

Clinical Profile and Histopathological Study of Geriatric Dermatoses - Original Article



Medical Science

KEYWORDS : geriatric, wrinkling, pruritus, seborrheic keratoses, lentigenes, xerosis.

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ABSTRACT

Background: Dermatological problems are frequently among the chief complaints that bring geriatric patients to the physician. It has been estimated that atleast 7% of all the physician visits are prompted exclusively by the disorders of the skin.¹

Aims: The present study was designed and conducted to study the various cutaneous disorders in geriatric age group of more than 60 years and to correlate between various cutaneous disorders and systemic illnesses.

Materials and Methods: A total number of 120 cases were studied of age more than 60 and willing to undergo necessary investigations in case of systemic illnesses. Skin biopsy was performed wherever mandatory for confirmation and histopathological study.

Results: Among 120 cases 88 males and 32 female patients were observed. Maximum patients 56.6% were in the group of 60-65 years. Considering the occupation 26.7% were involved in agricultural outdoor activities. Wrinkling (80.3%) was the commonest finding in our study followed by lentigenes in 39.1%, seborrheic keratoses in 30%, cherry angiomas 35%, xerosis 23.3%. Pruritus was the commonest presentation in 71.7% of our patients due to fungal infections in 25.8%, eczematous in 23.3% xerosis 24.4%, LSC 7 cases. In our study 44.1% of the patients presented with infections amongst which fungal infection were 30.8% and bacterial infections 4.1%. Among eczematous cases discoid eczema was common in 10% and allergic contact dermatitis in 8.3% of cases. Diabetes was the common disease found in 21% followed by hypertension in 10%, COPD 3.3% of cases.

Introduction:

In both developed and developing countries the number and proportion of older people are increasing from the past two decades. Government and institutions arbitrarily define the geriatric population as those over 65 years of age, which has no biological or epidemiological basis.²

As due to rise in research and development in modern medicine, life expectancy has been prolonged. So the dermatological problems are frequently among the chief complaints that bring geriatric patients to the physician. In India, in (1992), 6.6% of people were above 60 years, which by year 2001 has risen to 8.3%.³ It has been estimated that at least 7% of all the physicians visits are prompted exclusively by disorders of the skin.¹

In one study done by Gilchrist et al, in (1987), involving 68 non-institutional volunteers aged 50-91 years; none of who had ever consulted a dermatologist, two thirds had medical concern about their skin.⁴ Those aged 70 to 80 years, 83% complained of cutaneous problems.

The dermatological disorders in old age are not only due to physical consequences of ageing skin but also due to the effect of prolonged environmental exposure, especially UV radiation. Social and psychological circumstances also influence skin in old age. In women there are additional hormonal changes at menopause.⁵

True ageing²:

Primary ageing :

Intrinsic or chronological ageing : i) Genetic factors
ii) Constitutional

Extrinsic or photoageing : i) Environmental factors
ii) Life style

Secondary ageing :

Reactive ageing.

Primary ageing is best viewed in terms of the traditional epidemiological model of the interaction between intrinsic and extrinsic factors. Intrinsic or chronological ageing

is generally defined as the functional and morphological changes that occur in sun protected areas. Extrinsic ageing of the skin comprises changes that represent the accumulation of many caustic environmental insults to the skin.

Common changes associated with photoageing are:⁶

1. General appearance: muddy complexion, dryness, deep wrinkling, sagging skin, fragility.
2. Pigmentary lesions: irregular pigmentation (dyspigmentation), lentigenes, freckles Guttate hypomelanosis,
3. Vascular lesions: Telangiectasia, venous lakes, purpura angiomas
4. Appendageal changes: Sebaceous hyperplasia Favre Raouchot's comedones
5. Growths: Benign: (seborrheic keratoses) Premalignant (Actinic keratosis) Malignant (SCC, BCC)

Aims and Objectives:

The present study was conducted by keeping the following aims as:

1. To study the various common cutaneous disorders in geriatric patients of age more than 60 years.
2. To study the correlation between the various cutaneous disorders and systemic illnesses.

Materials and Methods:

Geriatric patients of age more than 60 years, attending the outpatient Department of Dermatology, indoor patients of Dermatology and Medicine of a tertiary teaching institute were randomly selected for the study.

A total number of 120 cases were studied. Patients detailed history and clinical findings were noted and recorded in the standard proforma. Whenever it was necessary biopsy of the skin lesions was done for confirmation. Culture, KOH mount, Tzanck smear was done wherever required.

Results:

It is hard to estimate the true frequency of skin diseases in the population as a whole in geriatric age group. Higher standards of housing, hygiene, nutrition together with the improvement in the health care services have meant that the average life span has increased considerably over the last century causing a proportionate rise in the incidence of skin problems in elderly.

Out of the total 120 cases males were 88 (73%) and females were 32 (27%) with female to male ratio being 2.7:1. Out of 88, 59% of the males were from the age group of 60-65 years while out of 32 females 50% were from the age group of 60-65.(Table-1)

Among the 120 senior citizens 26.7% (n=32) cases were involved in agricultural work (outdoor activities) and thus were exposed to the prolonged cumulative effect of UV radiations. Another large group constitutes those in miscellaneous group 26.7% who were retired personnel staying back at their houses, occupation less, living a sedentary life. Manual labor workers 20% were doing outdoor activities. Out of 32 females 50% were housewives.

Table-2 shows the prevalence of common physiological and pathological cutaneous conditions among geriatric age group. Wrinkling was the commonest finding in our study which was 80.3% (n=97) of the cases.

Lentigenes were present in about 39.1% (n=47) of cases. Solar lentigo is more prevalent among people who burn always and tan little. Seborrheic keratoses were present among 30% (n=36) of cases in our study. Cherry angiomas were present in 35%, acrochordans in 23.3%, Xerosis 23.3%, idiopathic guttate hypomelanosis in 40% of our case.

Various pruritic skin disorders was observed in 71.7% (n=86) of our patients. Fungal infection was commonest accounting for 25.8% followed by eczematous disorders 23.3%, xerosis 17.5%.Table-3

In our study 44.1% (n=53) of the patients presented with infections and infestations. Fungal infection was commonest 70% followed by bacterial infections 9.4% of cases.

Eczematous conditions were seen in 38 (31.6%) patients. Nummular discoid eczema was commonest presentation 10% followed by contact allergic dermatitis 8.3%, phytophotodermatitis 5.8% and stasis dermatitis 7.5%.

Total of 17 patients presented with pigmentary alterations. Out of these 5 cases were of vitiligo, while 12 were of pressure leucoderma.

Among the papulosquamous group of disorders Psoriasis was observed in 12 cases (10=males, 2=females) and hypertrophic lichen planus in 2 cases.

Bullous pemphigoid was commonest vesiculobullous disorder comprising 5% of cases. There was one case of Pemphigus vulgaris and Hailey Hailey disease.

Table-4 shows the incidence of benign neoplastic conditions in our study. Seborrheic keratoses (30%), lentiginosis (39.1%) and cherry angioma (35%) were common.

A total of 5.8% cases of patients presented with cutaneous malignancies. Basal cell carcinoma seen in 4 cases while 2 cases of squamous cell carcinoma.

Table-5 shows the comparison of various specific cutaneous presentations in our study. The commonest presentation was in the form of infective conditions 44.1%, fungal infections forming the major part of this group. Eczemas were observed in 31.% and contact allergic dermatitis 26.3%.

Table-6 shows the frequency of patients having systemic illnesses with cutaneous presentations which accounted for 38.3% (n=46).Diabetes mellitus was the commonest disease 17.5% followed by 10% of hypertension patients.

The nails were lusterless in 22.5% of cases, longitudinal ridging in 20%. Onychomycosis in 7, nail discoloration in 16, Beaus lines in 8 patients.

Discussion

Age and sex Distribution: Males were 88 (73%) while females were 32 (27%) with male to female ratio being 2.7:1 in our study. Sayal et al reported 3:1 male to female ratio in a similar study conducted in 1998.⁷

Maximum number of cases in our study was in the age group of 60-70 years of age with 76.7%.

Occupation: Patients involved in agricultural work 26.7% were exposed to the prolonged cumulative effect of UV radiations. Robinson N et al (1981) found that UV light induced skin cancers occur more frequently in outdoor workers than in indoor and who sunburn easily and tan poor. These persons had a higher incidence of SCC, BCC and melanoma of the head, face and neck.⁸

Common physiological and pathological condition: Wrinkling 80.3% was the common physiological condition among geriatric age group. Males presented with higher prevalence 65% and females with 15.8%. Tindall et al (1963) observed 96% of his cases had wrinkles due to loss of skin turgor.⁹ Chronic sun exposures that cause disorganization of elastic network accompanied by loss of elasticity and deeper furrows on face and exposed areas.

Lentigenes were seen in 39.1% cases, males 30% and in females 9.1%. Fernandez et al (1995) observed 6.5% of males and 5.5% of females with total of 24 cases having lentigenes.¹⁰

Seborrheic keratoses observed in 30% with males 19.2% and females 10.8%.The face and back were the most frequently involved sites, followed by the chest. A similar distribution was observed by Verbov et al (1975).¹¹Histopathological findings are in accordance with Lever et al.¹²Cherry angiomas seen in 35%, acrochordans in 23.3%, Idiopathic guttate melanosis in 40% of our cases. Actinic keratoses observed in 15.8% of cases 13 were males and 6 females.

Sayal et al⁷, Gilcrest et al¹ showed a similar incidence in their studies. Histopathological examination of lesions were classical to those described by Lever et al.¹²

Xerosis is another common presentation in 23.3% out of which 18.3% males and 5% were females.Fitzpatrick TB mentions 75% of persons over 64 present with aesthetically unappealing, uncomfortable pruritic xerosis due to decreased eccrine sweating, decreased water content in stratum corneum and altered keratinisation in old age.¹³

Pruritic disorders: Pruritus was most common presentation observed in 71.7%. Fungal infections was commonest accounting for about 25.8%, eczematous disorders being 23.3%, xerosis 24.4%.Macular amyloidosis in 2 cases and

LSC in 7 cases. Similarly Fernandez et al reported that in 78.5% of cases pruritus constituted the major complaint.¹⁰

Infections and infestations: In our study 44.1% of patients presented with some infections. Fungal infection was commonest 30.8%. Taenia pedis, taenia cruris, onychomycosis, candidal balanoposthitis were commoner presentation. Fitzpatrick TB mentions that as many as 20-80% of people over 65 have fungal infection of skin or nail.¹³ This may be due to decreased frequency of skin care, decreased epidermal turnover.

Bacterial infections were seen in 9.4%. Among these 4 were of folliculitis and one was paronychia. Single case of post herpetic neuralgia was seen. Five cases presented with scabies.

Eczematous conditions: In all 31.6% cases presented with one or other forms of eczema. Nummular discoid eczema was common among 10% followed by allergic contact dermatitis 8.3%. While stasis dermatitis presented in 7.5% and 7 cases of phytophoto-dermatitis. In Rockwood's series (1949) eczema was presenting complaint in 8.8% and contact dermatitis in 6.5%.¹⁴

Pigmentary disorders: Vitiligo was seen in 5 cases while 12 females presented with pressure leucoderma over the waistline. Chopra et al observed only 2 cases of Vitiligo in his study of 214 patients.³

Papulosquamous disorders: Psoriasis forms the major part with a total of 12 cases and 2 cases of hypertrophic lichen planus. Findings in our study are consistent with those of Sayal et al.⁷

Vesiculobullous disorders: Bullous pemphigoid was observed in 6 cases, 2 males and 4 females. Pemphigus vulgaris observed in one case. The incidence of Bullous pemphigoid is much greater in 7th and 8th decade.

Cutaneous malignancies: Basal cell carcinoma seen in 4 cases while squamous cell ca in 2 cases. Sayal et al reported single case of skin malignancy while Gilchrest et al reported a higher incidence of 4.4%. Julian Verbov reported 9.4% out of 170 cases.¹¹ The incidence is much higher in western studies because of less UV rays induced damage in pigmented skin.¹⁵

Systemic illnesses: The frequency of patients having systemic illnesses with cutaneous presentations accounted for 38.3%. Diabetics were 17.5%, hypertension 10%, COPD and parkinsonism in 3.3% each. Fernandez et al observed 35% patients with systemic ailments in which diabetics were 9% followed by hypertension, anaemia, asthma and IHD.¹⁰

Sayal et al encountered 49.7% with systemic illnesses, hypertension 14.3%, diabetes 12.8%, IHD 5.3%.⁷ A single old lady of carcinoma cervix undergoing radiotherapy was also there.

Table 1: Age and sex distribution of the study population (n=120)

Age group (years)	Males	Females	Total	Percentage
60-65	52	16	68	56.7
66-70	16	8	24	20
71-75	12	4	16	13.3
76-80	6	1	7	5.8
>80	2	3	5	4.2
Total	88	32	120	100

Table 2: Common geriatric dermatological conditions

Condition	Males	Females	Total	Percentage
Wrinkles	78	19	97	80.8
Pruritus	65	21	86	71.7
Guttate hypomelanosis	39	9	48	40
Lentigenes	36	11	47	39.2
Cherry angioma	34	8	42	35
Fungal infections	26	11	37	30.8
Seborrheic Keratosis	23	13	36	30
Skin tags	21	7	28	23.3
Xerosis	22	6	28	23.3
Senile comedones	15	6	21	17.5
Actinic Keratosis	13	6	19	15.8
Senile purpura	4	1	5	4.2
Vitiligo	4	1	5	4.1

Table 3: Conditions causing pruritus in the study group

Condition	Number	Percentage
Fungal infections	31	25.8
Eczemas	28	23.3
Xerosis	21	17.5
Papulosquamous	11	9.1
Scabies	5	4.1
Miscellaneous	13	10.8

Table 4: Common benign neoplastic conditions in study group

Condition	Males	Females	Total	Percentage
Seborrheic Keratosis	23	13	36	30
Lentigenes	36	11	47	39.1
Actinic Keratosis	13	6	19	15.8
Acrochordans	21	7	28	23.3
Cherry Angiomas	34	8	42	35
Keratoacanthoma	0	1	1	0.8

Table 5: Specific dermatological condition in geriatric age group

Condition	Males	Females	Total	Percentage
Infection	36	17	53	44.2
Eczemas	27	11	38	31.7
Papulosquamous	12	2	14	11.7
Pigmentary	4	13	17	14.2
Blistering diseases	4	5	9	7.5
Malignancies	4	3	7	5.8
Systemic disease	34	12	46	38.3

Table 6: Systemic diseases associated with cutaneous presentation in study group

Medical condition	Males	Females	Total	Percentage
Diabetes Mellitus	14	7	21	17.5
Hypertension	9	3	12	10
Ishaemic Heart Disease	2	0	2	1.7
Asthmatic	3	1	4	3.3
Parkinsonism	4	0	4	3.3
Hypertthyroidism	1	0	1	0.8
Rheumatoid Arthritis	1	0	1	0.8
Cervical carcinoma	0	1	1	0.8
Total	34	12	46	38.3

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