

Incidence and sociodemographic profile of scabies in paediatric patients attending secondary health care hospital

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Abstract

Background: Scabies is essentially a disease of children. The incidence of scabies has been found to vary from time to time. The aboriginal population in all countries and in both rural and urban areas is particularly at risk because of a number of factors such as crowded housing, shared beds, and crowded schools, etc. **Aim:** To study incidence and sociodemographic profile of scabies in pediatric patients with different age groups attending secondary health care hospital. **Material and Methods:** This prospective study was conducted over a period of 8 months on paediatric patients with scabies attending Skin and Paediatric OPD. Family history, per capita income, literacy and hygiene history was noted. **Results:** Scabies was found in 164 (62.1%); 92 (34.8%) and 8 (3%) cases with economic states of poor; average and good respectively. Overcrowding was noted in 238 (90.2%) and was absent in (9.8%). More commonly associated in-patients with poor and average hygiene (99.5%) than in the good hygiene. **Conclusion:** The important predisposing factors were overcrowding and poor hygiene. It was common in poor economic group. Thus, improving the socio-economic conditions, hygiene, avoiding overcrowding and proper treatment of cases and close contacts who are the sources of infection to children help in preventing scabies in children.

Key Word: Children, scabies, poor socioeconomic group, overcrowding, hygiene

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INTRODUCTION

Scabies is a commonly encountered cutaneous infestation caused by the human itch mite, *Sarcoptes scabiei* var *hominis*, an organism that was identified with the disease over 300 years ago.¹ It is a highly contagious infestation among close contacts and occurs in all ages. Although the presentation in adults follows a fairly distinctive pattern (but is also frequently missed), infants and young children

have a more varied presentation and so are more easily misdiagnosed.² It is essentially a disease of children. Among children, the prevalence is highest in the age group below 5 years. The incidence of scabies has been found to vary from time to time. There is a decreasing prevalence with increasing age.¹ Though earlier workers had reported higher incidence in different sexes, more recent studies have shown that there is no preponderance in either sex.^{1,3} As human scabies is contracted mainly by direct human contact, a pruritic rash in a family member should be pursued, keeping in mind that only one half to two thirds of family members become clinically infected.⁴ The aboriginal population in all countries and in both rural and urban areas is particularly at risk because of a number of factors such as crowded housing, shared beds, and crowded schools and day care centers, high pediatric population, reduced access to medical or nursing care, failure to treat close contacts and lack of running water, which may predispose people to secondary skin infection. The present study was conducted to study incidence and

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sociodemographic profile of scabies in pediatric patients with different age groups attending secondary health care hospital.

MATERIAL AND METHODS

This prospective single centre study was conducted on 264 paediatric cases attending Skin and Paediatric OPD at secondary institute over a period of 8 months.

Inclusion criteria

- Patients < 12 years of age including new borns
- Symptomatology – history of contact with scabies, history of itch and rash
- Lesions on skin – confirmed with dermatologists
- Resistant cases – Already diagnosed

Exclusion criteria

- Age above 12 years
- Lesions which are not of scabies confirmed with skin physician
- Patient's already got cured with adequate treatment
- Patient's unable / does not come during follow up

RESULTS

Out of studied patients (264) found to be 60 (22.7%); 87 (33%) and 117 (44.3%) in age groups < 2 yr.; 2-5 yr. > 6-12 yr., respectively suggesting commonest age affected < 6 yr. of age (55.7%) and more common in < 2 yr. of age. Boys were more affected 150 (56.8%) as compared to girls 114 (43.2%) i.e., M:F-1.31:1.

Table 1: Distribution of the cases by sociodemographic variables

Variables	No.	Percentage
Age in years	< 2	60 22.7%
	2to 5	87 33%
	6 to 12	117 44.3%
Gender	Female	114 43.2%
	Male	150 56.8%
Literacy Level of Parents	Primary	1 0.4%
	Upto 10 Std.	87 33%
	> 10 Std.	176 66.7%
Economic status (Rupees) Per capita Income of parent	<600	164 62.1%
	600 to 1200	92 34.8%
	>1200	8 3%
Total No. of members	3	7 2.7%
	4	67 25.4%
	5	109 41.3%
	6	54 20.5%
	7	20 7.6%
	8	3 1.1%
	9	1 0.4%
Family members affected Y/N	10	3 1.1%
	No	155 58.7%
	Yes	109 41.3%
No. of rooms	1	231 87.5%
	2	33 12.5%
Over Crowding	Absent	26 9.8%
	Present	238 90.2%

Scabies was found in 164 (62.10%); 92 (34.8%) and 8 (3%) cases with economic states of poor; average and good respectively. Indicating scabies is common in poor and average economic groups. Overcrowding was noted in 238 (90.2%) and was absent in (9.8%). It means scabies is common in association with overcrowding. Family affected in 109 (41.3%) of study group.

METHODOLOGY

All new and old registered patients attending dermatology clinics; pediatric OPD; well-baby clinics below 12 years of completed age, at secondary institution were studied. Patients were grouped for study as – 0 to less than 2 yrs., more than 2-5 yrs and 6th to 12 yrs. Income of parents is grouped as – (per capita income). E¹ – less than 600 rupees/month. E² – above 600 – 1200 rupees; E³ – more than 1200/month. Family history for total members (for overcrowding), total affected (contact history). Literacy of parents as – IL – illiterate; I – up to primary school; II up to 10th to 8th III above 10th standard. Housing: number of rooms; to see for overcrowding and mentioned as overcrowding if yes (+) and if not (-) ve.

Statistical analysis: All collected data was arranged in tabulated form. A computer based statistical analysis was done and chi-square test whenever indicated was used. Tables were made and graphs were plotted and results were obtained.

Table 2: Distribution of the cases by various scabies infestation related variables

Variables	No.	Percentage
Duration of Infection	< 10 days	106
	> 10 days	125
	>1 month	33
Hygiene	Good	1
	Average	134
	Poor	129
Contact History	Absent	155
	Present	109
Itching	Absent	62
	Present	202
Rx of Contacts	Yes	264
		100%

Commonest duration of symptoms while presentation less than 1 month in 231 (87.5%) and only 33 (12.5%) have more than 1 month. Itching was noted in 202 (76.5%) and absent in 62 (23.5%). More commonly associated in-patients with poor and average hygiene (99.5%) than in the good hygiene.

DISCUSSION

Scabies is commonest in very young age children and young adolescent, and then incidence declines as mentioned by Crissey JH in his series.⁵ In our study we found that 147 (55.7%) were affected less than 6 yrs. of age; out of which 40.81% found to be in less than 2 yr. of age. Other authors mentioned incidence common in early ages. As mentioned by Taplin D. *et al.*,² 46% patients were less than 10 years 84% of them were less than 1 year. Wakhlu *et al.*⁶ in their study mentioned that 81.8% were less than 6 years of age and 54% were less than 2 years of age. Results are similar in both the studies showing incidence common in early age. The slight difference of results may be due to method of study (present study was carried as passive survey while other were active surveys). In present study; the group of patients, which failed to attend clinics, has not enumerated. The prevalence of scabies decreases with increasing age probably because of more intimate contact, of the preschool children with their family members. We found that males were more affected than females i.e. 1.31:1 (M: F) these results were similar to other studies by Wakhlu *et al.*⁶ M:F-1.28:1. We found that major group of affected patients belonged to average or poor hygiene; and it is rare in good hygiene groups. We found that hygiene was average in 50.8% (134) and poor in 48.9% (129) and good hygiene was found only 0.40% in patients. Study by Wakhlu *et al.*⁶ has mentioned that hygiene was found poor in (90.5%); The results showing similarity to be found poor hygiene. The difference of results may be due to that; we have not documented family history of hygiene (i.e., we have mentioned only Personal hygiene). Results were similar to other studies by Nair BKH,¹ Taplin D,² Fred Baker⁴ and Valia RG *et al.*⁷ We found that 238 (90.2%) patients had history of overcrowding. Study by Wakhlu *et al.*⁶ has found overcrowding in (73.8%) of population. It has been

repeatedly emphasized importance of this factor in transmission of scabies infestation by many other authors, e.g. Taplin D,² Valia RG *et al.*⁷ If is affected by multiple other factors including economic status / education's which are also in association with infestations. Almost 164 (62.1%) children with scabies in the present study belonged to be low-income group. 92(34.8%) Children belonged to average income group and only 8 (3%) children were belonged to good income group. These results are similar to studies by Wakhlu *et al.*⁶ where he mentioned, it was common with low economic group i.e. in class IV / V people. Other authors also emphasized importance in their studies by Fred Baker,⁴ Valia RG *et al.*⁷ and Pomeranz and Fairly,⁸ and other factors like-overcrowding poor personal or environmental conditions are with higher incidence in this group. Family members of 109 children (41.3%) found to be affected. In a study by Wakhlu *et al.*⁶ family member of affected patients were found to be in (73%). Other authors, also mentioned importance of close contact in very crowded conditions and transmission of scabies.^{4,9,10}

CONCLUSION

Scabies was commonly seen in children below 6 years of age with boys affected more than girls. More commonly associated in-patients with poor and average hygiene than in the good hygiene. The important predisposing factors were overcrowding and poor hygiene. It was common in poor economic groups. Thus, improving the socio-economic conditions, hygiene, avoiding overcrowding and proper treatment of cases and close contacts who are the sources of infection to children help in preventing scabies in children.

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