

A CLINICAL STUDY OF GERIATRIC DERMATOSES

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Abstract

Introduction: The geriatric population is composed of persons over 65 years of age and very few studies are available on the dermatologic diseases in this group. This study was done to study the spectrum of cutaneous manifestations and prevalence of physiological and pathological changes in the skin of elderly people.

Material and Methods: Two hundred consecutive patients aged more than 65 years of age attending the outpatient clinic or admitted as inpatients in the Department of Dermatology at Vydehi Institute of Medical Sciences and Research Centre were subjects for the study. A detailed history of cutaneous complaints, present and past medical ailments was taken. A complete general physical, systemic examination and dermatological examination was done and all findings were noted in a pre designed proforma. Skin changes observed due to ageing were classified as physiological and pathological. Findings were collated in a master chart and results analyzed.

Results: Out of 200 patients studied, 71% were males and 29% were females. Pruritus was the single most common complaint elicited (44%). Among the physiological changes, xerosis was the commonest (93%). Among the pathological changes skin tumours, eczemas, infections were the common findings.

Conclusions: The geriatric dermatoses are different in different populations as some of the skin changes seen in western skin and Indian skin are not identical.

Key words: geriatric; dermatoses; cutaneous manifestations

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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 says "You do not heal old age. You protect it; you promote it; you extend it". The geriatric population is composed of persons over 65 years of age and very few studies are available on the dermatologic diseases in this group [1]. In India, there were 72 million elderly persons above 60 years of age as of 2001 and this number is likely to increase to 179 million in 2031 and hence dermatologic care in geriatric population needs emphasis [2].

The dermatology practice of the future will see an increase in the number of geriatric patients [3] and geriatric health care has become a major international issue [4]. In India, very few studies have been done to look into the cutaneous manifestations in the elderly people [5] though several studies have been carried out in the west [6]. Geriatrics as a branch of medicine is beginning to take a foothold in our country too.

In this scenario, with life expectancy in India going up to 63.9 years in males and 66.9 years in females in 2004 [7], this study was undertaken to study the spectrum of cutaneous

manifestations and prevalence of physiological and pathological changes in the skin of elderly people.

Material and Methods

Two hundred consecutive patients aged more than 65 years of age attending the outpatient clinic or admitted as inpatients in the Department of Dermatology, STD and Leprosy at Vydehi Institute of Medical Sciences and Research Centre were subjects for the study.

Method of data collection

A detailed history of cutaneous complaints, present and past medical ailments was taken. A complete general physical and systemic examination was carried out irrespective of the complaints. Detailed dermatological examination was done and all findings were noted in a pre designed proforma. Routine blood haemoglobin, complete blood counts, urine routine examination, blood sugar estimation was carried out whenever it was necessary. Skin scrapings, nail clipping for fungus, Tzanck smears and skin biopsies were done wherever indicated.

Skin changes observed due to ageing were classified as physiological and pathological. Findings were collated in a master chart and results analyzed. They were compared with findings from similar studies.

Results

The following observations were made in the study and the results analysed.

Total of 200 patients above the age of 65 years were studied of which, (142) 71% were males and (58) 29% were females. The male: female ratio was 2.44 : 1. The maximum number of patients 124 (62%) belonged to the age group of 65-70. The mean age of these patients was 68 years. Pruritus was the commonest single complaint in 88 patients (44%).

Fifty four percent of patients had associated systemic illness. These were tabulated in a bar graph (Fig. 1). Pruritus was the commonest single complaint in 88 patients (44%). All the patients had physiological changes and the commonest was xerosis. The physiological changes were tabulated in a bar graph (Fig. 2).

Papulosquamous disorders were seen in 24 patients (12%). Fourteen patients (7%) had psoriasis and 10 (5%) had lichen planus. Eczema was present in 62 patients (31%). Among the various types of eczema, lichen simplex chronicus was the commonest, seen in 20 (10%) patients. Ten patients (5%) each had gravitational eczema and seborrhoeic dermatitis. Irritant

contact dermatitis and allergic contact dermatitis was seen in 6 patients (3%) each. Asteatotic eczema was seen in 5 patients (2.5%). Hand eczema was seen in 3 patients (1.5%) and 1 patient (0.5%) had atopic dermatitis.

Infections and infestations were seen in 64 patients (32%). These were tabulated in a table (Tabl. I). Of the various infections, fungal infection was the commonest. Pigmentary disorders were seen in 28 patients (14%). Among the various pigmentary disorders, vitiligo was seen in 16 patients (8%), melasma in 10 patients (5%) and ashy dermatosis in 2 patients (1%).

Skin tumours present in patients were noted and tabulated in Table II. The incidence of benign tumours exceeds the number of cases because most patients had more than 1 type of tumour. No malignant or premalignant tumours were seen in this study. Skin tumours present in patients were noted and tabulated in Table II. The incidence of benign tumours exceeds the number of cases because most patients had more than 1 type of tumour. No malignant or premalignant tumours were seen in this study. Senile purpura was the commonest vascular disorder seen in 14 cases (7%). Varicose veins were seen in 8 cases (4%). Bullous pemphigoid was the only bullous disorder encountered in this study, seen in 3 patients (1.5%). Disorders of keratinization were seen in 12 cases (6%). Plantar hyperkeratosis was seen in 8 patients (4%) and corns in 4 patients (2%). Trophic ulcers were seen in 8 cases (4%), keloid in 5 cases (2.5%) and keratolysis exfoliativa in 3 cases (1.5%).

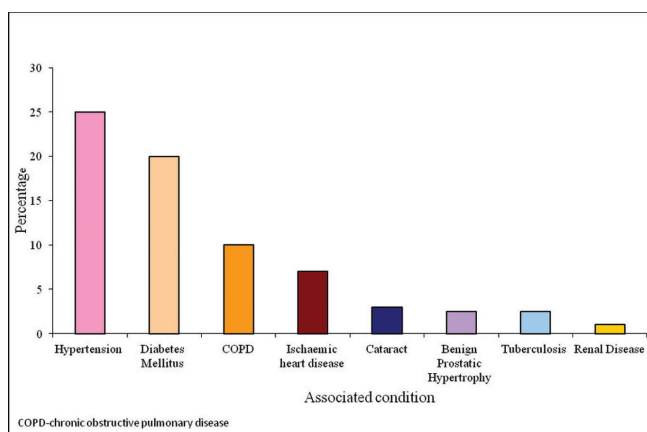


Figure 1. Associated systemic illness- Comorbidities.

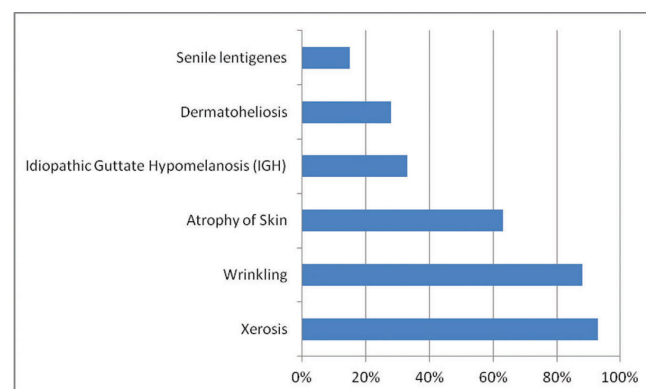


Figure 2. Physiological changes.

Sl. No.	Condition	No. of cases	Incidence (%)
1	Fungal Infections	22	11
	a) Dermatophytosis	15	7.5
	b) Candidiasis	05	2.5
	c) Pityriasis Versicolor	02	01
2	Viral Infections	16	08
	a) Herpes Zoster	08	04
	b) Verruca Vulgaris	08	04
3	Leprosy	12	06
4	Pyoderma	08	04
5	Scabies	06	03
	Total	64	32

Table I. Infections and Infestations.

Sl. No.	Condition	No. of cases	Incidence (%)
1	Seborrhoeic Keratosis	102	56
2	Dermatosis Papulosa Nigra	94	47
3	Cherry Angiomas	74	37
4	Achrochordon	39	19.5
5	Melanocytic Naevi	11	5.5
6	Dermoid Cyst	07	3.5
7	Sebaceous Cyst	01	0.5

Table II. Benign tumors of the skin.

Greying of hair was the commonest hair change seen in 180 patients (90%). Hypertrichosis of pinna was seen in 76 male patients (38%) and androgenic alopecia was seen in 36 male patients (18%). Hirsutism was seen in 12 patients (6%). The nail changes seen in patients were tabulated in Table III. The

incidence of nail changes exceeds the number of cases since some cases showed more than one nail change due to ageing. Oral mucosal hyperpigmentation was seen in 49 patients (24.5%).

Sl. No.	Condition	No. of cases	Incidence (%)
1	Vertical Ridging	94	47
2	Loss of Lustre	88	44
3	Onychomycosis	14	07
4	Paronychia	08	04
5	Nail psoriasis	06	03
6	Subungual Hyperkeratosis	02	01
7	Nail Dystrophy	02	01
8	Nail Lichen Planus	02	01
9	Beau's Lines	01	0.5
10	Pterygium	01	0.5

Table III. Nail Changes.

Discussion

In this study, a total of 200 patients varying in age from 65 to 85 years were examined. The oldest patient was 85 years. Of these, 142 (71%) patients were males and 58 (29%) were females. In the present study, the number of males outnumbered the females which coincide with most of the other studies [1,6,8].

Pruritus was the commonest symptom seen in this study and was given by 88(44%) patients. Patange and Fernandez [6] noted pruritus in 78.5% of patients, of which 3.8% had senile pruritus and the rest were associated with cutaneous dermatoses (91.1%). In all the studies, pruritus has been the commonest complaint noted varying from 11.5% to 49.6% [1,8-11]. About 108 (54%) of patients in the present study had co morbid conditions like diabetes mellitus, hypertension, chronic renal failure, ischemic heart disease, chronic obstructive lung disease etc with multiple drug usage which may have contributed to development of pruritus.

In evaluating the older person's skin, the greatest problem is deciding what is abnormal and what is physiological. Many changes and lesions are normal, except occasionally in degree and number. In this study xerosis, wrinkling, atrophy (thinness of skin), idiopathic guttate hypomelanosis, dermatoheliosis and senile lentigenes are considered physiological.

Xerosis was the commonest physiological change seen in the present study in 93% of patients. Xerosis was noted in 7% [6], 12.5% [12], 77% [13], 85% [9] and 99.8% [11] of patients in various studies. The high incidence of xerosis in this study is comparable to few of the studies [9,13]. The high incidence of xerosis could be attributed to less use of emollients and usage of harsher soaps by the subjects of the study who mostly hail from semi rural areas.

Wrinkling was seen in 88% (156) patients in this study. Tindall and Smith [13], Grover and Narasimhalu [14], Beauregard and Gilchrest [9], and Durai, Thappa et al [11] have reported

wrinkling in 94%, 95.5%, 95.6% and 99% patients respectively which coincides with the results of our study. Most of the wrinkling seen in this study was on sun exposed areas like the face, neck, forearms and dorsa of hands in the form of glyptic wrinkles. Slight lower incidence of wrinkling in this study may be because of increased tolerance of racially pigmented skin to sunlight.

Atrophic wrinkled skin was seen in 63% (126) of patients in this study. The aged skin becomes fragile, translucent, lax and wrinkled [15]. Tindall and Smith [13] found an incidence of atrophic wrinkled skin in 94% patients. Most of the patients in our study were in the age group of 65 to 70 years which may explain the decreased incidence of atrophy as compared to the other study as atrophy is just beginning to manifest at this age. More so, pigmented skin is less susceptible to skin damage and atrophy of the skin is more common in females than in males [16] and in this study, females form only 29% of the total cases. Idiopathic guttate hypomelanosis was present in 66 (33%) cases in this study. Three Indian studies mention an incidence of about 25% [6,9,11] and one other study by Grover and Narasimhalu [14] mentioned an incidence of 76.5%. IGH is statistically more often seen in darkened skin than in fair skinned subjects [9]. This may explain a slightly higher incidence (33%) of IGH in the present study compared to other studies. Also, most patients present themselves to be reassured that IGH is not vitiligo, due to the cultural bias against vitiligo.

The range of changes due to chronic sun damage is called dermatoheliosis. The skin change includes senile comedones, irregular pigmentation, wrinkling, scaling, actinic keratoses, elastoses and malignancy [17]. Senile comedones were found in 56 (28%) cases in this study. Senile comedones were seen in 95.6% [9], 81% [13] and 11.5% [6] in various studies. In the present study, 2% patients had Favre-Racouchot syndrome, which was similar to that seen in the study by Patange and Fernandez [6].

The incidence of senile lentigens was 30 (15%) in this study. The incidence of senile lentigens in various studies ranges from 0.2% to 70.6% [6,9,11,13,18]. The incidence of senile lentigens is well in concordance with the findings of Patange and Fernandez [6] which was carried out in the same ethnic population. The incidence of senile lentigens is lesser than most of the western studies as fair skin is more prone for senile lentigens.

Among the various pathological skin changes seen in the elderly the following conditions are discussed: papulosquamous disorder, eczematous conditions, infections and infestations, pigmentary disorders, benign tumors, vascular disorders, bullous disorders, disorders of keratinization and miscellaneous skin condition.

In this study psoriasis was seen in 14 (7%) patients. The incidence of psoriasis ranges from 1% to 11.2% in various studies [9,6,12,13,18-20]. The incidence of psoriasis in the present study is in concordance with that of the study by Patange and Fernandez [6] and Sahoo, Singh et al [12]. An incidence of 5% of lichen planus was noted in this study which is concordant with study by Sahoo, Singh et al [12].

In the present study eczematous conditions were seen in 62 (31%) patients. The total incidence of eczemas in various studies ranges from 11.9% [4] to 58% [8]. The incidence of lichen simplex chronicus (LSC) and contact dermatitis correlates well with the study by Patange and Fernandez [6]. The incidence of stasis dermatitis in the study is in concordance with the study by Beaugard and Gilchrest [9]. Incidence of seborrheic dermatitis correlates well with few studies [8,20]. The increased incidence of LSC and stasis dermatitis in our study may be because of the associated xerosis and pruritus which is high in the patients of this study.

Infections and infestations of skin were seen in 64 (32%) patients. Fungal infections were seen in 11% (22), viral infection in 8% (16), leprosy in 6% (12), pyoderma in 4% (8) and scabies in 3% (6) of patients. The incidence of infections and infestations in our study compares well with few studies. Fungal infections are the commonest infections seen in the elderly as noted in our study and in few other studies [4,6]. Leprosy was seen in 6% of patients in the study. The incidence of leprosy was 1.5% in the study by Grover and Narasimhalu [14].

Pigmentary disorders were seen in 28 (14%) cases, of these vitiligo was seen in 16 (8%) cases, melasma in 10 (5%) and ashy dermatosis in 2 (1%) cases. Various studies report an incidence of vitiligo between 1.2% to 19% [6,12,20]. 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 Indian subcontinent, self referral is higher in all hypo-pigmentary disorders.

The incidence of seborrheic keratosis ranged from 37.5% to 88% [6,9,13] and of cherry angiomas 49.5% to 75% [6,9,13] respectively in various studies. The findings in this study of seborrheic keratosis (56%) and dermatosis papulosa nigra (47%) are comparable to that of the study by Beaugard and Gilchrest [9]. The incidence of cherry angiomas (37%) in this study is comparable to that of the study by Patange and Fernandez [6] but the incidence of melanocytic naevi is less compared to the other studies which have an incidence of 46.3% [9] and 32.5% [6]. No malignant skin conditions were noted in this study. This could be because of the lower incidence of skin cancers in racially pigmented skin

Vascular disorders were seen in 22 (11%) patients, of these senile purpura was seen in 14 (7%) of cases and varicose veins in 8

(4%) of cases. The incidence of senile purpura is in concordance with few other studies [6,9,11,13] but the incidence of varicose veins is much less than that noted by Tindall and Smith (48%) [13]. Senile purpura was mostly noted in the exposed atrophic skin in our patients. Most of our patients being agriculturists have increased solar exposure which may be the cause of senile purpura.

Among the bullous disorders, only bullous pemphigoid was noted in 3 (1.5%) patients. In various studies incidence of bullous disorders ranges from 0.5% to 4.4% [1,8,11,14,19]. The findings in the present study matches with that of the other studies.

Trophic ulcer was seen in 8 (4%) cases and keloids in 5 (2.5%) cases in the study. Only one study by Liao YH, Chen KH [8] et al mention incidence of keloid as 1%. Other studies do not mention the incidence of keloids. Weismann, Krakauer [20] et al mention pressure sores in 2.2% of cases.

Longitudinal ridging of nails was the commonest physiological change seen in 94 (47%) cases followed by loss of luster in 88 (44%) cases. Among pathological changes onychomycosis was seen in 14 (7%) cases, paronychia was seen in 8 (4%) cases and psoriasis was seen in 6 (3%) cases.

Conclusion

A sizeable demographic percentage of many dermatologist populations are geriatric patients. India has thus acquired the label of "an ageing nation" with 7.7% of its population being more than 60 years old [21]. The geriatric population is afflicted with a great many dermatology concerns, not only because of normal ageing process but the additional stressors acquired from the environmental causes. The long term effect of the exterior causes such as UV radiation, chemical irritants, temperature, humidity, dryness, pathogens and so forth are compounded for those who have had to endure longer. This cumulative damage profoundly affects the health of the elderly.

More epidemiologic investigations concerning dermatologic diseases in the elderly population are needed to complement the information in this study, which presents an interesting profile of the various skin diseases and notes changes in western and Indian skin.

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