

ORIGINAL RESEARCH

Epidemic like Scenario of scabies during covid 19 pandemic: Observation at tertiary care centre of Northern Karnataka

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ABSTRACT

Background: The COVID-19 pandemic emerged in conjunction with changes in many areas of life that need to be reassessed and adjusted. These changes are also reflected in dermatology outpatient and inpatient clinics. Lay man may perceive scabies as a simple skin disease that causes itching. However, sometimes it may be life-threatening disease that can cause serious complications and death due to secondary bacterial infections and septicemia.

Objective: To study the socio demographic and cutaneous manifestations of scabies epidemic during covid19 pandemic.

Material and methods: The present cross sectional observational study was carried out at Department of Dermatology, KBN teaching and General Hospital Kalaburagi which includes 200 clinical diagnosed cases of scabies.

Results: Out of these 200 cases, majority were from 21-30 years age group (29%) followed by age group from 11-20 years (26%), age group 1-10 years (18%). Males outnumbered females with 63% and remaining 37% were females. 94.5% of the patients were from lower socioeconomic status. Among the 200 patients 44.5% were students, 21.5% were housemakers, 13.5% were labourer, 9.5% were job and 3.5% were self-employed. On examination, upper limbs were commonly involved (86.5%) followed by Inter digital cleft (68%), Genitals (47%), Abdomen (37%).

Conclusion: In our study most commonly affected age group was 21-30 years (29%) followed by 11-20 years (26%) with male preponderance high as 63%. 59% patients were from rural area and 47.5% were illiterate. Scabietic lesions were commonly found on the upper limb (86.5%) and interdigital cleft (68%). Coinfections were found in the form of fungal infection in 15% cases.

Key words: Scabies, Covid 19, Epidemiological profile

INTRODUCTION

Human scabies is a parasitic infestation caused by *Sarcoptes scabiei* var *hominis*. The microscopic mite burrows into the skin and lays eggs, eventually triggering a host immune response that leads to clinical manifestation. Scabies infestation may be complicated by secondary bacterial infection, which may sometimes lead to the development of more serious consequences such as septicaemia, heart disease and renal disease. In 2017, scabies and other ectoparasites were included as Neglected Tropical Diseases (NTDs), in response to requests from Member States and the recommendations of the WHO Strategic and Technical Advisory Group for NTDs.¹

The COVID-19 pandemic emerged in conjunction with changes in many areas of life that need to be reassessed and adjusted.² These changes are also reflected in dermatology outpatient and inpatient clinics.^{3,4}

Generally, the scabietic infestation occurs by skin-to-skin contact or, less commonly, by contact with infected objects like clothing, towels, bedsheets and blankets.⁵ Although it varies according to the socio-cultural and socioeconomic status of the societies, it can be seen in all races and age groups and both genders.⁶ The rate of spread of the disease may vary depending on social behavior, access to adequate health services, and migration movements. In addition, the individual's shelter and personal hygiene conditions are important in spreading the disease.⁷ For example, in previous studies, conditions such as insufficient health education, overcrowded living conditions, sleeping together, sharing clothes and towels, poor hygienic practices, malnutrition and travelling to areas where scabies are common or migration from those regions have been reported as risk factors.⁸ The public may perceive scabies as a simple skin disease that causes pain and itching. However, it may sometimes lead to life-threatening disease that can cause serious complications and death.⁹ WHO estimated scabies to affect more than 200 million people at any time, globally.¹⁰

Hence, we aimed to determine the current situation of scabies cases in increasing incidence during COVID-19 pandemic days and to create a scientific resource for the measures to be taken. Hence this study was conducted to study socio-demographic and clinical manifestations of scabies epidemic during COVID-19 pandemic.

MATERIAL AND METHODS

This Cross-sectional observational study was conducted among patients with clinical diagnosis of scabies in the Department of Dermatology OPD, KBN teaching and general Hospital Kalaburagi. Duration of study was 6 months (From Jan 2021 to June 2021)

SAMPLE SIZE

All cases diagnosed as scabies visiting to OPD were included in our study. This number was 200. Simple Random sampling method was used.

INCLUSION CRITERIA

Diagnosed cases of scabies willing to participate in the study.

EXCLUSION CRITERIA

Already treated case of scabies, Patients not willing to participate in study, Pregnant and lactating mothers.

METHODS OF DATA COLLECTION

Fresh new cases with clinical diagnosis of scabies were included in the study. We took consent of all cases. All the details of the patients like age, gender, socioeconomic status, complaints were noted and clinical examination was carried out.

STATISTICAL ANALYSIS

Data was collected by using a structured proforma. Data entered in MS excel sheet and analysed by using SPSS 24.0 version IBM USA. Qualitative data was expressed in terms of proportions. Quantitative data was expressed in terms of Mean and Standard deviation.

RESULTS

We included total 200 cases in our study. Out of 200 cases, majority i.e. 29% were from 21-30 years age group followed by 26% from 11-20 years, 18% from 1-10 years, 16% were from 31-40 years, 7.5% from 41-50 years and least i.e. 3.5% were from 51-60 years age group. Mean age of the patients was 33.5 ± 11.2 years. Table 1

Table 1: Distribution according to age group

		No. Of patients	Percentage
Age group in years	1 to 10	36	18.0
	11 to 20	52	26.0
	21 to 30	58	29.0
	31 to 40	32	16.0
	41 to 50	15	7.5
	51 to 60	7	3.5
	Total	200	100.0

Majority of the cases were males i.e. 63% and remaining 37% were females. 59% patients were from rural area and 41% from urban area. Table 2

Table 2: Distribution according to residence

		No of patients	Percentage
Residence	Urban	82	41.0
	Rural	118	59.0
	Total	200	100.0

47.5% were illiterate and 52.5% were literate. 94.5% of the patients were lower socioeconomic status. Table 3

Table 3: Distribution according to Socio economic status

		No. of Patients	Percentage
Socio economic status	Upper	0	0.0
	Upper middle	0	0.0
	Lower middle	11	5.5
	Upper lower	55	27.5
	Lower middle	134	67.0
	Total	200	100.0

Table 4: Distribution according to occupation

		No. of Patients	Percentage
Occupation	Student	89	44.5
	Housewife	43	21.5
	Labourer	27	13.5
	Self employed	7	3.5
	Job	19	9.5
	Retired	2	1.0
	Others	13	6.5
	Total	200	100.0

Occupational status of the patients were revealed 44.5% students, 21.5% were housemakers, 13.5% were labourers, 9.5% were employed and 3.5% were self-employed. Table 4
Infestations on body sites revealed as follows: Upper limb (86.5%), Interdigital cleft (68%), Genitals (47%), Abdomen (37%), Lower limb (27%), Buttocks (19.5%), Thorax (19%), Back (14%), Axilla (11%), Scalp (4.5%) and Face (3%). Table 5

Table 5: Distribution according to sites of infection

		No. of Patients	Percentage
Sites of infection	Scalp	9	4.5
	Face	6	3.0
	Interdigital cleft	136	68.0
	Upper limb	173	86.5
	Lower limb	54	27.0
	Thorax	38	19.0
	Abdomen	74	37.0
	Back	28	14.0
	Buttocks	39	19.5
	Genitals	94	47.0
	Axilla	22	11.0

Coinfections were found in the form of fungal infection in 15% cases, acne in 24%, vitiligo in 2% and xerosis in 1% cases. Table 6

Table 6: Distribution according to coinfections

		No. of Patients	Percentage
Coinfections	Fungal	30	15.0
	Acne	48	24.0
	Vitiligo	4	2.0
	Xerosis	2	1.0

DISCUSSION

Scabies can occur worldwide and in people of all classes. However, while cases are seen sporadically in developed countries, they are abundant in developing countries (especially in countries where overcrowding and poverty coexist, and access to treatment is limited).

We included total 200 cases in our study. Out of 200 cases, majority i.e. 29% were from 21-30 years age group followed by 26% from 11-20 years, 18% from 1-10 years, 16% were from 31-40 years, 7.5% from 41-50 years and least i.e. 3.5% were from 51-60 years age group. Mean age of the patients was 33.5 ± 11.2 years.

Porsuk AÖ et al¹⁰ reported that 55.9% (n=1.027) of all cases were men and 44.1% (n=811) were women ($P < 0.001$). In the distribution by age groups, the incidence of scabies was generally higher in men, but it was higher in women in some age groups. As an example, in the 20-24 age group, the incidence of scabies in men (n=223) was 2.62 times more than in women (n=85), whereas, in the 50-54 age group, it was 1.68 times more in women (n=57) than in men (n=34).

De Lucia M. et al¹¹ reported that 60.2% patients were below 18 years age and 55.2% were male patients

Karaca Ural Z et al¹² reported that there was a statistically significant difference between the presence of scabies and some sociodemographic characteristics of the patient which are sex, area of residence, and age.

In our study, 59% patients were from rural area and 41% from urban area. 47.5% were illiterate and 52.5% were literate. 94.5% of the patients were lower socioeconomic status. Occupational status of the patients revealed 44.5% students, 21.5% were housemakers, 13.5% were labourer, 9.5% were employed and 3.5% were self-employed.

In studies conducted during the Covid-19 pandemic, it was stated that there was an increase in the prevalence of scabies, and it was stated that the prevalence of scabies was 12.8% among patients who came to the dermatology outpatient clinic. In a study conducted in Spain, it is stated that the prevalence of scabies increased during the pandemic period. It is emphasized that there was a significant increase in scabies before the pandemic in Turkey and this situation is considered as an epidemic of scabies.¹²

Scabies was found 2.728 times (CI 1.325–5.557) more in those who live in rural areas than those who live in urban areas. In a cross-sectional study conducted in Ethiopia, it was reported that scabies is 2.03 (CI 1.07–3.86) times more common in rural residents than in urban residents. Due to the inadequacies in both environmental and economic conditions, it is expected that scabies is more common in rural areas.¹³

Scabies is 2.707 (CI 1.256–5.833) times more common in nonworking than in working. It is 2.2 (CI 1.2–2.6) times higher in unemployed than employed.¹⁴ In a study conducted in Poland, it was emphasized that unemployment is effective on scabies.¹⁵ In a study conducted with primary school children in Turkey, it was determined that scabies was more common in children of families in which the father is unemployed.¹⁶ Unemployment is a situation that is expected to affect the socioeconomic status of the family, and therefore, the health, nutrition, housing, etc. of the individuals in the family. Especially during the pandemic, workplaces were temporarily closed by the government. This can affect the economic status of employees of these working places.

In our study infestations on body sites revealed as follows: Upper limb (86.5%), Interdigital cleft (68%), Genitals (47%), Abdomen (37%), Lower limb (27%), Buttocks (19.5%), Thorax (19%), Back (14%), Axilla (11%), Scalp (4.5%) and Face (3%). Coinfections were found in the form of fungal infection in 15% cases, acne in 24%, vitiligo in 2% and xerosis in 1% cases.

Nair PA et al¹⁷ reported that the most common site affected was interdigital cleft in 73.52% cases followed by hands in 61.76% and genitals in 40.19% cases. Most common lesion seen in our study was papules in 84.3% followed by excoriations in 82.3% cases.

Nair PA et al¹⁷ reported that complications in the form of eczematization were seen in 50% cases and secondary infections were seen in 21.56% patients.

Das S, et al¹⁸ found papular lesions in 76% cases, papulovesicular and eczematous lesions in 23 and 24% cases respectively.

Study by **Das S. et al¹⁸** showed genitalia commonest site with 60%, followed by finger webs in 57% cases.

Study by **Sunil Agrawal et al¹⁹** showed generalized involvement in 25(60.97%), webs spaces in 07(17.07%), wrists in 04(9.75%), glans in 01(2.43%) and umbilicus in 01(2.43%) cases.

These findings are comparable to our study findings.

CONCLUSION

Scabies being the common infestation in dermatological Practice, however during COVID-19 pandemic we have observed increased surge of scabies cases in our outpatient department. The reasons for this upsurge maybe various socio demographic parameters like overcrowding, poor hygiene, limited accessibility to the health care facility, reduced economic status contributing to the epidemic like scenario during COVID-19 pandemic.

CONFLICT OF INTEREST

Nil

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