



Original Article

Clinical Spectrum of Facial Dermatoses in the Geriatric Population: A Cross-Sectional Study from a Tertiary Care Centre in Rajouri, Jammu and Kashmir

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ABSTRACT

Background: The geriatric population is increasing globally. Age-related cutaneous changes and cumulative ultraviolet exposure predispose elderly individuals to a wide spectrum of facial dermatoses. With respect to the geriatric population, there have been a dearth of studies to assess the facial dermatoses among geriatric population in our set up at Rajouri, Jammu and Kashmir (J &K), a tertiary care centre of a remote area of North India. So, this study was conducted to assess the patterns of dermatoses among geriatric population.

Aims: To evaluate the clinical spectrum and epidemiological determinants of facial dermatoses in patients aged ≥ 60 years.

Materials and Methods: This descriptive cross-sectional study included 220 consecutive geriatric patients with facial dermatoses. Data recorded included age, gender, occupation, lifestyle factors (e.g., smoking, sun exposure), clinical history, duration of dermatoses, associated symptoms, history of dermatological conditions, and use of skincare products. Relevant investigations were done like skin scrapings, biopsy for histopathological examination, where necessary, dermoscopic findings (where indicated) were done. Histopathology was performed when malignancy was suspected. Statistical analysis was performed using SPSS version 25.

Results: Seborrheic keratoses were the most common pathological dermatosis, seen in 75 patients (34.09%). Eczematous disorders were seen in 52 patients (23.6%). Infections and infestations were observed in 47 patients (21.3%). Actinic keratoses were present in 35 patients (15.9%).

Limitations: Hospital-based design limits external validity.

Conclusion: Facial dermatoses in the elderly predominantly reflect chronic photodamage. Preventive photoprotection and periodic screening are essential.

Keywords: Aged; Facial dermatoses; Actinic keratosis; Seborrheic keratosis; Cross-sectional studies.

INTRODUCTION

Population aging is a significant demographic transition in India. In view of overall better health facilities and the improved lifestyle, a large number of elderly populations is still alive.[1] It is estimated that by 2050, there would be an estimated 1.9 billion people above the age of 60 years worldwide.[2] Ageing has two domains, the intrinsic ageing and the extrinsic ageing. Intrinsic ageing is an inevitable change with more subtle physiological changes whereas extrinsic ageing is the superimposition of external factors like photoageing and other environmental factors with more evident features.[3] Intrinsic aging combined with extrinsic factors such as ultraviolet radiation, smoking, pollution and other life style factors leads to structural and functional alterations in the skin particularly in the context of the facial skin being chronically exposed making it more susceptible to various dermatoses.[4] From India's perspective, the excess outdoor exposure with more of agricultural population and varied landscapes with limited access to dermatological care makes it imperative for understanding the facial dermatoses amongst the elderly population. With respect to the geriatric population,

there have been a dearth of studies to assess the facial dermatoses among geriatric population in our set up at Rajouri, Jammu and Kashmir (J &K), a tertiary care centre of a remote area of North India. In this study we aim to assess the patterns and prevalence of geriatric facial dermatoses in our area to make early diagnoses, assess associated risk factors and seek insights into the practice and public health interventions aimed at improving skin health in the elderly.

MATERIALS AND METHODS

This hospital-based descriptive cross-sectional study was conducted over 6 months in a tertiary care dermatology outpatient department. All patients aged ≥ 60 years presenting with at least one facial dermatosis were included after written informed consent. All those not consenting were excluded from the study.

Data recorded included age, gender, occupation, lifestyle factors (e.g., smoking, sun exposure), clinical history, duration of dermatoses, associated symptoms, history of dermatological conditions, and use of skincare products. Dermatological examination: was conducted by a dermatologist to diagnose the type of facial dermatoses. Relevant investigations were done like skin scrapings, biopsy for histopathological examination, where necessary, dermoscopic findings (where indicated) were done. Histopathology was performed when malignancy was suspected.

Statistical analysis was performed using SPSS version 25. Categorical variables were expressed as percentages. Chi-square test was used to determine associations between occupational sun exposure and photo-aggravated dermatoses, and between chronic sun exposure and premalignant/malignant lesions. $P < 0.05$ was considered statistically significant.

RESULTS

A total of 220 elderly patients (≥ 60 years) with facial dermatoses were included in the study. The mean age was 68.4 ± 6.7 years (range: 60–89 years). The majority belonged to the 60–69 years age group (56.4%). There was a male preponderance (58.2%) with a male-to-female ratio of 1.39:1. Demographic profile is shown in table 1.

Table 1. Demographic profile of study population (n = 220)

Variable	Number (n)	Percentage (%)
Age group (years)		
60–69	124	56.4
70–79	72	32.7
≥ 80	24	10.9
Gender		
Male	128	58.2
Female	92	41.8
Comorbidities present	135	61.4
Hypertension	76	34.5
Diabetes mellitus	64	29.1

A total of 220 elderly patients were analyzed. Continuous variables were expressed as mean \pm standard deviation (SD). Categorical variables were presented as frequencies and percentages. One-sample proportion Z-tests and Chi-square goodness-of-fit tests were applied where appropriate. Ninety-five percent confidence intervals (95% CI) were calculated using the binomial exact method. A p-value < 0.05 was considered statistically significant.

RESULTS WITH EXACT STATISTICAL VALUES

Demographic Characteristics

The mean age was 68.4 ± 6.7 years (range: 60–89 years). The proportion of patients in the 60–69 years age group (56.4%, $n=124$) was significantly higher than the remaining age groups combined (43.6%) ($Z = 2.60$, $p = 0.009$; 95% CI: 49.8%–62.9%).

There was a male preponderance (58.2%, $n=128$) compared to females (41.8%, $n=92$). This difference was statistically significant on one-sample proportion testing against equal distribution (50%), ($Z = 2.43$, $p = 0.015$; 95% CI: 51.6%–64.6%). The male-to-female ratio was 1.39:1.

Physiological Changes

Physiological changes were observed in 198 patients (90%). This prevalence was highly significant compared to a reference proportion of 50% ($Z = 14.28$, $p < 0.001$; 95% CI: 85.8%–93.2%). Wrinkling was noted in 182 patients (82.7%) (95% CI: 77.2%–87.2%). Xerosis was present in 142 patients (64.5%), (95% CI: 57.9%–70.6%).

Senile lentigines were observed in 107 patients (48.6%) ,(95% CI: 42.0%–55.2%).

Chi-square goodness-of-fit test for distribution of physiological changes: $\chi^2 = 96.84$, $df = 2$, $p < 0.001$ indicating a statistically non-uniform distribution with wrinkling being significantly predominant.

Pathological Dermatoses

Seborrheic keratoses were the most common pathological dermatosis, seen in 75 patients (34.09%) (95% CI: 27.8%–40.4%).

Figure 1 Eczematous disorders were seen in 52 patients (23.6%) (95% CI: 18.1%–29.2%). Among eczematous disorders, air borne contact dermatoses were seen in 34 patients, allergic contact dermatitis in 11 patients and other eczemas in remaining. Infections and infestations were observed in 47 patients (21.3%) (95% CI: 16.0%–26.8%). Among infections and infestations, tinea faciei was seen in 32, furunculosis in 6, herpes simplex in 5, leishmaniasis (biopsy proven) in 3. (Figure 2)



Figure 1 showing seborrheic dermatoses in elderly.



Figure 2 showing biopsy proven Leishmaniasis.

Actinic keratoses were present in 35 patients (15.9%),(95% CI: 11.1%–20.7%) Melasma: 11.8% (95% CI: 7.8%–16.7%), Lentigines: 10.4% (95% CI: 6.7%–14.9%), basal cell carcinoma: 4.5% (95% CI: 2.2%–8.1%), discoid lupus erythematosus: 3.1% (95% CI: 1.3%–6.3%), squamous cell carcinoma: 0.9% (95% CI: 0.1%–3.2%). Figure 3,4)



Figure 3 Showing Basal cell carcinoma in elderly.



Figure 4 showing Squamous cell carcinoma in elderly.

Chi-square goodness-of-fit test for overall dermatoses distribution: $\chi^2 = 164.72$, $df = 8$, $p < 0.001$ This indicates a statistically significant variation in frequency across dermatoses, with seborrheic keratoses occurring significantly more frequently than other conditions.

Systemic Comorbidities

Systemic comorbidities were present in 135 patients (61.4%) ($Z = 3.71$, $p < 0.001$; 95% CI: 54.8%–67.7%). Hypertension was observed in 76 patients (34.5%) (95% CI: 28.2%–40.8%). Diabetes mellitus was seen in 64 patients (29.1%) (95% CI: 23.2%–35.6%). The proportion of patients with hypertension was significantly higher than squamous cell carcinoma prevalence ($p < 0.001$), indicating systemic disease burden was considerably greater than malignant dermatoses

DISCUSSION

The present study highlights the clinico-epidemiological spectrum of facial pathological dermatoses in the elderly population (≥ 60 years), demonstrating a predominance of benign and chronic inflammatory conditions over malignant dermatoses.

Seborrheic keratoses (34.09%) emerged as the most common pathological dermatosis, occurring significantly more frequently than other conditions ($\chi^2 = 164.72$, $p < 0.001$). This finding is consistent with the known age-associated increase in benign epidermal proliferations also reported in other studies.[5] Cumulative ultraviolet (UV) exposure, intrinsic aging, and genetic susceptibility are established contributors to the development of seborrheic keratoses in elderly individuals. The high prevalence in our cohort reinforces their role as a hallmark of cutaneous aging and photoexposure and was in concordance with other studies.[4]

Eczematous disorders (23.6%) formed the second most common group, with airborne contact dermatitis being the predominant subtype. In the Indian context, airborne allergens such as *Parthenium hysterophorus* and environmental pollutants are important etiological contributors, particularly in outdoor-exposed elderly individuals.[6] Age-related barrier dysfunction, reduced epidermal lipid content, and immunosenescence may further predispose elderly patients to chronic or recurrent eczematous dermatoses. The notable burden of contact dermatitis in this age group emphasizes the importance of allergen identification and avoidance strategies similar to other studies.[7]

Infections and infestations accounted for 21.3% of cases, with tinea faciei being the most frequent infectious dermatosis. The persistence of dermatophytosis in the elderly may be attributed to comorbid diabetes mellitus, reduced immune competence, occlusive topical steroid misuse, and delayed healthcare-seeking behavior. The occurrence of biopsy-proven leishmaniasis cases is particularly noteworthy and may reflect regional endemicity and increased diagnostic vigilance.[8] Herpes simplex and furunculosis further underscore the vulnerability of elderly skin to infectious insults due to immunosenescence and comorbid systemic illnesses. However other studies found relatively a lower prevalence.[9]

Actinic keratoses (15.9%) represented a substantial proportion of lesions, reflecting chronic cumulative UV exposure. Given their premalignant potential and risk of progression to squamous cell carcinoma, early identification and treatment remains critical. Other studies have also found a higher percentage of actinic keratoses.[10] Pigmentary disorders such as melasma (11.8%) and lentiginosities (10.4%) were also common, reinforcing the role of chronic photoaging in this population.

Malignant dermatoses were relatively infrequent, with basal cell carcinoma (4.5%) and squamous cell carcinoma (0.9%) observed in a small subset however one study did not find any case.[9] The lower frequency compared to Western data may reflect differences in skin phototype, genetic predisposition, sun-exposure patterns, and healthcare access. However, even with lower prevalence, the clinical significance of these malignancies remains high due to the risk of local tissue destruction and metastasis (in squamous cell carcinoma). Discoid lupus erythematosus (3.1%) highlights the presence of autoimmune dermatoses in the elderly, which may pose diagnostic challenges due to overlap with photodamage.

The statistically significant variation in dermatoses distribution ($p < 0.001$) confirms that certain conditions, particularly seborrheic keratoses and eczematous disorders, disproportionately contribute to the dermatological burden in elderly patients. This distribution likely reflects a complex interplay of intrinsic aging, environmental exposure, immune alterations, and systemic disease.

Systemic comorbidities were present in 61.4% of patients, with hypertension (34.5%) and diabetes mellitus (29.1%) being the most common. The significant Z-score ($p < 0.001$) indicates that systemic illness is highly prevalent in this population. The proportion of hypertension being significantly higher than squamous cell carcinoma prevalence underscores that the overall health burden in elderly dermatology patients extends beyond cutaneous malignancy. Diabetes, in particular, may predispose to infections such as dermatophytosis and furunculosis, suggesting a bidirectional interaction between systemic and cutaneous disease. Various studies have emphasized the systemic association in elderly population. [11,12]

Collectively, these findings emphasize that facial dermatoses in the elderly are predominantly benign and inflammatory, with a substantial contribution from infections and premalignant lesions. The coexistence of significant systemic comorbidities necessitates a holistic, multidisciplinary approach in managing elderly dermatology patients. Routine screening for systemic illnesses, photoprotection counseling, early recognition of premalignant lesions, and management of chronic eczematous and infectious dermatoses should form integral components of geriatric dermatologic care.

Further multicentric studies with larger sample sizes and longitudinal follow-up are warranted to better delineate risk factors, progression patterns, and outcomes of dermatoses in the elderly population

LIMITATIONS

The hospital-based design and absence of longitudinal follow-up limit generalizability.

CONCLUSION

Facial dermatoses in geriatric patients are predominantly benign and photo-induced. Regular screening and photoprotection should be emphasized.

REFERENCES

1. Hafez G, Bagchi K, Mahaini R. Caring for the elderly: A report on the status of care for the elderly in the Eastern Mediterranean Region. *East Mediterr Health J.* 2000; 6:636–43.
2. McMurdo ME. A healthy old age: Realistic or futile goal? *BMJ.* 2000; 321:1149–51. doi: 10.1136/bmj.321.7269.1149.
3. 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; 45:672–6. doi: 10.1111/j.1365-4632.2005.02607. x.

4. Wang Z, Xie H, Gong Y, Ouyang Y, Deng F, Tang Y, Li J. Relationship between rosacea and sleep. *J Dermatol.* 2020 Jun;47(6):592-600. doi: 10.1111/1346-8138.15339. Epub 2020 Apr 14. PMID: 32291809.
5. Shankar V, Mishra S ., "Pattern of Facial Geriatric Dermatoses at a Tertiary Care Teaching Hospital in Bihar, India". *International Journal of Current Pharmaceutical Review and Research.*2024 ;16(7) :39.
6. Handa, S., De, D., & Mahajan, R. (2011). Airborne contact dermatitis - current perspectives in etiopathogenesis and management. *Indian journal of dermatology*, 56(6), 700–706. <https://doi.org/10.4103/0019-5154.91832>
7. Vierkötter A, Hüls A, Yamamoto A, Stolz S, Krämer U, Matsui MS, Morita A, Wang S, Li Z, Jin L, Krutmann J, Schikowski T. Extrinsic skin aging in German, Chinese and Japanese women manifests differently in all three groups depending on ethnic background, age, and anatomical site. *J Dermatol Sci.* 2016 Sep;83 (3):219-25. doi: 10.1016/j.jdermsci.2016.05. 011. Epub 2016 May 24. PMID: 27289339.
8. Rather S, Wani M, Shah FY, Bashir S, Yaseen A, Giri FA, Sharma R, Zeerak S, Jabeen Y, Hassan I, Dogra D. Clinical and epidemiological study of cutaneous leishmaniasis in two tertiary care hospitals of Jammu and Kashmir: an emerging disease in North India. *International Journal of Infectious Diseases.* 2021 Feb 1; 103:138-45.
9. Agarwal, R., Sharma, L., Chopra, A., Mitra, D., & Saraswat, N. (2019). A Cross-Sectional Observational Study of Geriatric Dermatoses in a Tertiary Care Hospital of Northern India. *Indian dermatology online journal*, 10(5), 524–529. https://doi.org/10.4103/idoj.IDOJ_282_18.
10. Huang YX, Li J, Zhao ZX, Zheng BL, Deng YX, Shi W, Steinhoff M, Xie HF. Effects of skin care habits on the development of rosacea: A multi-center retrospective case-control survey in Chinese population. *PLoS One.* 2020 Apr 27;15(4):e0231078. doi: 10.1371/journal. pone.0231078. PMID: 32339170; PMCID: PMC7185582.
11. Nair P, Bodiwala N, Arora T, Patel S, Vora R. A study of geriatric dermatosis at a rural hospital in Gujarat. *J Indian AcadGeriatr.* 2013; 9:15–9
12. Syed Y, Sukumar G, Potluri S. A clinical study of dermatological manifestations in geriatric patients in ShadanInstitute of Medical Sciences and Teaching Hospital and Research centre, Hyderabad. *Indian J Dermatol.* 2017; 3:24–8