Original Research Article

Dermatoses in the Elderly: Clinico-Demographic Profile at a Tertiary Care Center GEMS, Ragolu, Srikakulam, Andhra Pradesh

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Abstract

Background: Over the last few decades, the quality of life improved in different parts of the world and in our country. As a result of this, more number of older people as alive these days. By 2025, the world will host around 1.2 billion people aged 60 years aged 60 years and above and the number may rise up to 1.9 billion by the year 2050. The health problems in the elderly are usually multiple and are often masked by sensory and cognitive impairments, which may contribute to a worsening of mortality and morbidity**. Methods:** Our study was a Hospital-based Cross-sectional Observational study done in the Department of Dermatology, Venereology and Leprosy at Great Eastern Medical School and Hospital Ragolu,Srikakulam,Andhra Pradesh,India for a period of two years. In this study, a total of 150 patients were taken with age 65 years and above who attended to the OPD within a period of January 2019 to December 2020. Written informed consent was taken from all the patients included in the study. A complete history was taken followed by clinical examination, complete general, physical and systemic examinations. **Results:** Out of 150 patients studied, 114(76%) were males, and 36(24%) were females. In our study, the single most common symptom was Generalized pruritus, present in 86(57.33%) patients. The most common physiological change seen in the elderly was rhytides (wrinkling), seen in 121 (81%) patients. The most common hair change seen in our study was Greying of hair in 99(66%) patients and the most common nail finding seen in our study was ridging of nails, in 78 (52%) patients. The most common pathological change seen, in our study was Eczema(Dermatitis) which was noticed in 43 (28.6%) patients, of which photodermatitis being the most common eczematous condition.**Conclusion:** The present study reveals that skin problems are quite common among the elderly. They develop a wide variety of physiological and pathological skin changes. Thorough knowledge of physiologic and pathologic skin changes in the geriatric population can strengthen the dermatologist's hand in managing such cases.

Keywords: Elderly, Aging, Dermatoses, Dermatitis(Eczema), xerosis

Background

Over the last few decades, the quality of life has improved in various parts of the world, as well as in our country. As a result, of which there are more older people who are alive today.[1] Government and institutions arbitrarily define geriatric populations are those persons who are over 65 years of age.[2] With the increase in age, there are changes in the skin for which the geriatric population seek the advice of a dermatologist. To know various dermatoses associated with aging, cutaneous aging is divided into two categories i.e, true aging also known as intrinsic aging.

It is a universal, presumably unavoidable transition carried about by the passing of time. Photoaging was also known as extrinsic aging, is the superimposition of the effects of chronic sun exposure,pollution on intrinsic aging, neither universal nor inevitable.[3] The true aging is manifested primarily by the physiologic alteration with subtle but undoubtedly essential consequences on both healthy and diseased skin.

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The photoaging has major morphologic and physiologic manifestations and corresponds more closely to the popular notion of "old skin"[4]. Due to the consequences that arise because of the combination of both intrinsic and extrinsic aging elderly people are predisposed to certain dermatological disorders which appears as elderlydermatoses. In a study on age related decrease in CD271+ cells in human skin, it states that the CD271+ stem cells reside in stratum basale. After dividing once cell moves and differentiates to epidermal dead cornified keratinocyte and the other cell remains as a stem cell in stratum basale. Epidermal aging does not contribute significantly to the appearance of wrinkles. The CD271+ stem cells are also seen in dermis and they can differentiate into fibroblasts. Dermal aging significantly contributes to wrinkling of skin due to loss of volume.[5]

In terms of the elderly population, India ranks second in place with 72 million older adults over the age of 60 in 2001, and that number is expected to rise to 179 million in 2031 and 301 million in 2051.[6] This increase in trend of the geriatric population make us to think of various age-related disorders in older adults.This study aimed to ascertain the clinical Pattern of dermatological disorders, physiological, pathological changes, and their prevalence in the geriatric population who visited a tertiary care center so that they could receive timely care and treatment to reduce mortality and morbidity.

Aims and Objectives

The main aim of the study is to find out the most common dermatoses in the elderly people presenting to our dermatology department.

To differentiate between physiological and pathological dermatoses presenting in elderly group.

To differentiate between various lesions which need prompt treatment or not.

To educate patients regarding physiological lesions so as to prevent unnecessary treatment.

Methods

The present study was a Hospital-based Cross-sectional Observational study. The study was conducted at the Department of Dermatology, Venereology and Leprosy at Great Eastern Medical School and Hospital, Ragolu, Srikakulam,Andhra Pradesh, India,for a period of two years from January 2019 to December 2020. In this study, a total of 150 patients were enrolled with age 65 years and above who attended the outpatient and inpatient departments for consultation of their skin problems. Written informed consent was taken from all the patients who are included in the study. A complete history was taken followed, by a clinical examination, complete general, physical and systemic examination. All the necessary investigations for the study, including complete blood picture, renal function tests, liver function tests, complete urine routine examination, viral markers, Skin scrapings, nail clipping for fungus, Tzanck smear, skin biopsy, and other investigations were done. Data collected from the study participants was noted in a pre-designed pro forma, and results were analyzed.

Inclusion Criteria

- Patients with age 65 and above were included in this study.
- Geriatrics who are available at the time of data collection.

Exclusion Criteria

- Patients with age of less than 65 patients were excluded.
- Patients who were unwilling to participate in our study were excluded.

Statistical Analysis

Statistical analysis was done with the help of SPSS 23 version statistical software. Percentage analysis were used for categorical variables and the mean and S.D were used for continuous variables.

Results

The following observations were obtained in the present study, and the results were tabulated and analyzed. The study includes 150 patients presented to the dermatology department who are above 65 years of age. In the present study out of 150 patients, 114 patients (76%) were males, and 36 patients (24%) were females. Thus, the Male: Female ratio was noted to be 3.16:1. The mean age of presentation was found to be 70.5 years.

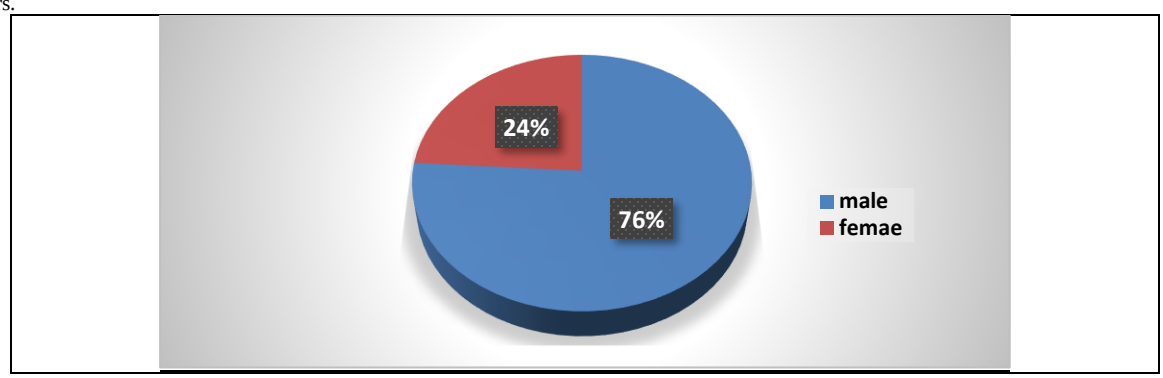


Fig 1:Graph showing sex distribution

The socio-demographic details of the patients include age, educational qualification, occupation, and marital status were obtained and the results were analyzed. When patients were divided according to age, a maximum number of 98 (65.34%) patients belongs to the age group of 65-70 years, followed by 71-76 years 23(15.33%). Only 5 patients lie in the age group of 89-95 years i.e (3.33%).Depending on educational qualification, uneducated form the bulk of the study i.e 115 (76.67%) patients, educated were 43 (22%) patents of which only 2 patients were graduates. When patients were divided according to occupation, most of the male patients were farmers by occupation 111(74%) and most of the female patients were housewives by occupation 18(12%). The Majority of the patients were married 146(97.3%) according to the marital status. The following table detailed description of socio- demographic profile of the patients included in the study.

Table 1: Socio-demographic profile of the study subjects

		No. of cases	Percentage
Age (Years)	65-70	98	65.34
	71-76	23	15.33
	77-82	18	12
	83-88	6	4
	89-95	5	3.33
Education	Uneducated	115	76.67
	Educated	33	22
	graduate	2	1.34
occupation	Agricultural	111	74
	Housewife	18	12
	Retired	12	8
	Others	9	6
Marital Status	Married	146	97.3
	Unmarried	3	2
	Divorced	1	0.67

In the present study, we recorded the comorbidities in the elderly patients with cutaneous disorders, and some of the patients had more than one comorbidities. The most common comorbidity which was noted in our study was found to be hypertension, noted in 49 (32.7%) patients, followed by diabetes mellitus, noted in44 (29.34%) patients.Cerebrovascular accidents was noted in 17 (11.3%) patients, coronary artery disease was noted in 8 (12%)patients, tuberculosis was noted in 5 (3.34%) patients, benign prostatic hypertrophy was noted in 3 (2%) patients andasthma was noted in2 (1.34%) patients. Out of 150 people, 34(22.67%) patients did not have any systemic diseases or any other comorbidities.

Table 2: Comorbidities in patients with cutaneous diseases in elderly

Associated Disease	No. Of cases	Percentage
HTN	49	32.7
DM	44	29.34
CVA	17	11.3
CAD	12	8
TB	5	3.34
BPH	3	2
ASTHMA	2	1.34
NORMAL(Without any comorbidities)	34	22.67
Grand total	**150**	**100**

In the present study, the most common clinical presentation was found to be generalized pruritus which was noted in 86 (57.3%) patients. Of which, 45(52.32%) patients had senile pruritus, and in the rest pruritus was associated with cutaneous and systemic dermatoses.

The bar chart below shows the most common physiological changes of skin in the elderly.Among the physiological changes the most common change was found to be rhytides, which was seen in 121 (81%) patients, which were followed by, senile xerosis is seen in 109 (72.67%) patients, grey hair in99 (66%) patients, Senile come dones in 29 (19.3%) patients, dermato heliosis in 15 (10%) patients and Senile Lentigens seen in 8 (5.34%) patients.

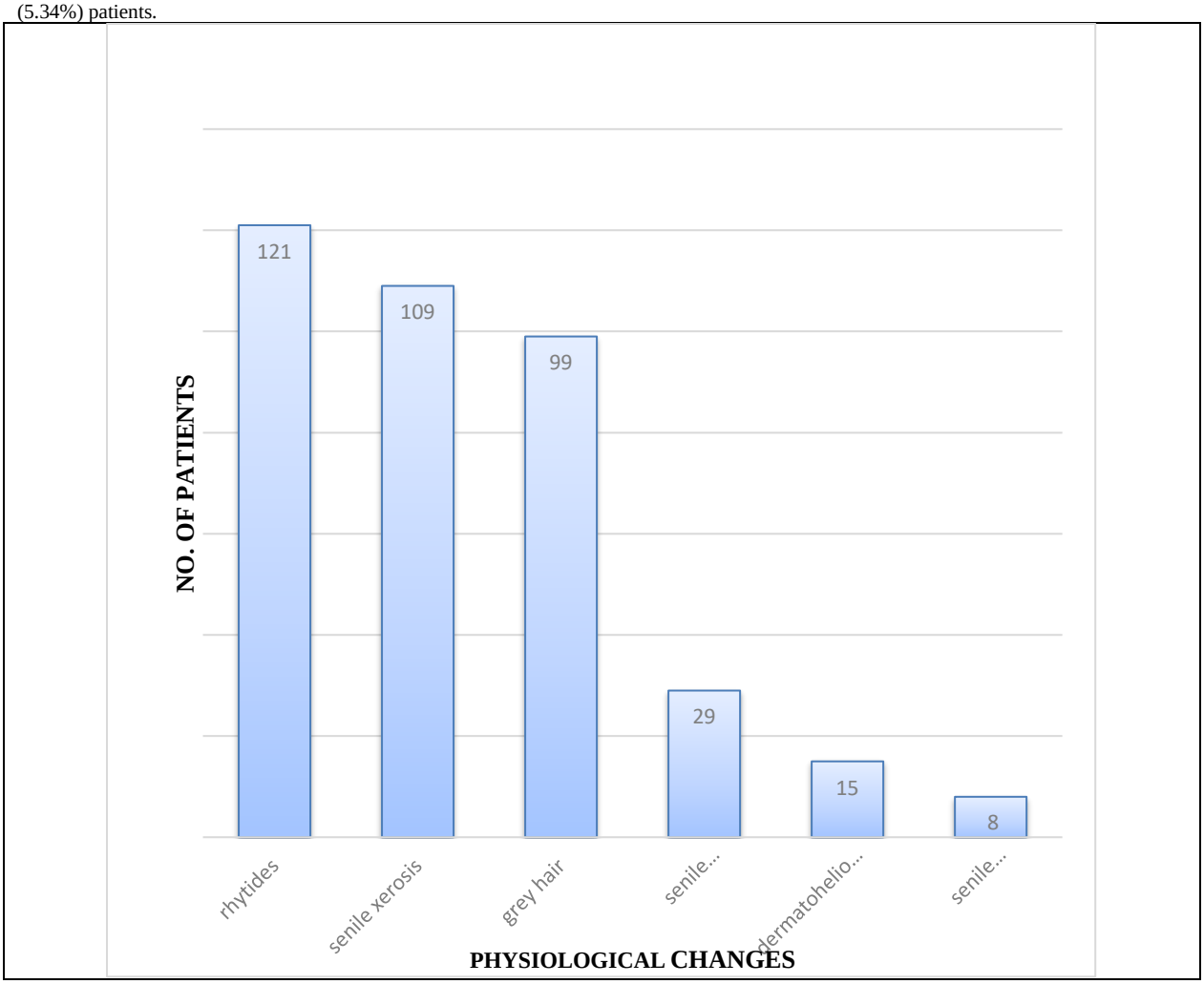


Fig 2:Physiological changes in elderly

We noted the pathological skin diseases in all the patients and the results were analyzed. The most commonly observation was found to be Eczema(Dermatitis).Eczema was noted in 43(28.6%) patients. Various types of Eczema were noted in our study, of which the most common presentation was Photodermatitis, which was seen in 11 (25.58 %) patients, followed by Stasis eczema, which was noted in 9 (20.9%) patients, contact dermatitis in 7(16.2%) patients, chronic Hand foot eczema in 5 (11.6%) patients, Prurigo nodularis in 4 patients (9.3%) and2 patients

(4.6%) each of Asteatotic Eczema, seborrheic dermatitis and atopic dermatitis. A single patient presented with endogenous Eczema i.e , female with 69 years age.The second most commonly clinical presentation was noted to be infections and infestations, which were present in 38(25.34%) patients. Among the 28 patients with infections, superficial fungal infections were most common seen in 20 (68.9%) patients. Most common fungal infection being tinea corporis, followed by tinea cruris. Candidal intertrigo was noted among 6 patients ,out of which females 4 (66.6%) were more commonly affected and in majority involving interdigital cleft of the foot.10 patients had infestation, out of which 8(80%) patients had scabies which was noted to be most common infestation followed by pediculosis capitis, which was seen in 2(20%) female patients.

Papulosquamous disorders were seen in 22(14.67%) patients, out of which 18 patients (81.8%) had Psoriasis,which was noted to be most common and 4 patients (18.18 %) had Lichen planus. A total of 9 patients presented with the pigmentary disorder, out of which 6 cases had hyperpigmentation and 3 with hypopigmentation, Among 3 patients with hypopigmentation 2 patients presented with leukoderma, which was predominantly seen over the shin area.Senile purpura was found to be the commonest vascular disorder, which was noted in 7 patients, out of which 1 patient had Pigmented purpuric dermatoses.Bullous disorders were seen in 4 patients, of which 3 (75%) patients had Bullous pemphigoid, and only 1 patient (25%) had Pemphigus Vulgaris. Table below give a detailed description of the skin diseases in elderly patients.

Table 3: Types of skin diseases in elderly patients

Conditions	No. of Cases	Percentage (%)
Eczema(Dermatitis)	43	28.6
Infection and Infestation	38	25.34
Papulosquamous skin disorders	22	14.67
Nutritional deficiency	13	8.6
Pigmentary Disorder	9	6
Vascular Disorders	8	5.34
Vesicobullous Disorder	4	2.67

Every patient with skin tumors were noted and thoroughly investigated regarding the nature of the tumor to know if it is benign or malignant. Most of the patients had more than one benign skin tumors. The most common cutaneous benign tumor was found to be Seborrheic keratosis which was noted in 97 (64.6%) patients followed by Cherry Angioma which was noted in 72 (48%) patients, Acrochordons were noted in 55 (36.6%) patients, Dermatosis papulosa nigra was noted in 43 (28.67%) and melanocytic nevus was noted in 29 (19.4%) patients. The number of benign cutaneous tumors exceeds the number of patients studied since most patients had tumors in multiple numbers.Among premalignant tumors, Bowen's disease is seen in one patient (0.66%). Among the malignant conditions, 3 (2%) patients had Basal cell carcinoma on face and one patient(0.66%)had Squamous cell carcinoma over the leg. Table and the graph below gives the detailed description of the skin tumors in the study population.

Table 4:Distribution of skin tumors in elderly

Types of Tumors	No. of Cases	Percentage (%)
Seborrheic Keratosis	97	64.6
Cherry Angioma	72	48
Acrochordons	55	36.6
Dermatosis papulosa nigra	43	28.67
Melanocytic nevus	29	19.4

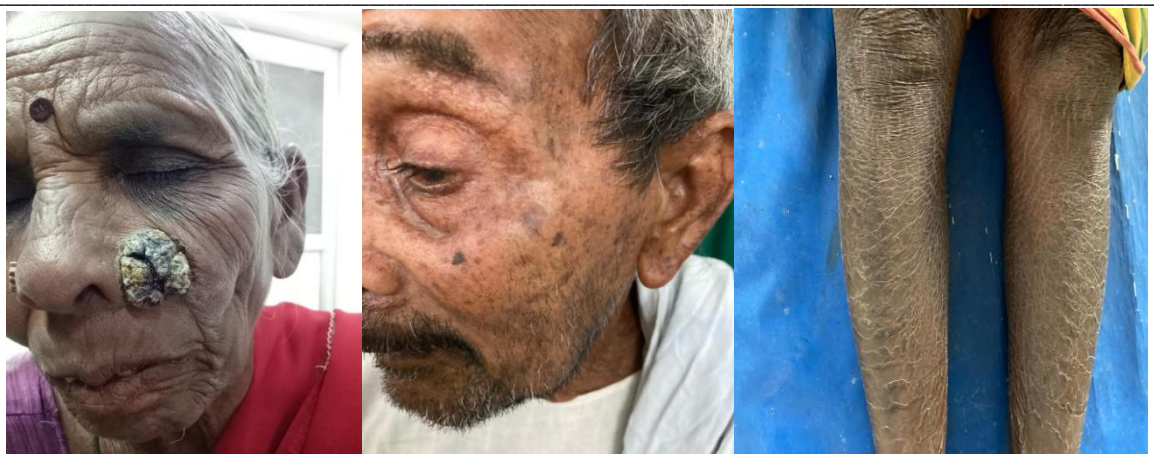
Among the changes in hair ,greying of hair was noted to be the commonest hair change observed in 99 (66%) Patients. Out of 114 male patients, 64 (56.14%) patients had Androgenic alopecia, and out of 36 female patients, 29 (80.5%) patients had diffuse hair loss.

The nail changes exceed the number of patients since some of the patients had more than one nail change due to aging.The most common nail finding was found out to be ridging and it was physiological in nature which was noted in 78(52%) patients.Loss of luster was noted in 58 (38.6%) patients ,followed by Onychomycosis in 39(26%) patients and Onychorrhexis was notedin 16 (10.6%) patients.

Among miscellaneous dermatoses, Urticaria was found among 3(2%) patients, PMLE in 2 (1.33%) patients and 1 (0.66 %) patient each of Lichen amyloidosis and drug reaction due to diclofenac.

Clinical pictures

RHYTIDES & SENILECOMODONE | INFECTIVE ULCER | CHRONIC ECZEMA



BCC SEBORRHEIC KERATOSES XEROSIS

Discussion

The present study was conducted at a tertiary care center to know various physiological and pathological dermatosis associated with the geriatric population. The present study includes patients with age more than 65 years attending to dermatology outpatient and inpatient departments. Total number of 150 patients were included in the present study.

Out of 150 patients included in the study,the oldest of all belongs to 98 years of age. Of the total 150 patients, males were 114(76%), and females were 36(23%), and the male to female ratio was noted to be 3.16:1, and the mean age of presentation was found to be 72.5±2.8 years. The male predominance in the present study which was similar to studies conducted by to Dharjani A et al[7],Beauregard S et al[8], Durai P C et al[9],and Patange VS et al. This may be due to more exposure of the male population to the outside environment when compared to females and more attention regarding health issues in male population when compared to females.

When compared to symptoms, itching was found to be the most common symptom of presentation, which was noted in 86(57%) of patients. In pruritis,senile pruritis was found to be most common 45(52%),which was similar with the study done byChopra A et al [10]. Patient education is very important in dealing with pruritis. Thorough counseling regarding disease was done in all patients with pruritis. All patientswere advised to use moisturizers with low pH, which may be of further benefit through the reduction of serine proteases (mast cell tryptase). Few patients were advised to undergo narrow band uvb (Nbuvb) therapy bi or tri-weekly schedule for 30 sittings. Along with nbuvb therapy, we tried drugs like pregabalin, gabapentin,anti histamines, and ciclosporin .Among the various physiological changes observed, rhytides(wrinkles) were found to be the most common physiological finding which was noted in 121(81%) patients. These results were found to be similar to the studies conducted by Sheetal M P and Shashikumar B M et al but the results were slightly higher when compared with Varma K et al. This may be due to more number of patients who are near to 70 years of age and most common occupation was found to be farming which mandates more exposure to sun.We examined all patients andnecessary investigations were done. Counselling was done and patients were advised to follow sun protection measures. Senile xerosis was found to be the second most common physiological change observed in the present study which was present in 109 (72.6%) patients. These results were similar to the studies conducted by Chopra A et al and Preeja R et al[11]and slightly lower when compared with studies conducted by Sheetal M P and Shashikumar B M et al and Verma K et al.This may be due to variation in the number of study population. All routine and specific investigations were advised to patients with senile xerosis. We advised the patients with proper moisturizers, maintain the finger nails short,wearing light loose clothing, maintaining a comfortable temperature, lukewarm water bathings, and avoiding cleansers with high pH.

Among the pathological conditions dermatitis was found to be the most common condition in the present the study which was present in 43(28.6%) patients and it was found to be similar to study conducted by Kumar D et al and Paliwal G et al.Our present study dermatitis findings were higher when compare with Patange VS et al.The present study findings lower withwhen compare Gunalan P et al [12]We performed all necessary investigations and special investigations like patch test, serum IgE was level done and appropriate treatment was provided. Second most pathological condition was found tobe infections and infestations which was noted in 38(25.3%) which were found to be similar to study conducted by Gunalan P et al andSheetal M P and Shashikumar B M et al[13,14].Among the superficial infection, fungal infections were more common.The fungalinfections were more common in female patients when compared to male patients. This may be due to household work and poor maintenance of hygiene. The cause of the infection and infestation was identified with proper investigations and was treated accordingly.Among the cutaneous benign neoplastic conditions, the most common was found to be seborrheic keratosis,which was present in 97(64.6%) patients which were found to be similar to studies conducted by Kumar D et al and Varma K et al[15,16].

Among the hair changes greying of hair was noted to be the most common presentation, which was present in 99(66%) patients, which was found to be similar to study conducted by Varma K et al. Among the nail changes, the most common finding was found to be ridging of nails, which was noted among 78(52%) patients, which was found to similar to studies conducted by Varma K et alAmong the malignant lesions, in the present study we were noted two cases of Basal cell carcinoma on the face and one patient (0.66%)had Squamous cell carcinoma over the leg with totally 3 case (2.66%), which was found to similar to studies conducted by Varma K et al and Paliwal G et al.[17]We referred the patient to the oncology department, where we evaluated the lesion thoroughly and treated accordingly.

Conclusions

Knowledge of elderly dermatoses is essential in this present era due to the increase in life expectancy and changing trends of countries, moving towards developed societies. As a part of increasing life expectancy, the incidence of geriatric dermatoses are also increasing.

In our study, majority of elderly dermatoses were noted in males with rhytides (wrinkling) as the most common physiological finding and Eczema as the most common pathological finding. Among the benign cutaneous tumors, seborrheic keratosis was commonly seen. Rarely malignancies like Basal cell carcinoma and Squamous cell carcinoma were noted. Early evaluation and management of malignant conditions will prevent cosmetic disfigurement, morbidity and mortality. There are many elderly dermatoses causing morbidity and

mortality in the geriatric population. Proper diagnosis and management of these dermatoses improve the quality of life in elderly people. This study was conducted in the Northern Coastal part of Andhra Pradesh in a tertiary care center where most elderly population belong to below poverty line and are Illiterate with undiagnosed elderly dermatoses, the tip of iceberg phenomenon. So, this type of study with prompt diagnosis and management of elderly dermatoses is of utmost importance in this area.

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