

Skin Disorders Among Geriatric Population at a Tertiary Care Center in Uttarakhand

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ABSTRACT

Introduction: Ageing results in decline of normal functioning in all organ systems including skin. This predisposes the elderly persons to develop various skin ailments. A thorough knowledge of different diseases prevalent in this population in different geographic regions help the health care providers in better health care policy making.

Aim: This study was planned to know the common dermatological diseases prevalent in Uttarakhand region of India.

Materials and Methods: Hospital out patients records maintained in Department of Dermatology, Venereology & Leprosy were analysed and information regarding age, sex and diagnosis of patients were recorded. Descriptive statistics for prevalence of skin diseases in patients presenting to hospital were calculated.

Results: Out of the total 29,422 patients seen in dermatology department from August 2012 to 2014, 4.7% (1,380) were aged 60 years and above. Male to female ratio was 2:1. Erythematous-squamous disorders taken collectively constituted the major skin disorder seen in 38.9% patients. This was followed by infections and infestations (29.9%), senile pruritus (9.0%) and age related skin changes (3.7%). Benign neoplasms were seen in 1.1% patients followed by cutaneous malignancies in 0.8% and precancerous lesions in 0.4%. Fungal infections were the most common infections seen in 18% patients.

Conclusion: This study strengthens the opinion that infections, senile pruritus and eczema-dermatitis are the major dermatological disorders in elderly population.

Keywords: Ageing, Dermatoses, Pruritus, Senile

INTRODUCTION

India entered the group of ageing countries in 2001 with the population of persons aged 60 years and above exceeding 7%. Further the geriatric population is expected to double by 2026. The reasons proposed for this are increase in life expectancy as well as decrease in birth rates [1]. Ageing results in variable spectrum of manifestations in all organ systems including skin. A decline in normal functions of skin predominantly its healing capacity, immune responsiveness and capacity to repair DNA occurs with aging [2]. Knowledge of common geriatric dermatoses in different regions can help us make effective health care policies. There are few Indian studies on the spectrum of geriatric dermatoses but none from Uttarakhand region situated in sub Himalayan range. This study was planned to know the common dermatological diseases prevalent in geriatric population in this region.

MATERIALS AND METHODS

The study was conducted at Himalayan Institute of Medical Sciences, Dehradun, (Uttarakhand), India, which is a tertiary care hospital situated in sub-Himalayan region. In this retrospective study hospital patient records from August 2012-2014 were analysed. These registers were maintained in out patient department of Department of Dermatology, Venereology and Leprosy and contained information regarding age, sex and diagnosis of patients. Ethical clearance was taken from ethical committee of institute and the data was anonymized. From these records data of geriatric patients (60 years and above) was extracted. Three age groups were created: 60-69 years, 70-79 years and ≥ 80 years. The diseases were categorized into seven broad categories namely erythematous-squamous disorders, infectious diseases, benign neoplasms, precancerous lesions, cutaneous malignancies, age related skin changes and others. Descriptive statistics for the prevalence of skin diseases was calculated.

RESULTS

Total number of patients seen in Dermatology out patient department during the study period were 29422 and out of these 1380 (4.7%) were aged 60 years and above. There were 921 (66.7%) males and 459 (33.3%) females. Age of patients ranged from 60 years to 95 years with a mean age of 66.30 ± 6.37 years. 69.6% patients were in the age group 60-69 years. The distribution of patients in the different age groups is shown in [Table/Fig-1].

Age group (Years)	n=1380			
	Male		Female	
	No.	%	No.	%
60-69	610	44.2	351	25.4
70-79	258	18.7	98	7.1
≥ 80	53	3.8	10	0.7
Total	921	66.7	459	33.3

[Table/Fig-1]: Sex wise distribution of patients in different age groups.

Erythematous-squamous disorders taken collectively constituted the major skin disorder seen in 38.9% patients. This was followed by infections and infestations (29.9%), senile pruritus (9.0%) and age related skin changes (3.7%). Benign neoplasms were seen in 1.1% patients followed by cutaneous malignancies in 0.8% and precancerous lesions in 0.4%. The distribution of skin diseases according to gender and age group is shown in [Table/Fig-2].

Among the various erythematous-squamous disorders contact dermatitis was the most prevalent seen in 7.3% patients. This was followed closely by psoriasis (5.4%), endogenous eczema (4.1%), lichen planus (3.3%) and urticaria (3.0). Fungal infections were encountered in 18.0% patients. Out of this cutaneous dermatophytosis were seen in 76.3%, onychomycosis in 14.9% and candidiasis in 8.8% (n=249). 4.1% patients had presented with herpes zoster and 3.5% patients had post herpetic neuralgia.

Disease	Male	n=921	Female	n=459	Total	n=1380
	No.	%	No.	%	No.	%
Psoriasis	52	5.6	23	5.0	75	5.4
Lichen planus	24	2.6	22	4.8	46	3.3
Seborrheic dermatitis	14	1.5	06	1.3	20	1.4
Contact dermatitis	78	8.5	23	5.0	101	7.3
Stasis dermatitis	08	0.87	00	0.0	08	0.6
Lichen simplex chronicus	17	1.8	09	2.0	26	1.9
Urticaria	26	2.8	16	3.5	42	3.0
Endogenous eczema	35	3.8	22	4.8	57	4.1
Other erythematous squamous disorders	104	11.4	58	12.6	162	11.8
Fungal infections	190	20.7	57	12.6	247	18.0
Viral infections	66	7.2	39	8.5	105	7.6
Bacterial infections	23	2.5	14	3.0	37	2.7
Scabies	24	2.6	10	2.2	34	2.5
Hansen's disease	19	2.0	3	0.7	22	1.6
Senile pruritus	74	8.0	51	11.1	125	9.0
Age related skin changes	31	3.4	20	4.4	51	3.7
Benign neoplasms	10	1.0	5	1.0	15	1.0
Precancerous lesions	1	0.1	4	0.9	5	0.4
Cutaneous malignancies	6	0.6	5	1.0	11	0.8
Others	119	13.0	72	15.7	191	13.9
Total	921	100	459	100	1380	100

[Table/Fig-2]: The distribution of skin diseases according to gender.

Pyodermas including folliculitis, furunculosis and cellulitis were seen in 2.7% patients. Scabies was encountered in 2.5% patients and 1.6% patients had Hansen's disease.

Senile pruritus was also a common diagnosis seen in 9.0% of the total cases. Seborrheic keratoses were the most common benign neoplasms seen in 5 patients and actinic keratosis most common precancerous lesion seen in 4 patients. Among the cutaneous malignancies basal cell carcinoma were seen in 7 patients followed by cutaneous metastasis in 2 patients and squamous cell carcinoma and melanoma in one patient each.

DISCUSSION

Elderly population aged 60 and above constitutes a large and rapidly growing segment of Indian population. Dermatological diseases in elderly are increasing and thus put a great burden on health care system. It is important to identify the patterns of geriatric skin disorders for effective delivery of health care services. Aim of the study was to determine the frequency and distribution of skin diseases in elderly.

A high prevalence of infections and infestations was seen in our study (29.9%). This reflects the decrease in immunological functions of skin in elderly persons associated with a decrease in personal care. Fungal infections were the most common infections seen in 18% patients. Various other studies have reported variable rates ranging from 8.2% to 38.0% [3-7]. This wide variation can be explained because of differences in environmental conditions. High prevalence in our study probably reflects high humidity in our region. Among other infections herpes zoster and pyodermas were next in frequency. Scabies was seen in 2.5% of patients. In eczema-dermatitis group 7.3% patients had contact dermatitis, mostly allergic in nature. Most of the elderly population in this region is actively involved in farming increasing their exposure to various environmental allergens. Variable rates of dermatitis have been reported by other studies ranging from as low as 1.5% to as high as 58.7% [4,8-15].

Age related skin changes including senile pruritus were also seen in a substantial number of patients forcing them to seek dermatological consultation. A multitude of factors are responsible for senile pruritus. Most important among others being xerosis, intake of multiple drugs by elderly persons and co-morbidities including chronic kidney disease, chronic liver disease and diabetes mellitus. Due to lack of adequate information we could not identify patients with pruritus of systemic origin from those having idiopathic senile pruritus. A 9% of our patients sought consultation for pruritus. This is much lower than reported in another Indian study but comparable to that reported in a study from Turkey [4,5,8]. Precancerous lesions and malignancies collectively constituted 1.2% cases. This rate is much lower than that reported from Iran, Turkey and America, while is comparable to that reported from other Indian studies [3,4]. This probably reflects the influence of regional and ethnic factors. Comparison of prevalence of skin disorders among geriatric population in various studies is depicted in [Table/Fig-3].

LIMITATION

Being a retrospective study, the major limitation of our study was lack of adequate information regarding the systemic co-morbidities in patients. Further only the diagnosis for which patient sought consultation was noted thus other asymptomatic age related changes must have been missed.

CONCLUSION

Geriatrics constitutes an important group of the total population having different spectrum of cutaneous diseases. Knowledge about diseases prevalent in this age group helps in better management thus improving the quality of life of elderly persons. This study strengthens the opinion that infections, eczema-dermatitis and senile pruritus are the major dermatological disorders in geriatrics. Larger studies in different regions of the country should be undertaken to analyse the effects of environment on disease frequencies.

S.No	Study	No. of patients	Erythematous squamous disorders	Infections & infestations	Benign neoplasms	Precancerous & cancerous lesions	Pruritus
1.	Darjani et al., (Northern Iran 2011) [3]	440	35.3%	20.2%	65%	41.5%	20.8%
2.	Grover S & Narasimhalu CRV (India 2009) [5]	200	66%	43.5%	74.5%	-	18.5%
3.	Yalcin et al., (Turkey 2006) [4]	4099	20.4%	33.8%	1.7%	5.2%	11.5%
4.	Liao et al., (Taiwan 2001) [7]	16,924	67.0%	58.9%	12.8%	2.1%	14.2%
5.	Present study	1380	38.9%	29.9%	1.1%	1.2%	9.0%

[Table/Fig-3]: Prevalence of skin disorders among geriatric population in various studies.

REFERENCES

- [1] Situation Analysis of Elderly in India. Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India, June 2011. Available at: http://mospi.nic.in/mospi_new/upload/elderlyinindia.pdf.
- [2] Yaar M, Gilchrist BA. Aging of skin. In: Freedberg IM, Eisen AZ, Wolff K, et al., eds. Fitzpatrick's Dermatology in General Medicine, 5th edn. New York: McGraw-Hill, 1999:1697-1706.
- [3] Darjani A, Mohtasham-Amiri Z, Mohammad Amini K, Golchay J, Sadre-Eshkevari S, Alizade N. Skin disorders among elder patients in a referral

- center in northern Iran (2011). *Dermatol Res Pract.* 2013;2013:193205. doi: 10.1155/2013/193205.
- [4] Yalcin B, Tamer E, Toy GG, Oztas P, Hayran M, Alli N. The prevalence of skin diseases in the elderly: analysis of 4099 geriatric patients. *Int J Dermatol.* 2006; 45:672-76.
- [5] Grover C, Narasimhaul CRV. A clinical study of skin changes in geriatric population. *Indian J Dermatol Venereol Leprol.* 2009;75:305-06.
- [6] Patange SV, Fernandez RJ. A study of geriatric dermatoses. *Indian J Dermatol Venereol Leprol.* 1995;61:206-08.
- [7] Liao YH, Chen KH, Tseng MP, Sun CC. Pattern of skin diseases in a geriatric patient group in Taiwan: A 7-year survey from the outpatient clinic of a university medical centre. *Dermatology.* 2001;203:308-13.
- [8] Bilgili G, Karadag AS, Ozkol HU, Calka O, Akdeniz N. The prevalence of skin diseases among the geriatric patients in Eastern Turkey. *J Pak Med Assoc.* 2012;62:535-39.
- [9] Cvitanovic H, Knezevic E, Kuljanac I, Jancic E. Skin disease in a geriatric patients group in outpatient dermatologic clinic Karlovac, Croatia. *Collegium Antropologicum.* 2010;34:247-51.
- [10] Durai PC, Thappa DM, Kumari R, Malathi M. Aging in elderly: chronological versus photoaging. *Indian J Dermatol.* 2012;57:343-52.
- [11] Smith DR, Kubo H, Tang S, Yamagata Z. Skin disease among staff in a Japanese nursing home. *J Occup Health.* 2003;45:60-2.
- [12] Smith DR, Atkinson R, Tang S, Yamagata Z. A survey of skin disease among patients in an Australian nursing home. *J Epidemiol.* 2002;12:336-40.
- [13] Smith DR, Sheu HM, Hsieh FS, Lee YL, Chang SJ, Guo YL. Prevalence of skin disease among nursing home patients in southern Taiwan. *Int J Dermatol.* 2002;41:754-59.
- [14] Chan SW. Prevalence of skin problems in elderly homes residents in Hong Kong. *Hong Kong J DermatolVenereol.* 2006;14:66-70.
- [15] Weismann K, Krakauer R, Wanscher B. Prevalence of skin diseases in old age. *Acta Dermato Venereologica.* 1980;60:352-53.

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