

Original Article

Scabies epidemic at Tando Muhammad Khan, Sindh

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Abstract *Background* Scabies is the most common dermatosis as reported at District Hospital, Tando Muhammad Khan. Scabies has become an epidemic in the newly created District Tando Muhammad Khan previous Taluka of District Hyderabad, Sindh.

Objective To assess prevalence of scabies, to determine causes and hurdles in management of scabies.

Patients and methods A hospital-based observational study was conducted at dermatological out-patient department of Government District Headquarter Hospital, Tando Muhammad Khan. Duration of study was six months from 1st January, 2007 to 30th June, 2007. All patients of scabies were included in the study irrespective of any concomitant disease. Patients were diagnosed clinically.

Results During six months study period, 5484 (70.2%) patients of scabies were enrolled. Out of these, 3456 (63%) were males and 2028 (37%) females. 69% of adult males and 92% of adult females were illiterate. Over 75% adult patients belong to low socioeconomic group.

Conclusion Scabies was found to be very common among patients attending dermatology clinic at District Hospital, Tando Muhammad Khan. It is associated with poor hygiene, overcrowding, illiteracy and low socioeconomic conditions. Management of scabies requires special skills including health education and counseling.

Key words

Scabies, epidemic, District Tando Muhammad Khan.

Introduction

Scabies, an infestation by *Sarcoptes scabiei*, is endemic in many tropical and subtropical areas, such as Africa, Egypt, Central and South America, northern and central Australia, the Caribbean Islands, India, and Southeast Asia.¹ In industrialized countries, scabies is observed primarily in sporadic individual cases and institutional outbreaks.¹ Epidemiological studies indicate that the prevalence of scabies is not affected by sex, race or age. The primary contributing factors

in contracting scabies seem to be poverty and overcrowded living conditions. Notwithstanding this, certain groups are more affected by the disease than others. Scabies is most commonly observed in the very young, followed by older children and young adults.² In situations where scabies is endemic, this most likely reflects reduced immunity as well as increased exposure. Other age groups more commonly affected by scabies infestations include mothers of young children and the elderly in nursing homes.¹

Accurate figures of its incidence are difficult to obtain, and most reports are based on hospital out-patients attendance records. In resource-poor communities worldwide the

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prevalence of scabies is 10%.³ In under developed countries overcrowding and poor hygiene are main causes of spread.^{1,2}

Tando Muhammad, previously a Taluka of District Hyberabad, Sindh, was elevated as District Headquarter in 2006. It was observed in the dermatology outpatient clinic of District Hospital, Tando Muhammad Khan that scabies is very prevalent in this region. The present study was undertaken to document its hospital-based frequency and various factors contributing to this rampant disease.

Patients and methods

It was a hospital-based observational study. Total duration of study was six months from 1st January, 2007 to 30th June, 2007. All patients of scabies were enrolled in the study irrespective of any associated illness. However, those who were bed-ridden or admitted in wards were excluded. They were diagnosed clinically.⁴ Clinical criteria for diagnoses were: (1) presence of burrows and papules over at least two sites of predilection or alone at genitals in case of males, (2) night itch, and (3) involvement of at least another family member or companion. Patients with two of the above criteria were included in study. Patients were further divided in to four age groups 0-4 years, 5-14 years, 15-44 years and ≥ 45 years.

To determine the causative factors and hurdles in the management of scabies, a questionnaire regarding income, occupation, address, education, family members and living conditions was filled in every adult case (age group ≥ 15 years). Personal hygiene was noted in every case. Illiteracy was considered when a person was unable to read English or even Sindhi or Urdu.

Income groups were based on the following criteria. Total income was divided by the total

Table 1 Prevalence of scabies (n=5484)

Age group	Males (n=3456)	Females (n=2028)
0-4 years	532 (15.4%)	318 (15.6%)
5-14 years	1056 (30.5%)	727 (35.8%)
15-44 year	995 (28.8%)	562 (27.7%)
≥ 45 years	873 (25.2%)	421 (20.7%)

Table 2 Prevalence of scabies in different income groups (age group ≥ 15 years)

Income group	Males (n=1868)	Females (n=983)
Low	1410 (75.5%)	762 (77.5%)
Average	326 (17.4%)	113 (11.5%)
Reasonable	132 (7.1%)	108 (11.0%)

number of family members and labeled as low income if less than Rs. 2000 per person per month; average income if between Rs. 2000 to Rs. 4000 per person per month and reasonable income when over Rs. 4000 per person per month.

Results

During six months from 1st January, 2007 to 30th June, 2007, a total of 7812 patients attended the dermatology OPD; of which 5484 (70.2%) had scabies. Out of these, 3456 (63%) were males and 2028 (37%) were females. Prevalence of scabies in male patients was significantly more. Among different age groups prevalence was much more in children ranging from 5 to 14 years (in males as well as females), which is the school going age. The frequencies of male and female scabies patients in different age groups are shown in **Table 1** whereas **Table 2** depicts the distribution of patients according to their income. Similarly literacy rate and other causative factors groups are given in **Table 3**.

In our study, over 75% of adult patients (≥ 15 years) belonged to poor class. 69% of adult male patient were illiterates, while 92.2% of adult female patients were illiterate. 78% of male patients and 69.7% of female patients were not aware of importance of hygiene in prevention of scabies. Over 80% of patients

Table 3 Literacy rate and other risk factors involved in scabies (age group ≥ 15 years).

Factors	Males (n=1868)	Females (n=983)
Literates	578 (31%)	77 (7.8%)
Illiterate	1190 (69%)	906 (92.2%)
Poor hygiene	1454 (78%)	685 (69.7%)
Over crowded houses	1490 (79.8%)	812 (82.6%)
Madarassah students	108 (5.8%)	-
Police employees	51 (2.7%)	-
Prisoners	46 (2.5%)	-

were living in overcrowded houses. 11% of adult male patients were staying in institutions like madarassah, police headquarters or prisoners from jail.

Discussion

Our study showed that 70% of our patients were suffering from scabies. Nonetheless, this was a hospital-based study and the high figures might be due to clustering of scabies patients rather than the true incidence of disease in the community. A community-based study would have given the true picture. Even then, this alarmingly high figure suggests the scabies epidemic in the region, necessitating emergency measures for disease control.

Around 50% of our patients were children ≤ 14 years. A community-based study from Brazil showed point prevalence of 9.3% with 15.5% of their patients < 15 years old.⁵ Many other studies show similar figures. A study in a resource-poor community in urban Bangladesh, showed that virtually all children aged less than 6 years developed scabies within a period of 12 months.⁶ In a rural village in the United Republic of Tanzania, the overall prevalence was 6%, in rural and urban Brazil 8-10%, and in rural India 13%.⁷⁻⁹ In Egyptian children, the prevalence was estimated to be 5% but in Australian Aboriginal communities the prevalence in this age group approached 50%.^{10,11} Of 5-9-year-old children living in a displacement camp in

Sierra Leone, 86% were found to be infested with scabies.¹² This testifies that scabies spreads by direct physical contact amongst children and their mothers.⁵

About 50% of population was ≥ 15 years especially males. This high figure can be due to students living in madarassah, prisoners in jail and policemen living in headquarters. In our study 11% of males (≥ 15 years) were coming from these institutions. Overall prevalence was much more as majority of madarassah students were less than 15 years of age. Institutional outbreaks of scabies have been described by various researchers.¹³⁻¹⁶

Over 75% of our adult patients were living in very low socioeconomic conditions; combined with poor hygiene, over crowding, and illiteracy seem main culprits as suggested previously.¹⁷ There is a complex interplay of these factors responsible for the high burden of scabies in resource-poor communities. It has been suggested that crowding, sharing of beds, frequent population movements, poor hygiene, lack of access to health care, inadequate treatment, malnutrition and social attitudes contribute to the high burden of scabies in these settings.¹⁸ It is difficult to disentangle the relative importance of economic, environmental and behavioural factors, since they frequently coexist.¹⁹ There is, however, circumstantial evidence that extreme poverty and its economic and social consequences play a pivotal role.⁶

For achieving good control, increased awareness and education, improved hygiene measures and massive treatment campaign should be integrated.

Conclusion

Scabies was found to be very common at District Hospital Tando Muhammad Khan. Its management requires special skills. Health

education programme should be evolved to educate common people through general practitioners, lady health workers, school teachers, councilors and media. And efforts should be made for the availability of anti scabies preparation in government hospitals.

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