Nail disorders	Males	Females	Total n (%)
1	Loss of lusture	24 (9.6%)	20 (8.00)	44 (17.6)
2	Onychomycosis	2 (0.80%)	4 (1.60%)	6 (2.4)
3	Paronychia	2 (0.80%)	2 (0.80%)	4 (1.6)
4	Longitudinal melanonychia	10 (4%)	6 (2.40%)	16 (6.4)
5	Nail dystrophy	12 (4.80%)	8 (3.20%)	20 (8)
6	Onycholysis	3 (1.20%)	0	3 (1.2)
7	Anychia	1 (0.40%)	0	1 (0.4)
8	Beau’s lines	2 (0.80%)	1 (0.40%)	3 (1.2)
9	Nail pitting	12 (4.80%)	3 (1.20%)	15 (6)
10	Subungual hyperkeratosis	2 (0.80%)	0	2 (0.8)
11	Vertical ridging	7 (2.80%)	1 (0.40%)	8 (3.2)
	Total	77	45	122 (48.8)

Table 4: Distribution of degenerative conditions among males and females:

S.N.	Degenerative Conditions	Males	Females	Total n (%)
1	Milia	2 (0.80%)	1 (0.40%)	3(1.2)
2	Senile lentigenes	2 (0.80%)	0	2(0.8)
3	Senile comedones	5 (2.00%)	3 (1.20%)	8(3.2)
4	Acrochordon	7 (2.80%)	4 (1.60%)	11(4.4)
5	Seborrhoeic keratosis	17 (6.80%)	20 (8.00%)	37(14.8)
6	Actinic keratosis	4 (1.60%)	0	4(1.6)
7	Dermatosis Papulosa Nigra	8 (3.20%)	9 (3.60%)	17(6.8)
8	Fissure foot	3 (1.20%)	3 (1.20%)	6(2.4)
9	Colloid milia	2 (0.80%)	0	2(0.8)
10	Crow’s feet	7 (2.80%)	9 (3.60%)	16(6.4)
	Total	57(22.8%)	49(19.6%)	106(42.4)

Eczemas were more common in males, and the P value is 0.013 which is statistically significant. This is because allergic contact dermatitis (16%) which was the most common type of eczema in our study was seen in males (11.6%) more commonly than females (4.4%). This male preponderance can be attributed to environmental exposure to the allergens more commonly than females because of their occupation. Pigmentary disorders were more common in females, and the P value is 0.002 which is statistically significant. Fungal infections were more common in males, and the P value is 0.003 which is statistically significant. Papulosquamous disorders were more common in males, and the P value is 0.026 which is statistically significant.

Discussion

Elderly individuals usually develop a wide variety of physiological and pathological cutaneous changes. Their prevalence varies widely depending on the patient's clinical environment as well as the regional and ethnic factors.⁶ Of the 250 patients, males (58%) outnumbered females (42%) with a male to female ratio of 1:0.7, which coincide with

most of the other studies. This may be due to the lack of self-care among females and their unwillingness to come to the hospital for treatment compared to males. This is similar to the findings of Patange et al.⁷, Talukdar et al.⁸, S Grover et al.,⁶ Sahoo A et al.⁹ in whose study males outnumbered females. The overall prevalence of most common skin diseases from comparable studies done elsewhere is shown in Table 5.

Table 5: Overall prevalence of most common skin diseases from comparable studies done elsewhere:

SN	Researcher	Study population	Year	Sample	Findings
1	Our study	Salem, South India	2015	250	1. Nail disorder (48.8%) 2. Degenerative conditions (42.4%) 3. Eczema (29.2%)
2	Talukdar K et al. ^[8]	North East India		360	1. Wrinkles (85.6%) 2. Cherry angioma (58.3%) 3. Seborrheic keratosis (23.3%)
3	Serap Gunes et al. ^[33]	Turkey	2010	5961	1. Eczema (32.7%) 2. Infections (10.4%) 3. Pruritus (8.8%)
4	Safa Suleman Elfaituri et al. ^[28]	Libya		248	1. Infectious dermatoses (67%) -- fungal infections (49.6%) 2. Eczema (27.8%) - contact dermatitis (9%) 3. Papulosquamous disorders (9.7%)
5	Rinu Ruth George et al. ^[31]	Kerala		500	1. Wrinkles 2. Xerosis 3. Eczema
6	Demet Kartal et al. ^[21]	Turkey	2014	7412	1. Eczema (32.2%) 2. Infectious dermatoses (18.5%) 3. Pruritus (9.5%)
7	Pavithra S et al. ^[13]	Goa	2007	411	1. Wrinkles (99.3%) 2. Greying of hair (96.8%) 3. Benign neoplasia (80.5%)
8	Cvitanovic H et al. ^[15]	Croatia	2009	3200	1. Actinic keratosis (26.61%) 2. Seborrheic keratosis (18.98%) 3. Nummular eczema (9.37%)
9	Rashmi Jindal et al. ^[34]	Uttarakhand	2014	1380	1. Erythematous-squamous disorders (38.9%) 2. Infectious dermatoses (29.9%) 3. Senile pruritus (9%)
10	Khawar Khurshid et al. ^[25]	Pakistan	2009	275	1. Eczema (40%) 2. Fungal infection (14.8%) 3. Pruritus (9.6%)

SN	Researcher	Study population	Year	Sample	Findings
11	Sanjiv Grover et al. ^[6]	Bangalore	2007	200	1. Wrinkles (95.5%) 2. Xerosis (85.5%) 3. IGH (76.5%)
12	Pragya A Nair. ^[14]	Gujarat	2010	457	1. Eczema (31.29%) 2. Fungal infection (23.2%)
13	A Sahoo et al. ^[9]	Orissa	1998	200	1. Infectious dermatoses (30%) 2. Xerosis (12.5%) 3. Eczema (12%)
14	Leena Raveendra. ^[12]	Bangalore	2014	200	1. Xerosis (93%) 2. Wrinkles (88%) 3. Pruritus (44%)

Nail disorders

In our study, the most frequent disease group was nail disorders (48.8%); this is inconsistent with the results of other studies in the literature showing eczema or infective conditions as the predominant skin condition in the elderly.^{1,10} Among that loss of nail lusture (17.6%) was the most common dermatoses. Nails become dry and brittle as age advances which lead to lusterless nails (Figure 1). Fragile nails are considered as one of the common signs of ageing which could be caused by exposure to moisture like washing the dishes and women are more vulnerable to fragility.^[11] Grover et al. (64%)⁶ and Leena Raveendran (44%)¹² reported a higher incidence of loss of lusture whereas Pavithra et al¹³ reported 1.9% in her study. Onychomycosis was seen in 2.4% of our study population whereas in Grover et al. (12%)⁶, Leena Raveendran et al. (7%)¹² and Pavithra S et al. (5.8%)¹³ reported a slightly higher prevalence. Nail pitting was seen in 6% of our patients which is comparable with Pavithra et al (5%).¹³



Fig. 1. Lustureless nails with Beaus lines

Degenerative conditions

Over all prevalence of degenerative conditions in our study was 42.4% which is more than Pragya A Nair et al (6.7%)¹⁴ and Sahoo et al (5%).⁹ Seborrhoeic keratosis (SK) (Figure 2) is the most common type of degenerative condition (14.8%) in our study which is comparable with A Sahoo et al (10%)⁹ and Cvitanovic H et al (18.98%)¹⁵ whereas Talukdar et al (23.3%),⁸ Pavithra S et al (27.5%),¹³ Sanjiv Grover et al (43%),⁶ Leena Raveendra (56%)¹² shows higher prevalence of SK. The reason for a wide variation of this could be partly explained by the fact that seborrhoeic keratosis occur more commonly in fair-skinned individuals and the incidence relatively decreases in darker skin types i.e. Type IV and Type V.⁷ In our study there was lower prevalence of wrinkling which may be due to tolerance of the pigmented skin to sunlight whereas in majority of studies it was seen in a large number of patients. Leena Raveendra,¹² Tindall and Smith¹⁶, Grover et al.⁶, Beauregard et al¹⁷, Durai PC et al¹⁸ and Pavithra S et al¹³ have reported wrinkling in 88%, 94%, 95.5%, 95.6%, 99% and 99.3% patients respectively. In our city, most of the population has Fitzpatrick type 4 and 5 skin. Therefore, actinic keratosis is rarely observed in our study (1.6%) which is comparable to Talukdar et al. study(1.1%).⁸

Eczema

Eczematous dermatitis (29.2%) forms the third most common dermatoses in our study. Similar findings were found in study by Yab *et al* 35.3%¹⁹, Thaipisuttikul 34.9%²⁰ and Liao *et al.*¹⁰ respectively. Eczematous dermatitis frequencies indicate a country's industrial improvement

therefore, these frequencies can change depending on the country's level of development.^[21]



Fig. 2. Seborrheic keratosis

Among the eczema, allergic contact dermatitis (16%) constitutes the major dermatoses. It may be attributed to self-application of various topical medications including traditional preparations in addition to common allergens like dyes, rubber etc. Contact dermatitis is an important medical problem in elderly patients who have increased sensitivity to the irritants and allergens due to epidermal barrier dysfunction.²² Neurodermatitis (lichen simplex chronicus) is a psychocutaneous disorder that affects only those areas of the body that can be reached by the hands. In our study it was reported in 4.4% of the patients which is comparable to DP Thapa et al's (5.9%) study²³ and Pavithra S et al (3.9%).¹³ The role of psyche is important in the formation and progression of the presenting lesions. It has been recommended that elderly people with neurodermatitis should be evaluated for the possibility of underlying neuropathic changes.²⁴

Seborrheic dermatitis was seen with a 0.4% frequency rate in eczematous dermatitis in our study where as it is 10% in Demet Kartal et al's study²¹ and 5% in Leena raveendra et al's study.¹² Photodermatitis contributed 4.4% out of the total dermatoses and was more commonly seen in female patients like DP Thappa et al's study (4.5%)²³ because females are having the habit of wearing dresses like half sleeves (blouse) in comparison to full sleeves worn by male counterparts. Eczema (16.4%) was more commonly seen in 60-65 years of age group than the patients in more than 65 years of age. This decrease in the frequency of eczema appears to be related to decreased exposure of the more elderly population to the environmental toxins and impurities, since they are homebound in most of the cases with advanced aged.²⁵

Infectious dermatoses

Infectious dermatoses was observed in 21.2% of our study population. It is comparable with Pragma A Nair et al. (23.2%)¹⁴, but it is slightly lower than the study by Sahoo et al. (30%),⁹ Patange and Fernandez (34.5%).⁷ Geriatric people are most commonly affected by infectious dermatosis. 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 (11.6%) 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 (11.6%) were more or less in concordance with Singaporean (4.5%), Croatian (6.81%), Tunisian (16.9%), Indian (17.5%), Taiwan (38.0%), Nepal (13.6%) and Pakistan (14.8%)^{7,15,25,23,10,26}. Fungal infections were mainly represented by *Tinea corporis* (5.6%) (Figure 3) in our study which is comparable to Talukdar et al. study (7.5%)⁸ and DP Thappa et al.'s study.²³ Fungal infection was common in males in comparison to females in our study. Males are more prone to physical trauma and hence to infection due to active outdoor activities.



Fig. 3. Tinea corporis

Bacterial infection was seen in 4.8% of our study population which is comparable with Chopra A et al. study (4.5%)²⁷, Leena raveendra (4%) study¹² where as in Safa Suleman Elfaituri et al²⁸ it is 9%, in Khawad Khurshid at el it is 2.2%²⁵, Pragma A Nair et al. (2.84%).¹⁴ Cellulitis (1.6%) and Furunculosis (1.6%) was the most common bacterial infection in our study and the predisposing factors are Xerotic skin, diabetes and compromised circulation. Leprosy cases were seen in 0.8%, of our study

population. The frequency of viral infection in our patients (3.6%) was in concordance with Grover S et al. (5%)⁶¹ and Yap KB et al. (3.4%) studies¹⁹. Herpes zoster was the most common viral illness in our study (1.2%) which is comparable to Chopra A et al. (0.9%) study²⁷. Scabies is an important parasitic infestation in elderly, it was detected in 0.8% of our patients which is comparable to Pragya a Nair et al. (1.75%) study.¹⁴ But in Thappa et al.'s study²³ it was 4.5% and 3% in Leena Raveendran's study.¹² Because of the atypical presentation of scabies in elderly, it can be misdiagnosed in them. Atypical presentation of these infections and infestations may complicate underlying chronic skin disorders. All the infectious dermatoses in our study were more commonly seen in the age group of 60-65 years and a decreasing trend above 65 years of age. Though immunity is more compromised in the older adults, this decrease in infections may be due to decreased exposure to community and environmental toxins because most of the elderly patients are homebound.²⁵

Pruritus & Xerosis

Itching is a common symptom in elderly people. The frequency of pruritus was 12%, and xerosis was 7.2% in our study. In certain studies, the frequency of itching was found from 1.2% to 14.2%.^{11,10} which is comparable to our study. Xerosis and dry skin are due to decreased ability of the skin to retain water and reduced epidermal hydration during the ageing process and can induce pruritus.²³ Skin dryness increases, especially in winters.²⁹ In addition to skin dryness, itching may occur as a result of several etiological factors (10-50%) including diabetes mellitus, chronic renal failure, thyroid disease, liver dysfunction, neuropathies, vitamin A toxicity, multiple medications uses, anaemia, polycythemia vera, malignant neoplasms such as lymphoma and leukemia.^{10,29,30}

The burden of pruritus in older adults is a consequence of defects or disorders of the three major players that produce or mediate pruritus—the epidermis, the nervous system, and the immune system. Senescent barrier failure, immunosenescence, and neurodegenerative disorders all afflict elderly people and can produce pruritus. The Pruritic conditions produced by these age-related processes can be considered the "eruptions of senescence." Treatment directed at the primary element triggering the pruritus is most effective. The incidence of the pruritus may vary depending upon the specific population under study.

Xerosis was noted in 7.4% of our study population. The prevalence of xerosis varies widely

and ranges from 29.5% to 58.3% in different long-term care facilities. It is due to the decrease in skin lipids both from the epidermis and sebaceous glands complicated by impaired epidermal permeability barrier hemostasis.³¹ It is comparable to Talukdar et al. (9.4%),⁸ Pragya A Nair (5.64%)¹⁴ and Pavithra S et al. (6.6%).¹³ The prevalence of xerosis depends upon the usage of emollients, usage of harsher soaps and the climatic conditions.

Miscellaneous conditions

The frequency of benign neoplasm was 5.2% in our study which is similar to the previous studies done by Liao et al¹⁰, and Yalchin et al.¹ In our study, the frequency of malignant skin tumours (0.8%) was lower than the previous studies. Basal cell carcinoma (BCC) was the only malignant tumour observed in our study population (Figure 4). The racial and cultural differences and overall standard of living may explain a lower prevalence of skin tumours in our study.



Fig. 4. Basal cell carcinoma

Due to multiple drug usage in the elderly population, the frequency of drug reaction is increased. In our study, the drug-induced disorders were seen in 1.20% of the study population. This may be due to polypharmacy, which is common among elderly that can lead to higher risk of cutaneous adverse reaction while also complicating the effort to pinpoint the culprit.^[32]

In this study, psoriasis was seen in 8.8% patients. The incidence of psoriasis ranges from 1% to 11.2% in various studies.^{7,16,17} An incidence of 2% of lichen planus was noted in this study. Idiopathic guttate hypomelanosis was present in 5.6% of our study population which is comparable to A Sahoo et al. (6.5%)⁹¹. Various studies report an incidence of vitiligo between 1.2% to 19%.^{7,9} Our study showed prevalence as 3.6% which is comparable with A Sahoo et al. (6.5%)⁹ but lower than Patange and

Fernandez et al. (19%).⁷ Our study, as well as that of Patange and Fernandez, shows that the incidence of vitiligo is higher in Indian patients. Also, since vitiligo is culturally a dreaded disease in the Indian subcontinent, self-referral is higher in all hypo-pigmentary disorders.

Blistering disorders were noted in (1.6%) of the patients in our series close to (2.8%) as reported by Talukdar et al.,^[8] Leena Raveendra (1.5%),^[12] Yalcin et al (1.5%)^[11] and Chopra A et al (2.9%).^[27] In our study, bullous diseases were more common in males. The bullous diseases group included *Pemphigus Vulgaris* (PV) and *Bullous pemphigoid* (BP) (Figure 5) in our study.



Fig. 5. Bullous pemphigoid

Prevalence of systemic diseases in our study was 34.4% which is comparable to other studies by Patange and Fernandez (35%)^[7] and lower than Pragya A Nair et al. (44.4%)^[14] and Grover et al. (64.5%).^[6] Hypertension (16.8%) was the most common systemic disease observed followed by Diabetes mellitus. Diabetes mellitus was seen in 11.6% of the subjects in present study.

Incidence and character of many dermatoses encountered are in agreement with earlier studies showing some variation probably due to ethnic, regional, national and skin type differences between different study population. Also, the line between the physiological and the genuinely pathological becomes increasingly difficult to draw with advancing years.^[6] In evaluating the older person's skin, the most significant problem is deciding what is abnormal and what is physiological. Many changes and lesions are normal, except occasionally in degree and number.^[12] Dermatology care in this group should not be considered as synonymous with only antiaging cosmetology or wound care. Epidemiologic data are useful for

monitoring changes in disease trends in geriatric patients and for planning health care programs for this group.^[21]

Conclusion

Nail disorders (48.8%), Degenerative conditions (42.4%), and eczema (29.2%) occupied the top three common dermatoses in our geriatric study population.

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