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Original Research Article

Pattern of dermatoses in elderly at tertiary care center, Jaipur, Rajasthan, India

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ABSTRACT

Background: The population of India is currently moving towards and old age structure. The Indian elderly population 60 and older is currently the second largest in the world. During aging, structural and functional changes of the skin system are observed. Among the elderly, the number of cells decreases and the cell-renewing slows down in the epidermis. The skin water retention capacity decreases as well. Social and psychological circumstances also influence skin in old age.
Methods: A cross-sectional study was conducted in out-patient Department of Dermatology, Venereology and Leprosy, Mahatma Gandhi Medical College and Hospital, Jaipur (Rajasthan) for a period of 18 months from January 2016 to June2017. A total of 1100 elderly were included in the study.
Results: Out of 1100 total elderly patients 622 (56.50%) were males and 478 (43.50%) were females. Maximum number of males (322; 29.27%) as well as females (244; 22.18%) belonged to 65-70 years age group. Out of total 3138 diagnosis, the most common physiological changes secondary to aging process were graying of hair (1100; 35.05%) and wrinkling (1100; 35.05%). Out of the total 3256 diagnosis, the relative incidence of benign tumors was maximum (1626; 49.94%).
Conclusions: Good general care of the elderly including nutritional diet, proper clothing, moderate physical activity and personal hygiene will improve many of their dermatoses and help in prevention of cases of dermatitis and infections.

Keywords: Elderly, Dermatosis, Aging, Xerosis, Greying of hair

INTRODUCTION

United Nations has agreed cutoff as 60+ years to refer to the elderly population.[1] The pace of population ageing is much faster than in the past. Today for the first time in history most people can expect to live into their sixties and beyond. Between 2015 and 2050 the proportion of the world's population over 60 years will nearly double from 12% to 22% and by 2050 world's population aged 60 years and older is expected to 2 billion.[2] India recorded an improvement in life expectancy at birth. The life expectancy at birth in 1969 was 47 years growing to 60 years in 1994 and 69 years in 2019.[3] In India the percentage of elderly population above 60 years has gone from 5.3% to 5.7% (census 1991) to 6.0 to 8.0% (census 2011) respectively.[4] Projections are being made that India will house 316 million elderly by 2050.[5]

The population of India is currently moving towards and old age structure. The Indian elderly population 60 and

older is currently the second largest in the world.[6] India has thus acquired the label of "an ageing nation" and there is a need to highlight the medical and socio economic problems that are being faced by the elderly people.[7] In developed as well as developing countries, the size and ratio of the elderly population has been increasing. Aging is a progressive degeneration process that leads to a decrement in the function and the reserve capacity of the whole body system, including the skin system.[8]

Some disorders of the skin are specifically common and bothersome in the elderly. The dermatological disorders in old age are not only due to physical consequences of again skin but also due to the effect of prolonged environmental exposure, especially UV radiation. Social and psychological circumstances also influence skin in old age. Almost half of all elderly individuals have at least one skin disorder that warrants a clinical evaluation.[9] Cutaneous aging includes two distinct phenomena. Intrinsic aging is a universal, presumably inevitable change attributable to the passage of time alone; photoaging is the superimposition on intrinsic aging of changes attributable to chronic sun exposure, which are neither universal nor inevitable.[10]

During aging, structural and functional changes of the skin system are observed. Among the elderly, the number of cells decrease and the cell-renewing slows down in the epidermis. The skin water retention capacity decreases as well. In addition, the secretions of sebaceous and sweat glands, and the number of melanocytes and Langerhans cells decrease in the elderly. A decrement in the number of dermal collagen and elastic fibers and a thinning of nails are also seen. Due to these changes, skin disorders are more commonly seen in the elderly population. Most of these disorders are not life-threatening, but affect the quality of life. However, there are limited studies on the prevalence, and the age and gender distribution of skin diseases in the elderly.[11,12]

There have been many studies available on geriatric dermatoses in western literature. However, only a few such studies are available in Indian literature. The index study was done to know various dermatological problems in elderly people of this geographical area.

Aims and objectives

Aim

To study the pattern of dermatoses in elderly patients attending outpatient department.

Objectives

- To study the demographic profile of elderly patients.
- To study the contributing factors to these dermatoses.
- To study the association of these dermatoses with systemic diseases.

METHODS

A cross-sectional study was conducted in out-patient Department of Dermatology, Venereology and Leprosy, Mahatma Gandhi Medical College & Hospital, Jaipur (Rajasthan) for a period of 18 months from January 2016 to June2017. A total of 1100 patients, aged 60 years and above of both sex were subjects for the study. A pretested structured questionnaire was used as a study tool. Appropriate changes were made in the schedule taking into account the experiences of the pretest. The questionnaire consisted of 2 sections. Section A was designed to collect socio‑demographic information and Sections B contained detailed history of elderly patients regarding general, systemic and cutaneous examination. Relevant investigations were done to arrive at a diagnosis. and obtained data was analyzed and interpreted. The data were analyzed using Epi info. Descriptive statistics was applied and the results were presented in the frequencies and percentage.

Inclusion criteria

Inclusion criteria were patients aged 60 years and above attending dermatology out-patient Department; patients willing to give consent & keen to participate in study.

RESULTS

A total of 1100 patients, aged 60 years and above, attending the skin OPD of Mahatma Gandhi Medical College were registered in this study. Out of 1100 total elderly patients 622 (56.50%) were males and 478 (43.50%) were females (Table 1). The age group 65-70 years included maximum patients (566; 51.45%) followed by 60-64 years (204; 18.55%), 71-75 years (181; 16.45%), 76-80 years (97; 8.82%). Maximum number of males (322; 29.27%) as well as females (244; 22.18%) belonged to 65-70 years age group. The oldest patient was a 96 years old female (Table 2).

Table 1: Sex distribution of elderly patients (n=1100).

Gender	No. of patient	%
Male	622	56.5
Female	478	43.5
Total	1100	100

Duration of dermatoses was <1 month in 332 (30.2%) patients, >12 months in 290 (26.3%) patients, 1-6 months in 253 (23.0%) patients and 6-12 months in 225 (20.5%) patients. So there was not much difference in the number of patients with acute and chronic problems (Table 3). Out of total 3138 diagnosis, the most common physiological changes secondary to aging process were graying of hair (1100; 35.05%) and wrinkling (1100; 35.05%) followed by xerosis (540; 17.21%), senile comedones (159; 5.07%), senile lentigenes (121; 3.86%) and senile purpura (118; 3.76%). The relative incidence of senile purpura was more in females as compared to males (Table 4).

Table 2: Age and sex distribution of elderly patients (n=1100).

Age group (years)	Male		Female		Total	
	No. of patients	%	No. of patients	%	No. of patients	%
60-64	113	10.28	91	8.27	204	18.55
65-70	322	29.27	244	22.18	566	51.45
71-75	108	9.82	73	6.63	181	16.45
76-80	51	4.64	46	4.18	97	8.82
>80	28	2.55	24	2.18	52	4.73
Total	622	56.55	478	43.45	1100	100

Table 3: Duration of dermatoses in elderly patients (n=1100).

Duration (months)	Male		Female		Total	
	No. of patients	%	No. of patients	%	No. of patients	%
<1	174	15.80	158	14.40	332	30.20
1-6	128	11.60	125	11.40	253	23.00
6-12	115	10.40	110	10.10	225	20.50
>12	205	18.60	85	7.70	290	26.30
Total	622	56.50	478	43.50	1100	100

Table 4: Physiological cutaneous changes secondary to aging in elderly patients (n=1100).

Physiological changes	Male		Female		Total	
	No. of diagnosis	%	No. of diagnosis	%	No. of diagnosis	%
Greying of hair	622	35.3	478	34.78	1100	35.05
Wrinkling	622	35.3	478	34.78	1100	35.05
Xerosis	301	17.1	239	17.40	540	17.21
Senile comedones	86	4.8	73	5.32	159	5.07
Senile lentigenes	76	4.3	45	3.28	121	3.86
Senile purpura	57	3.2	61	4.44	118	3.76
***Total**	1764	100	1374	100	3138	100

*Some patients had more than one entity.

Table 5: Pattern of cutaneous problems in elderly patients (n=1100).

Problems	Male		Female		Total	
	No. of diagnosis	%	No. of diagnosis	%	No. of diagnosis	%
Benign tumors	924	50.46	702	49.26	1626	49.94
Infections/ Infestations	337	18.41	299	20.98	636	19.53
Allergic/ dermatitis	197	10.76	141	9.89	338	10.38
Pruritus	98	5.35	68	4.77	166	5.10
Pigmentary	87	4.75	57	4.00	144	4.42
Papulosquamous	76	4.15	42	2.95	118	3.63
Disorders of connective tissue and systemic collagen disorders & metabolic disorders	39	2.13	30	2.11	69	2.12
Premalignant and malignant	11	0.60	5	0.35	16	0.49
Vesicobullous	13	0.71	1	0.07	14	0.43
Miscellaneous	49	2.68	80	5.62	129	3.96
Total*	1831	100	1425	100	3256	100

*Some patients had more than one entity.

Out of the total 3256 diagnosis, the relative incidence of benign tumors was maximum (1626; 49.94%), followed by infections and infestations (636; 19.53%), allergic/ dermatitis problem (338; 10.38%), pruritus (166; 5.10%), pigmentary disorders (144; 4.42%), papulosquamous disorders (118; 3.63%), disorders of connective tissue

and metabolic disorders (69; 2.12%), premalignant and malignant lesions (16; 0.49%), vesicobullous disorders (14; 0.43%) and miscellaneous group (129; 3.96%) (Table 5). Systemic diseases were associated in 640 (58.18%) cases. Hypertension was the most common associated systemic disease (370; 33.64%) followed by diabetes mellitus (164; 14.91%), anemia (36; 3.27%), asthma (24; 2.18%), hypothyroidism (16; 1.27%), internal malignancy (8; 0.73%), pulmonary tuberculosis (14; 1.27%) and chronic renal disease (8; 0.73%) (Table 6).

Table 6: Pattern of associated systemic disorders in elderly patients (n=1100).

Diseases	Male		Female		Total	
	No. of patients	%	No. of patients	%	No. of patients	%
Hypertension	262	23.82	108	9.82	370	33.64
Diabetes mellitus	98	8.91	66	6.00	164	14.91
Anemia	20	1.82	16	1.45	36	3.27
Bronchial asthma	16	1.45	8	0.73	24	2.18
Hypothyroidism	5	0.45	11	1.00	16	1.45
Chronic renal failure	4	0.36	4	0.37	8	0.73
Pulmonary tuberculosis	12	1.09	2	0.18	14	1.27
Internal malignancy	3	0.27	5	0.46	8	0.73
Total	420	40.4	220	23.6	640	58.18

DISCUSSION

The elderly population is increasing the world over. India has acquired the label of "an ageing nation". Only a few hospital bases studies have been done in India on the dermatological problems in elderly people. We therefore, recorded various physiological cutaneous changes and dermatoses of elderly population, attending skin OPD of Mahatma Gandhi Medical College &Hospital, Jaipur, Rajasthan, India. Eleven hundred patients were registered under this study.

Our study showed that the maximum number of patients (566; 51.45%) was between age of 65-70 years followed by 18.55% (204) between 60-64 years and 16.45% (181) between 71-75 years. Only 8.82% (97) patients were between 76-80 years. Yadav et al studied 500 patients and observed that 61.2% (306) cases were between 60-69 years followed by 31.6% (158) between 70-79 years, 6.2% (31) between 80-89 years and 1% (5) above 90 years.[13] Gover et al observed that among 200 patients aged 65 years and above, majority of patients were of 65-70 years of age (110; 55%).[14] In our study oldest patient was a 96 years old female, while in their study oldest patient was a 96 years old male.[13]

In the present study male patients (622; 56.5%) outnumbered females (478; 43.5%) and male: female ratio was 1.3:1. Similar findings have been reported by others also.[9,13,15] Sayal et al carried out a study on 320 patients, of whom 75% (240) were males and 25% (80) were females.[9] The M: F ratio was 3:1. Patange et al carried out a study on 200 patients and observed that 63% (126) were males and 37% (74) were females and the M: F ratio was 1.7:1.[15] In a study by Yadav et al 63.6% (318) patients were males and 36.4% (182) were females with M: F ratio being 1.74:1.[13] The male preponderance could possibly be due to relatively higher outdoor activities, more exposure to external environment and easier approach to hospital. Moreover, female patients are known to avoid their health problems until it becomes serious.

Analysis of duration of disease revealed that there was not much difference in the proportion of patients having acute or chronic diseases. There were 30.2% patients (332) having illness of duration less than 1 month and 26.3% (290) patients having illness more than 12 months. The elderly patients are dependent on others or reluctant on their part to seek medical advice, which may explain the reduced proportion of patients with long duration of illness.

Greying of hair was the commonest physiological finding in our study seen in all 1100 patients. It was also most common physiological finding recorded in the study done by Groves et a.l[14] Wrinkling was also most common physiological finding seen in all 1100 patients. It was the most common finding in other studies.[9,13,14] Xerosis was also a common finding seen in 540 (17.21%) patients in our study, as recorded by Chopra et al in 108 (50.8%) patients in their study.[16] In our study we recorded 3256 dermatological diagnosis in 1100 patients, since some patients had more than one entity.

Out of the total 3256 diagnosis, the relative incidence of benign tumors was maximum (1626; 49.94%), followed by infections and infestations (636; 19.53%), allergic/dermatitis problem (338; 10.38%), pruritus (166; 5.10%), pigmentary disorders (144; 4.42%), papulosquamous disorders (118; 3.63%), disorders of connective tissue and metabolic disorders (69; 2.12%), premalignant and malignant lesions (16; 0.49%), vesicobullous disorders (14; 0.43%) and miscellaneous group (129; 3.96%).

Systemic diseases were associated in 58.18% (640) patients in our study. Hypertension (370; 33.64%) was the commonest disease followed by diabetes mellitus (164; 14.91%), anemia.(36; 3.27%), asthma (24; 2.18%), hypothyroidism (16; 1.45%), internal malignancy (8; 0.73%), pulmonary tuberculosis (14; 1.27%) and chronic renal failure (8; 0.73%). A similar findings of systemic diseases 64.5% (129) was found in the study by Grover et al and the most common association was hypertension (80; 40%) followed by diabetes mellitus in their study too.[14] Similarly in the study by Sayal et al hypertension (46; 28.9%) was the most common followed by diabetes mellitus (41; 25.8%).[9] However in other studies diabetes mellitus was the commonest systemic disease associated.[15,17]

CONCLUSION

Maximum number of patients (566; 51.5%) were between 65-70 years. 332 (30.2%) patients had their disease for less than one month. Greying of hair and wrinkling were the commonest physiological finding found in all patients. In our study, benign tumors (1626; 49.94%) were the commonest. Associated systemic diseases were observed in patients 640 (58.18%). Hypertension was the commonest followed by diabetes mellitus. Based on these findings we conclude that most dermatoses of elderly are benign and require no aggressive therapeutic approach. Dermatitis in the elderly is a common problem (~50%) where good symptomatic control should be attempted. Amelioration of xerosis of the elderly will lead to significant improvement in these cases. 2/3rd of patients under study had associated systemic illness. A possibility of drugs for systemic diseases causing or aggravating some dermatological manifestation should be considered when managing cutaneous problems in elderly. Good general care of the elderly including nutritional diet, proper clothing, moderate physical activity and personal hygiene will improve many of their dermatoses and help in prevention of cases of dermatitis and infections.

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