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Original Research Article

Clinical and management profile of dermatoses in geriatric population of North Kashmir: An observational study

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Abstract

Background: Dermatoses in the geriatric population are an emerging concern due to increasing life expectancy and resultant elderly population. This study aims to evaluate the prevalence, types, co-morbidities, quality of life impact, and management of dermatoses in the geriatric age group in a hospital setting in this part of North India.

Materials and Methods: A total of 500 geriatric patients aged 60-92 years (mean age 68.7) were examined over one year. Data were collected on demographics, types of dermatoses, co-morbidities, quality of life using the Dermatology Life Quality Index (DLQI), and treatments administered.

Results: The study included 290 males and 210 females. A total of 710 dermatoses were identified. Pruritus and xerosis together affected 38%, with xerosis in 22% of patients. Infectious dermatoses and infestations were found in 32% of patients, with fungal infections being the most common (14%). Eczematous dermatoses were present in 26% of patients, with seborrheic dermatitis (10%) being the most prevalent. Papulosquamous disorders were seen in 14%, including psoriasis (8%) and lichen planus (6%). Benign lesions, pigmentary disorders and photo-dermatoses were found respectively in 12%, 10% and 6% patients, whereas autoimmune bullous dermatosis and malignant lesions were found in 2% each. Co-morbidities included hypertension and diabetes mellitus, found respectively in 40% and 30% patients. DLQI indicated moderate to severe impact on quality of life in 54% of patients.

Conclusion: This study highlights the diverse dermatological conditions in the geriatric population and underscores the need for tailored dermatological care to improve the quality of life in this age group.

Keywords: Geriatric dermatoses, Prevalence, Quality of life, Dermatology, Kashmir, North India, Co-morbidities

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1. Introduction

Dermatoses in the geriatric population are a significant and growing concern, particularly in regions experiencing a demographic shift towards an older age structure.[1] The elderly population is more susceptible to various skin disorders due to physiological changes in the skin associated with aging, including decreased skin barrier function, reduced immune response, and impaired wound healing.[2-4]

Additionally, the presence of multiple co-morbidities and the use of various medications can complicate the clinical presentation and management of skin conditions in this age group.[5,6]

Kashmir in North India, with its diverse climate and socio-economic conditions, presents unique challenges and patterns in the prevalence and types of dermatoses affecting the elderly. Despite the growing recognition of the importance of dermatological health in the geriatric population, there is a paucity of comprehensive epidemiological data from this region. Understanding the specific dermatological needs and conditions prevalent among the elderly in this part of the country is crucial for developing effective management strategies and improving their quality of life.

This study seeks to comprehensively characterize the clinical profile of dermatological disorders among the geriatric population in a tertiary care hospital setting within

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the Kashmir region. By systematically evaluating the clinical spectrum, demographic patterns of dermatoses, alongside their associations with comorbid systemic conditions, quality of life implications, and current therapeutic approaches, this work aims to elucidate the unique dermatological burden faced by elderly individuals in this geographically distinct area. The findings are anticipated to provide critical insights for optimizing clinical management, advocating for specialized geriatric dermatological services, and in forming public health strategies to address unmet needs in this vulnerable population. Furthermore, the study underscores the imperative for interdisciplinary collaboration and policy reforms to enhance resource allocation, foster targeted prevention programs, and improve healthcare delivery tailored to the dermatological health of aging communities in Kashmir.

2. Materials and Methods

2.1. Study design

This hospital-based observational (cross-sectional) study was conducted over a one-year period from July 2023 to August 2024 in the Department of Dermatology, Government Medical College Baramulla, J&K. The study aimed to evaluate the prevalence, types, co-morbidities, impact on quality of life, and treatment modalities of dermatoses in the geriatric population.

2.2. Study population

The study included 500 geriatric patients aged 60 years and above, who presented with dermatological complaints during the study period. All eligible patients were approached for participation in the study.

Inclusion criteria were: Age 60 years or older, willingness to participate and provide informed consent, presence of one or more dermatological conditions.

2.3. Data collection

Data were collected through structured interviews, clinical examinations, and review of medical records. A detailed history was taken, including demographic information, duration and type of skin conditions, and associated symptoms. Clinical examination was performed to identify and document the types of dermatoses.

2.5. Diagnosis and classification

Dermatological diagnoses were made based on clinical examination and, where necessary, supported by laboratory investigations such as skin scrapings, cultures, and biopsy. Conditions were classified into various categories, including infectious dermatoses, eczematous dermatoses, papulosquamous disorders, pruritus and xerosis, benign and malignant tumors, vascular dermatoses, and bullous disorders.

2.6. Co-morbidities assessment

Information on co-morbidities such as diabetes mellitus, hypertension, and cardiovascular diseases was collected from patient interviews and medical records.

2.7. Quality of life assessment

The impact of dermatological conditions on the patients' quality of life was assessed using the Dermatology Life Quality Index (DLQI), a validated questionnaire that measures the effect of skin disease on patients' lives.

2.8. Treatment and management

Details of treatments prescribed were recorded, including topical and systemic therapies. Data on the use of topical corticosteroids, emollients, antifungal agents, and systemic treatments for conditions like psoriasis, allergic dermatoses and bullous disorders were specifically noted.

2.9. Data analysis

Data were analyzed using descriptive statistics. The prevalence of various types of dermatoses was calculated as percentages. Co-morbidities, quality of life impact, and treatment modalities were similarly analyzed. Results were presented in tables to provide a clear and organized view of the findings.

We ensured that the study subjects have a choice for voluntary participation and patient confidentiality and human subject protection was ensured. Ethical guidelines of the declaration of Helsinki of 1975, as revised in 2000 were followed in all aspects of the study.

3. Results

3.1. Demographic profile

Out of the 500 geriatric patients studied, 290 were males and 210 were females, giving a male-to-female ratio of 1.38:1. The age distribution ranged from 60 to 92 years, with a mean age of 68.7 years (**Table 1**).

Table 1: Demographic profile

Parameter	Number of Patients	Percentage
Total Patients	500	100%
Males	290	58%
Females	210	42%
Age Range (years)	60 – 92	-
Mean Age (years)	68.7	-

3.2. Prevalence and types of dermatoses

The study identified a total of 710 dermatoses among the 500 patients, with some individuals presenting multiple conditions. Combined pruritus and xerosis were the predominant symptoms at presentation (190/710 or 38%), while, xerosis alone observed in 110 of these cases (22%).

Infectious dermatoses and infestations were found in 160 patients (32%), with fungal infections being the most common (14%), followed by bacterial infections (8%), viral infections (6%), and infestations (4%), (**Figure 1,3** and **4**). Eczematous dermatoses were noted in 130 patients (26%), including seborrheic dermatitis (10%), nummular eczema (6%), and contact dermatitis (6%). Papulosquamous disorders were seen in 70 patients (14%), with psoriasis (8%) and lichen planus (6%) being the primary conditions observed. Benign tumors including actinic keratosis, Seborrheic keratosis, Acrochordons, Cherry Angiomas, Dermatosis Papulosa Nigra were seen in 60 patients (12%). Pigmentary dermatoses were found in 50 (10%) patients, including 6% and 4% cases of hypo and hyperpigmentation respectively. Photo-dermatosis was found in 30 (6%) patients, while autoimmune bullous diseases and malignant lesions (**Figure 2**) in 10 (2%) patients each, as elaborated in **Table 2**.

Figure 1: Elderly male with herpes zoster ophthalmicus

Figure 2: Elderly female with basal cell carcinoma on ala of nose.

Figure 3: Elderly female with botryomycosis over mandibular area

Table 2: Prevalence and types of dermatoses

Type of Dermatoses group	Dermatoses	Number of Patients (Percentage)	Total (Percentage) [n=710]
Infections and infestations	Fungal Infections	70 (14%)	160 (32%)
	Bacterial Infections	40 (8%)	
	Viral Infections	30 (6%)	
	Scabies & Pediculosis	20 (4%)	
Eczematous Dermatoses	Seborrheic Dermatitis	50 (10%)	130 (26%)
	Nummular Eczema	30 (6%)	
	Contact Dermatitis	30 (6%)	
	Stasis Eczema	10 (2%)	
	Lichenified lesions (LSC, NP, LA)	10 (2%)	
Papulosquamous Disorders	Psoriasis	40 (8%)	70 (14%)
	Lichen Planus	30 (6%)	
Benign lesions	AK, SK, Acrochordons, Cherry Angiomas, DPNs	60 (12%)	60 (12%)
Pigmentary dermatosis	Hypopigmentation (Vitiligo, IGH etc)	30 (6%)	50 (10%)
	Hyperpigmentation (Solar Lentigenes, MA, PIH etc)	20 (4%)	
Photo-dermatoses	Senile Comedones, Photodamage	30 (6%)	30 (6%)
Autoimmune Bullous Disorders	Bullous Pemphigoid, Pemphigus	10 (2%)	10 (2%)
Malignant Tumors	BCC	07 (1.4%)	10 (2%)
	SCC	03 (0.6%)	
Total dermatoses			710

LSC: Lichen Simplex Chronicus; NP: Nodular Prurigo; LA: Lichen amyloidosis;
AK: Actinic Keratosis; SK: Seborrheic Keratosis; DPN: Dermatosis Papulosa Nigra; BCC: Basal Cell carcinoma; SCC: Squamous Cell Carcinoma;
IGH: Idiopathic Guttate Hypo-melanosis; MA: Macular Amyloidosis; PIH: Post Inflammatory Hyperpigmentation.

Figure 4: Tinea pedis with Onychomycosis in an elderly male

3.3. Comorbidities

The study also documented the presence of various co-morbidities among the patients. Hypertension and Type 2 Diabetes mellitus were found in 200 (40%), 150 (30%) patients respectively (**Table 3**).

Table 3: Comorbidities

Co-morbidity	Number of Patients	Percentage
Hypertension	200	40%
Diabetes Mellitus	150	30%

3.4. Quality of life

The Dermatology Life Quality Index (DLQI) indicated that 270 patients (54%) reported a moderate to severe impact on their quality of life due to their skin conditions, while 230 patients (46%) experienced no or minimal impact (**Table 4**).

Table 4: Quality of life (DQLI)

Impact on Quality of Life	Number of Patients	Percentage
Moderate to Severe Impact	270	54%
No or Minimal Impact	230	46%

3.5. Treatment and management

The most common treatments included topical corticosteroids (60%), emollients (40%), and antifungal agents (22%). Systemic treatments were required for 80 patients (16%), primarily those with psoriasis (10%) and bullous disorders (6%) (**Table 5**).

Table 5: Treatment and management

Treatment	Number of Patients	Percentage
Topical Corticosteroids	300	60%
Emollients	200	40%
Antifungal Agents	110	22%

4. Discussion

The present study provides a comprehensive clinico-epidemiological profile of dermatoses in the geriatric population in Kashmir in North India, based on data collected over a one-year period from July 2023 to August 2024. Our findings highlight the significant burden of skin diseases in the elderly and underscore the importance of targeted dermatological care for this age group.

The male-to-female ratio in our study was 1.38:1, with a mean age of 68.7 years. This demographic distribution is consistent with other studies in similar settings, indicating a higher prevalence of dermatological conditions among males. The age range of 60 to 92 years reflects the diverse age group within the elderly population, all of whom are vulnerable to a variety of skin disorders due to age-related changes and comorbid conditions. Similar demographic trends were observed by Ajani et al and Singhal et al, and other studies, highlighting the broad spectrum of dermatological issues affecting this population.[7-10]

Our study identified 710 dermatoses among 500 patients, with some individuals presenting multiple conditions. Pruritus and xerosis together were the most common finding, present in 38% of patients, with xerosis contributing significantly in 22% cases. This was followed by infectious dermatoses, found in 32% of patients, with fungal infections being the predominant type. This high prevalence of infections could be attributed to the compromised immune function in the elderly, decreased hygiene and selfcare.[11]

Eczematous dermatoses, including seborrheic dermatitis, nummular eczema, and contact dermatitis, were also prevalent, affecting 26% of patients. Papulosquamous disorders such as psoriasis and lichen planus were seen in 14% of patients, highlighting the chronic nature of these conditions in the elderly. Darjani et al also reported similar findings, emphasizing the prevalence of chronic skin conditions in older adults.[9,10,12] Benign tumors including Actinic keratosis, Seborrheic keratosis, Acrochordons, Cherry Angiomas, Dermatosis Papulosa Nigra were seen in 12% patients, while malignant tumors, though less frequent, were still notable, with basal and squamous cell carcinomas identified in 2% of patients. All these conditions can severely impact the quality of life, as evidenced by our DLQI results.[11,13]

Pigmentary dermatoses, photo-dermatosis and autoimmune bullous diseases were also documented in 10%, 6% and 2% patients respectively, underscoring the diverse range of skin conditions affecting the elderly.[14,15] Similar observations were made in various other studies available in the literature, reinforcing the need for comprehensive dermatological care in this population.[1-3]

The presence of co-morbidities such as hypertension (40%) and diabetes mellitus (30%), in our study population is indicative of the complex health challenges faced by the elderly. These co-morbid conditions not only predispose patients to various skin disorders but also complicate their management. Agarwal et al highlighted the interplay between systemic diseases and dermatological conditions, which complicates treatment strategies.[2]

The Dermatology Life Quality Index (DLQI) revealed that 54% of patients experienced a moderate to severe impact on their quality of life due to their skin conditions. This finding underscores the substantial burden of dermatological diseases on the daily lives of elderly patients, affecting their physical, psychological, and social well-being. Similar impacts on quality of life were documented by Kandwal et al, who noted the significant psychological and social burdens imposed by skin diseases in the elderly.[16]

Topical corticosteroids (60%), emollients (40%), and antifungal agents (22%) were the most used treatments, reflecting standard therapeutic approaches for managing common geriatric dermatoses.[17] Systemic treatments were required for 16% of patients, primarily those with psoriasis (10%) and bullous disorders (6%), indicating the need for more aggressive therapy in certain chronic and severe conditions. These findings align with the treatment patterns observed by Ajani et al and Singhal et al, who also reported high utilization of topical treatments and the necessity of systemic therapies for more severe conditions.[7,8]

5. Limitations

This study is limited by its hospital-based design, which may not fully represent the broader community. Additionally, the sample size of 500 patients, while adequate for initial observations, may limit the generalizability of the findings. Future studies with larger, more diverse populations and multi-center involvement are recommended to validate and extend these results.

6. Conclusion

Our study highlights the diverse and significant burden of dermatological conditions in the geriatric population in Kashmir in North India. The high prevalence of infectious and eczematous dermatoses, coupled with the substantial impact on quality of life, emphasizes the need for targeted dermatological care and management strategies tailored to the elderly. Further research is warranted to explore specific interventions that can improve outcomes and enhance the quality of life for this vulnerable population.

7. Ethical Considerations

The study protocol was approved by the Institutional Review Board (IRB) of the participating institution with ref. no. GMC/BLA/IRB/2024/Cert/05**.** All participants provided written informed consent prior to enrolment in the study. Participants' personal information was kept confidential, and data were anonymized for analysis and reporting purpose.

8. Patient Consent

Patient consent has been taken prior from the submission of the article for the publication.

9. Conflict of Interest

None.

10. Source of Funding

None.

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