

Pattern of Skin Diseases in Geriatric Population: Our Year-Long Experience from Nepal

Abstract

Introduction: The average life span has increased by about two decades in Nepal in last 30 years. With increasing longevity, geriatric health care is gaining much more importance. The statistical data regarding the geriatric skin disorders in Nepalese population is limited. The aim of this study to look for the patterns of skin diseases in the geriatric population of Nepal. **Methodology:** This is a retrospective, descriptive study where we reviewed the database of patients visiting the dermatology outpatient department of multispeciality teaching hospital in Nepal from August 2016 to July 2017. All patients from the age of 60 and above were included in the study. Data was analyzed using SPSS version 20. Chi square test was done where relevant. **Result:** Total of 918 patients were included in the study with mean age of 69 years. Most common presentation was that of dermatitis (32.2%) which was followed by infectious condition (29.4%), pruritus (7.4%), psoriasis (4.6%), urticaria (3.9%), miliaria (3.9%) and others. Among the dermatitis, 23% of the patients had hand or feet eczema and 23% had seborrheic dermatitis. Variability according to weather was noticed with in presentation of seborrheic dermatitis, dermatophytic infections, miliaria and herpes zoster. **Conclusion:** This study concludes that dermatitis, infections and pruritus are the most significant dermatological morbidities in our population. It highlights the need of zoster vaccine for our elderly population as it is not a part of the routine vaccination scheme in Nepal.

Keywords: *Dermatophytic infections, eczema, geriatric dermatology, herpes zoster, post herpetic neuralgia*

Introduction

The skin changes with age. These changes are attributed to intrinsic and extrinsic factors. The epidermal turnover rate of the skin slows with age. The epidermal synthesis of lipids and filaggrin decreases. This leads to decline in epidermal hydration and increased trans-epidermal water loss which results in dry and xerotic skin. The dry and xerotic skin does not provide an efficient epidermal barrier function. All these factors result in the geriatric skin being more susceptible to various dermatosis.

The average life span has increased by two decades in Nepal in last 30 years. An “ageing society” is defined as one where people aged 65 and older account for 7% of the population and an “aged society” is defined as one where population of people 65 and above account for 14% of the population. Nepal will be an “ageing society” by 2028 and an “aged society”

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by 2054.^[1] With increasing longevity, geriatric health care is gaining much more importance. The statistical data regarding the geriatric skin disorders in Nepalese population is limited. The aim of this study was to look for prevalence of geriatric skin diseases in Central Nepal.

Material and Methods

This was a retrospective, descriptive study conducted at department of dermatology in a multi-specialty hospital in central Nepal. Database of all patients who visited the dermatology out patient department (OPD) from August 2016 to July 2017 was reviewed. Ethical approval was obtained for this study from the Institutional Review Board (CMC-IRC/077/078-082). All patients from the age of 60 and above were included in the study. Data was analyzed using SPSS version 20. Chi square test was done where relevant.

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Results

Outpatient record of total 19,520 patients who visited the OPD was reviewed and of these 918 (4.7%) patients were in the geriatric age group. The male to female ratio was 420 (45.8%) and 498 (54.2%) respectively. The mean age of the patients was 69. Most of the patients (55.3%) were within the age group of 60-69 [Table 1]. The most common dermatosis seen were eczema (32.2%), followed by infections (29.4%), pruritus (7.4%), psoriasis (4.5%), miliaria (3.9%), urticaria (3.9%), lichen planus (3.1%), post herpetic neuralgia (PHN) (2.2%) and others [Table 1]. Among the infections, the most common infection was dermato-phytic infections (47%), followed by herpes zoster (HZ) (13%), scabies (6%), bacterial infection (5%), leprosy (3%) and others [Figure 1].

Among the eczematous presentations, most common presentation was of lichen simplex chronicus (LSC) followed by seborrheic dermatitis (SD) and hand and foot eczema. Three patients presented with cutaneous malignancy. Of these, 2 patients presented with basal cell carcinoma and 1 with squamous cell carcinoma. Variability depending on weather on the cutaneous presentation of disease was analyzed. More cases of eczema were recorded in winter, whereas more cases of infections and miliaria were recorded during summer months [Table 2]. Variability according to weather was noticed in presentation of SD, dermato-phytic infections, miliaria and HZ. SD and HZ presented significantly more in the winter months and dermato-phytic infections and miliaria presented significantly more in warmer summer months ($P < 0.05$). 52% cases of HZ were seen during the months of January, February and March. There was no significant difference in presentation of different diseases based on gender except of PHN [Table 3]. Male patients significantly had more PHN as compared to female patients ($P < 0.05$). There was slight male preponderance seen in occurrence of HZ, though it was not of statistical significance.

Discussion

A total of 4.7% of our patients were in the geriatric group. Eczema was the most common dermatosis in our study population. Other studies done in geriatric population have reported infectious disease as the most common dermatosis.^[2,3] Among the eczemas, the most common presentation was that of LSC, followed by SD and hand and foot eczemas. LSC is a neurodermatitis that may arise de novo or maybe secondary to other skin conditions. Patients in geriatric age group have increased predisposition to LSC due to worsening of pre-existing dermatosis. Neurodermatitis maybe secondary due to peripheral nerve damage that may happen with age.^[4] Elderly age is a known risk factor for SD. Decreased epidermal barrier function favors the growth of malassezia in the elderly. The elderly are also at an additional risk of SD due to several age related co-morbidities such as parkinsonism, depression, HIV-AIDS, malignancies and organ transplantation.^[5] In our study, we have not evaluated for these individual risk factors. We noted an expected increased presentation of SD during the winter season. Hand/foot eczema may have increased presentation in our socio-cultural context, as patients predominantly come from agricultural background

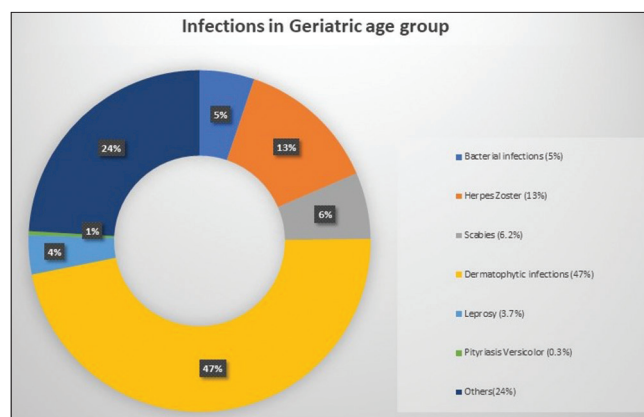


Figure 1: Common Infections in geriatric age group

Table 1: Age-Wise Cross Tabulation of Common Skin Diseases in Geriatric Age Group

	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100	Percentage
Eczema	91	50	84	27	29	11	2	2	296 (32.2%)
Infections	104	52	51	23	27	7	6	0	270 (29.4%)
Pruritus	18	19	19	7	1	1	2	1	68 (7.4%)
Psoriasis	11	9	13	5	2	2	0	0	42 (4.5%)
Miliaria	12	11	6	4	1	1	1	0	36 (3.9%)
Urticaria	10	11	7	3	3	1	0	1	36 (3.9%)
Lichen Planus	15	3	4	6	0	0	0	0	28 (3.1%)
Post herpetic Neuralgia	3	8	2	5	0	2	0	0	20 (2.2%)
Benign Age Related	1	1	3	2	1	0	0	0	8 (0.9%)
Nutritional	2	0	2	1	0	0	0	0	5 (0.5%)
Malignancy	1	1	1	0	0	0	0	0	3 (0.3%)
Others/Non specific	41	34	15	11	5	0	0	0	106 (11.5%)
Total	309	199	207	94	69	25	11	4	918

Table 2: Seasonal Distribution of Common Skin Diseases in Geriatric

	Summer (April-September)	Winter (October- March)
Eczema	115	181
Infections	145	125
Pruritus	34	34
Psoriasis	27	15
Miliaria	27	9
Urticaria	20	16
Lichen Planus	16	12
Post herpetic Neuralgia	10	10
Benign Age Related	5	3
Nutritional	1	4
Malignancy	1	2
Others/Non specific	41	65
	442	476

Table 3: Gender Distribution of Common Skin Diseases in Geriatric Age Group

	Male	Female
Eczema	134	162
Infections	136	134
Pruritus	26	42
Psoriasis	18	24
Miliaria	10	26
Urticaria	12	24
Lichen Planus	12	16
Post herpetic Neuralgia	14	6
Benign Age Related	4	4
Nutritional	4	1
Malignancy	2	1
Others/Non specific	48	58
Total	420	498

and are often involved in farming activities without proper hand/foot protection.

Among the skin infections, the most common presentation was that of dermatophytic infections. The geographical area where the study was conducted experiences tropical weather, which favors dermatophytic growth. Rampant use of over the counter topical corticosteroids is common in Nepal^[6] which has further increased the problem of tinea. Dermatophytic infections favor the summer months due to increased heat and humidity. The incidence of HZ increases dramatically with age after 50, with lifetime risk reaching 50% by the age of 85.^[7] Our study has reported the prevalence of HZ to be around 3.9%, which is higher than what was reported by previous study done in Nepal which had reported prevalence of 0.66%.^[8] The previous study was not exclusive to elderly population. We noted increased occurrence of HZ in months of January, February and March. Previous study done in Nepal has noted increased occurrence during months of March and April.^[8]

Some studies have demonstrated no effect of seasonality on herpes zoster,^[9] whereas others do. Studies done in tropical countries have noted increased incidence in cooler months,^[10] whereas studies done at higher latitudes have noted increased incidence in warmer months.^[11] There appears to be an effect of ambient temperature and humidity on HZ, which further needs to be elucidated. It might be partly attributable to the effect of seasons on the immune function of the body.^[12] Seasonal immunosuppression could lead to reactivation of latent virus. There was no significant gender difference in the occurrence of HZ in our study, though increased occurrence was noted in males. Post herpetic neuralgia (PHN) was another common complaint observed in our elderly population. Complications of HZ is seen in about 14% of the patients who have the disease.^[13] For our study, we diagnosed patients to have PHN, if pain persisted for more than 3 months after initial diagnosis of HZ. Previous studies have reported that after 50 years, 20% of patients get PHN after HZ.^[14] Previous studies have noted that female gender poses an additional risk for HZ.^[14] We noted that in our study, there was significantly higher prevalence of males with HZ. Since, our study was a retrospective study it would be difficult to comment, if in our population males were at greater risk of developing HZ. Till date, immunization against HZ is not easily available in Nepal, but both HZ and PHN are common disease burden in our elderly population as noted in our study.

Immunization against zoster can reduce incidence of HZ by 51.3% and incidence of post herpetic neuralgia by 66.4%.^[15] Cost – effectiveness studies have shown that vaccination against zoster is a cost-effective measure.^[16] Introducing varicella vaccine is recommended for the protection of our elderly population.

Pruritus was the third most common complaint in our patients. Pruritus in elderly can be attributed to four main factors;

- (1) loss of barrier function of the skin;
- (2) immune-senescence of the skin resulting in increased pro-inflammatory state of the skin;
- (3) neuro-degenerative conditions;
- (4) adverse effect of multiple drugs due to several comorbidities that may be present in elderly.^[18]

Since, ours was a retrospective study, we couldn't identify if the patients were concurrently taking any drugs that could exacerbate pruritus. Increasing awareness amongst elderly population on general skin care and moisturizing could decrease the prevalence of pruritus.

Nepal's current national prevalence of leprosy is 0.99/10,000 population. Our study shows 3% prevalence of leprosy in our study. Since the geographic location of our study center, borders several districts, which have prevalence of more than 1/10,000 cases of leprosy, hence, we might have noted high prevalence in our study.^[19] We noted only 3 patients of cutaneous malignancy in our study.

Our study site is located close to a national referral center for malignancies, which might have contributed to lower prevalence in our study, as patients prefer to go to the referral center for suspicious lesions.

Conclusion

This study summarizes the common cutaneous lesions in the elderly population in Central Nepal. It highlights the importance of introducing zoster vaccination for our elderly population, as there is a high burden of zoster and post herpetic neuralgia. We are still seeing cases of leprosy in our elderly population and this would be important from the policy making perspective. A larger study may be even more helpful in introducing public health measures.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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