

A cross-sectional study on the dermatological conditions among the elderly population in Mandya city

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Abstract

Background: Geriatric health care has been considered as an emerging issue due to the increase in life expectancy. Cutaneous lesions are more common among the elderly due to aging, which causes decline in the function of skin. Additional factors such as medical conditions, drugs, and environmental irritants also lead to the compromised skin.

Objective: To determine the spectrum of cutaneous manifestations among the elderly.

Materials and Methods: A total of 300 patients aged 60 years and above reporting to the private clinic in Mandya between July 2013 and June 2014 were evaluated. Skin changes in all the patients were recorded and were classified into physiological and pathological changes. Data were entered in an Excel sheet and analyzed using descriptive statistics.

Results: Among 300 patients studied, 68% were men and 32% were women. Eczema (40%) was the most common pathological condition followed by pruritus (32%), and xerosis was common among the physiological changes.

Conclusion: Elderly people are one of the more vulnerable sections of our society. Majority of the elderly in this study had xerosis and eczema. Increased prevalence of psychodermatosis in this study emphasizes the need of psychological support in addition to the medical care.

KEY WORDS: Elderly, cutaneous manifestation, Mandya, eczema

Introduction

In the twenty-first century, one of the biggest social transformations is population aging. The global share of older people (aged 60 years or above) increased from 9.2% in 1990 to 11.7% in 2013, and will continue to grow as a proportion of the world population, reaching 21.1% by 2050. At present, about two-thirds of the world's older persons live in developing countries. By 2050, nearly 8 in 10 of the world's older population will live in the less developed regions.^[1, 2]

The most common problems in aging population are economic, psychosocial, mental, and medical morbidities. Health has always been considered the primary concern in old age as aging predisposes elderly people to injuries

and diseases. Skin diseases are common in elderly, and increased prevalence of skin disease may reflect underlying systemic diseases such as diabetes mellitus, neurological disease, vascular insufficiency and malignancy, and may also be due to restricted mobility/lack of care and compromised immune status.

Because meeting health needs of the aging population is a priority and aging-related issue is drawing increasing attention in the present scenario, this study was undertaken to know the prevalence of skin problems among elderly. The main objective of this study was to determine the spectrum of cutaneous manifestations and prevalence of physiological and pathological changes in the skin of elderly.

Materials and Methods

A cross-sectional study was conducted among 300 elderly patients (aged group 60 years and above) for 1 year from July 2013 to June 2014 at a private clinic in Mandya city. A structured questionnaire was used to obtain the data regarding the sociodemographic profile after obtaining the informed consent. A detailed history of cutaneous complaint including associated medical conditions followed by general physical,

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systemic, and dermatological examinations were carried out for all the patients. Relevant investigations were carried out wherever necessary. Skin changes in all the patients were recorded and were classified into physiological and pathological changes. Data were entered in an Excel sheet and were analyzed using descriptive statistics.

Results

Among the 300 patients, 68% (204) were men and 32% (96) were. The mean age of the patients was 67 years (60–94 years). Majority of them were in the age group of 60–69 years (61%) and were married (48%) [Table 1]. On the basis of the systemic illness, majority of them had osteoarthritis, followed by hypertension and diabetes mellitus [Table 2].

Physiological changes were observed in all the patients among which xerosis was the most common change [Table 3]. In this study, 540 pathological conditions were observed among the patients with an average of 1.8 conditions/person. Among the various conditions observed, eczematous dermatitis and pruritus were seen in majority of the subjects [Table 4]. In the present study, eczematous conditions were observed in 40% patients.

Table 1: Sociodemographic profile of the study subjects

	Males (%)	Females (%)	Total (%)
Age (years)			
60–69	122 (66.7)	61 (33.3)	183 (61.0)
70–79	59 (72.8)	22 (27.2)	81 (27.0)
>80	23 (63.9)	13 (36.1)	36 (12.0)
Marital status			
Married	111 (76.6)	41 (28.3)	145 (48.3)
Separated	30 (85.7)	5 (14.3)	35 (11.7)
Widow/Widower	70 (58.3)	50 (41.7)	120 (40.0)
Education			
Illiterate	46 (42.2)	43 (39.4)	109 (36.3)
Primary	49 (59.1)	34 (40.9)	83 (27.7)
High school	50 (80.6)	12 (19.4)	62 (20.7)
Pre-university	26 (83.9)	5 (16.1)	31 (10.3)
Degree	13 (86.7)	2 (13.3)	15 (5.0)

Table 2: Sex-wise distribution of the associated systemic illness

	Male (%)	Female (%)	Total (%)
Osteoarthritis	102 (75.0)	34 (25.0)	136 (45.3)
Hypertension	82 (73.2)	30 (26.8)	112 (37.3)
Diabetes mellitus	68 (73.1)	25 (26.9)	93 (31.0)
Cataract	45 (76.3)	14 (23.7)	59 (19.6)
IHD	28 (80.0)	7 (20.0)	35 (11.7)
COPD	16 (80.0)	4 (20.0)	20 (6.7)
Renal disease	16 (80.0)	4 (20.0)	20 (6.7)
Malignancy	12 (70.6)	5 (29.4)	17 (5.7)

COPD, chronic obstructive pulmonary disease; IHD, ischemic heart disease

Table 3: Sex-wise distribution of physiological changes in elderly

Condition	Male (%)	Female (%)	Total (%)
Xerosis	220 (79.7)	56 (20.3)	276 (92.0)
Wrinkling	216 (80.9)	51 (19.1)	267 (89.0)
Idiopathic guttate hypomelanosis	104 (76.5)	32 (23.5)	136 (45.3)
Atrophy of skin	84 (76.4)	26 (23.6)	110 (36.7)
Dermatoheliosis	72 (76.6)	22 (23.4)	94 (31.3)
Senile lentiginos	70 (76.9)	21 (23.1)	91 (30.3)

Table 4: Distribution of cutaneous diseases in elderly

Diseases	Male (%)	Female (%)	Total (%)
Eczematous dermatitis	96 (80.0)	24 (20.0)	120 (40.0)
Pruritus	75 (78.1)	21 (21.9)	96 (32.0)
Neoplastic changes	62 (86.1)	10 (13.9)	72 (24.0)
Infections	45 (76.3)	14 (23.7)	59 (19.7)
Psychodermatosis	30 (71.4)	12 (28.6)	42 (14.0)
Photodermatosis	17 (80.9)	4 (19.1)	21 (7.0)
Cutaneous drug reactions	9 (64.3)	5 (35.7)	14 (4.7)
Vascular disorders	10 (83.4)	2 (16.7)	12 (4.0)
Immunological	6 (75.0)	2 (25.0)	8 (2.7)
Nutritional	2 (66.7)	1 (33.3)	3 (1.0)
Miscellaneous	13 (72.2)	5 (27.8)	18 (6.0)

Different types of eczema noted in descending order in this study were contact dermatitis, asteatotic dermatitis, stasis dermatitis, and nummular eczema.

Among the various infections, fungal infection was the most common (Figure 1). Skin tumors present in the patients were noted and are given in Figure 2. Seborrhoeic keratosis was the most common benign tumor reported in this study. Common psychodermatological disorders observed in this study include lichen simplex chronicus, neurotic excoriations, prurigonodularis, and delusion of parasitosis. Lichen simplex chronicus was the most common psychodermatological disorder observed and leg and occipital regions were the most common affected sites.

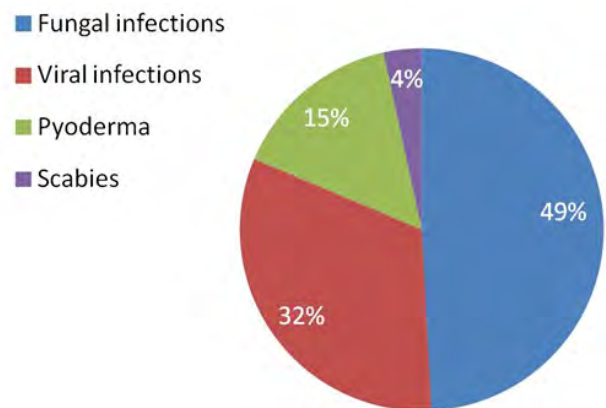


Figure 1: Distribution of infections among elderly.

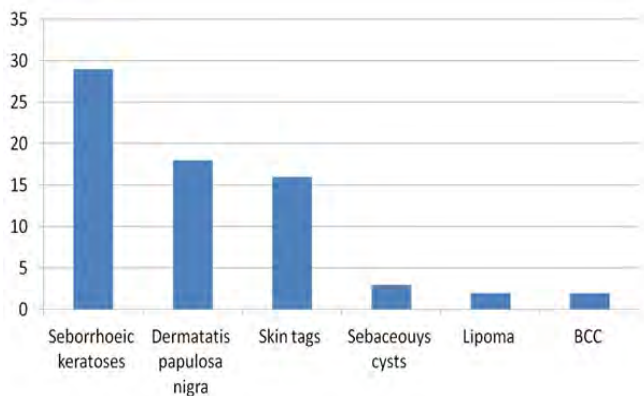


Figure 2: Prevalence of cutaneous neoplasia.

Discussion

A total of 300 patients aged 60 years and above were considered for this study. The oldest patient was aged 94 years, and men/women ratio was 2.1:1. The number of men outnumbered the women in this study, which coincides with most of the other studies.^[3,4]

In this study, 45.3% patients had features suggestive of osteoarthritis (OA). The prevalence of OA varies according to its definition and increases with age. In the third National Health and Nutrition Examination Survey (NHANES III), approximately 37% participants aged >60 years or more had radiographic knee OA.^[5] The observed increased prevalence of OA in this study was due to the presence of significant proportion of elderly aged >70 years. Prevalence of diabetes and hypertension in elderly correlates with other Indian study.^[6]

Xerosis was the most common physiological change seen in this study (92%), which is similar to that reported in the study by Durai et al.^[7] and few other Indian studies.^[8] The prevalence of xerosis varies from 7% to 99.8% in various studies.^[4,7-12] The high prevalence of xerosis could be attributed to less use of emollients and usage of harsher soaps by the subjects who mostly hail from semi-rural areas. Wrinkling was the second most common change, and most of the

wrinkling seen in this study was on sun-exposed areas, which is similar to most of other studies.^[7,10-12] The prevalence of idiopathic guttate hypomelanosis was reported to be 25–76.5% in various studies,^[4,7,10,12] which is comparable to this study.

Pathological conditions were compared with few of the studies, as shown in Table 5. In this study, eczematous conditions were seen in 40% patients. The total eczema cases in various studies range from 11.9%^[13] to 58%.^[14] The suboptimal barrier functions of elderly skin associated with xerosis and pruritus were the common predisposing factors of the increased eczema prevalence in the elderly.

Pruritus was the second most common finding in this study. The observed prevalence of pruritus in various studies ranged from 11.5% to 49.6%.^[3,7,9,10,12,14] Common causes of pruritus, apart from senile pruritus, include xerosis, acquired ichthyosis, diabetes mellitus, hypertension, chronic renal failure, ischemic heart disease, chronic obstructive lung disease, malignancy, and drugs. Both benign and malignant neoplasms have been noticed in the elderly population with increased frequency. There was an increase in the prevalence of benign lesion (24%) in the patients with seborrhoeic keratoses being the most common. The prevalence of neoplasia varied between 6.9% and 74.5%.^[4,10,12]

Psychodermatological disorders are characterized by skin disorders with psychological impact, and psychiatric disorders are characterized by skin manifestations. Psychocutaneous disorders of older age are mainly self-induced disorders that affect only the areas of the body that can be accessible by hands. Yalcin et al.^[3] reported very high (21.5%) prevalence whereas Grover and Narasimhalu^[11] reported very less prevalence in their study. However, there was increased prevalence of psychodermatosis in the present study. Increased awareness of psychocutaneous disorders among dermatologists has increased the disease identification.

Conclusion

Elderly patients are one of the more vulnerable sections of our society. Majority of the elderly in this study had xerosis and eczema. Increased prevalence of psychodermatosis in this study emphasizes the need of psychological support in addition to the medical care.

Table 5: Comparison of various pathological conditions

Diseases	This study	Yalcin et al. ^[3]	Grover and Narasimhalu ^[11]	Raveendra ^[8]
Eczematous dermatitis	40	20.4	39	31
Pruritus	32	11.5	18.5	44
Neoplastic changes	24	6.9	74.5	120
Infections	19.7	33.8	43.5	32
Psychodermatosis	14	21.5	0.5	–
Photodermatosis	7	1.4	–	–
Cutaneous drug reactions	4.7	1.4	–	–
Vascular disorders	4	1.5	10	11
Immunological	2.7	4.1	0.5	1.5
Nutritional	1	–	–	–

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