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Scabies in Relation to Hygiene and Other Factors in Patients Visiting Liaquat University Hospital, Sindh, Pakistan

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Abstract : ***Objective : To determine frequency of Scabies and its relationship to hygiene and other factors in patients attending a tertiary care hospital. Study Design : Descriptive study. Place and Duration: Out patient Department (OPD) of Dermatology, Liaquat University of Medical and Health Sciences Hospital Jamshoro from June-July 2011. Methodology: A sample of 283 diagnosed cases of Scabies were selected through non-probability purposive sampling according to pre-defined inclusion and exclusion criteria. History of scabies, hygiene and associated predisposing factors like overcrowding, sanitation, socioeconomic status etc were enquired. Data was collected through filling à pre-formed questionnaire and interviews of the patients. Data was analyzed on SPSS version 21.0. The continuous and categorical variables were analyzed by student`s t-test and chi-square test respectively. The significant p-value was taken at ≤ 0.05. Results: The frequency of scabies was found as 47.6%.The lowest age recorded was five months and oldest of 64 years. Scabies was more frequent in females (54%); however gender difference was statistically non-significant (p= 0.66), similar was statistical finding for the socio-economic status (p=0.87). Family history of scabies was positive in 82% of patients. Irregular and infrequent bathing practice and sharing of clothes and towels were observed in 87% and 85% of patients respectively with statistically significant p-value (p=0.01). Irregular washing of clothes was observed in 78% and statistically significant association was observed between non availability of water and scabies. (p=0.001). Exposure to dust and pets all showed strong association with occurrence of scabies. Conclusion: The present study concludes that scabies is common in our local population in all age groups. The poor economic conditions, bad hygienic practices, overcrowding and unhygienic living conditions, scarcity of water, sharing of towels and clothing materials are positively associated with scabies.***

Keywords: Scabies Hygiene Risk Factors Sindh

1. Introduction

Scabies also known as sarcoptic mange and colloquially known as itch[1] is a neglected parasitic disease and is one of the major public health problem in the world and specially in resource poor regions. Scabies affects people of all age groups, races and socioeconomic levels.[2] It is transmitted from person to person by mite sarcoptes scabiei.[1] The burden of disease is highest in tropical countries where scabies is endemic. Different studies worldwide have suggested a 7 to 28 years cyclic pattern of disease prevalence.[3] Scabies causes highest morbidity because of unbearable itch, secondary infection, post infective complications such as glomerulonephritis and the highest risk of spreading the infestation to close contacts.[2]

More severe forms of scabies i.e. crusted scabies caused by delayed treatment of the initial infestation is characterized by mite filled lesion covered with scabs. The lesions often become victim to secondary infections as with staphylococcus bacteria. Crusted scabies is most common in people with reduced immunity or with immune system problem including AIDs, Diabetes mellitus and systemic lupus erythromatous.[3] Scabies is commonly observed in very young children followed by older children and young adults.[4]

The primary factors in spreading of scabies seems to be poverty, low socioeconomic conditions, poor hygiene, illiteracy, lack of access to health care, frequent population movements, inadequate treatment, malnutrition, and social attitudes.[4] Scabies is caused by *sarcoptes scabieivar hominis*. The characteristic clinical feature is intense itching at night. The other symptoms includes superficial burrow, generalized rash and secondary infection. Acropustulosis, or blisters and pustules on palms and soles and characteristic symptoms in infants.[1]

The most commonly affected areas are the hands, feet, the inner part of the wrists and the folds under arms .It may also affect other areas of the body, like elbows and the areas around the breasts, genitals, umbilicus and buttocks.[5] The action of mites moving within hidden areas of skin produces an intense itch which may resemble an allergic reaction in appearance. There is usually a two to six weeks incubation period between infestation and presentation of symptoms and in prior exposure of scabies the incubation period in likely to be much shorter as little as 1 to 4 days.[1]

Scabies is everyday diagnosis in almost any dermatology clinic in Pakistan. However, no study has so far been carried out in Pakistan, to identify risk factors for scabies. More over published data on the clinical and epidemiological aspects of this preventable disease in Pakistan are scarce.[2]

The rationale of present study was to freqeuncy of scabies in patients attending out patient department of Liaquat Univerysity Hospital Jamshoro and its relationship with hygiene and other factors.

2. Subjects and Methods

A descriptive study was conducted at the Out patient Department (OPD) of Dermatology, Liaquat University of Medical and Health Sciences Hospital Jamshoro/Hyderabad, Sindh, Pakistan from June-July 2011.
A sample of 283 diagnosed cases of Scabies were selected through non-probability purposive sampling according to pre-defined inclusion and exclusion criteria. History of scabies, hygiene and associated predisposing factors like overcrowding, sanitation, socioeconomic status etc were enquired. Data was collected through filling à pre-formed questionnaire and interviews of the patients.
Data was analyzed on SPSS version 21.0. The continuous and categorical variables were analyzed by student`s t-test and chi-square test respectively. The significant p-value was taken at ≤ 0.05.

3. Results

The frequency of scabies was found as 47.6%.The lowest age recorded was five months and oldest of 64 years. Scabies was more frequent in females (54%); however gender difference was statistically non-significant (p= 0.66), similar was statistical finding for the socio-economic status (p=0.87). Family history of scabies was positive in 82% of patients. (Table I.) Irregular and infrequent bathing practice and sharing of clothes and towels were observed in 87% and 85% of patients respectively with statistically significant p-value (p=0.01). Irregular washing of clothes was observed in 78% and statistically significant association was observed between non availability of water and scabies. (p=0.001) (Table II.) Exposure to dust and pets all showed strong association with occurrence of scabies. (Table I.)

Table 1 : Demographic characteristics of study population (n=300)

Variable	*No.*	*%*
Age (years)		
≤ 9	86	28.66%
10-19	27	09.00%
20-29	68	22.66%
30-39	46	15.33%
40-49	43	14.33%
50-59	24	8%
≥60	6	2%
Gender		
Male	138	46%
Female	162	54%
Socioeconomic status		
Poor class	205	68.33%
middle class	95	31.66%
family History		
yes	246	82%
no	54	18%

Table 2 : Hygiene related problems of study population (n=300)

Variable	*No.*	*%*
Water availability		
yes	155	51.66%
no	145	48.33%
Bathing		
Regularly	37	12.33%
Irregularly	263	87.67%
Washed clothes		
Regularly	66	22%
Irregularly	234	78%
Sharing towels and clothes		
Yes	255	85%
No	45	15%

Table 3 : Descriptive statistics of study population (n=300)

Variable	*No.*	*%*
Consultation to Physician		
Yes	212	70.67%
No	88	29.33%
Past History		
Yes	177	59%
No	123	41%
Time of symptoms		
Whole Day	02	0.67%
Day Time	35	11.67%
At Night	263	87.67%
Family History		
Yes	246	82%
No	54	18%
Dust Exposure		
Yes	214	71.33%
No	86	28.67%
Pets		
Yes	216	72 %
No	84	28%

4. Discussion

Scabies is a contagious skin infection that occurs among humans and other animals. It has been classified as a water-related disease. It is caused by a tiny and usually not directly visible parasite, the mite Sarcoptes scabiei, which burrows under the host's skin, causing intense allergic itching. The infection in animals (caused by different but related mite species) is called sarcoptic mange.

The disease may be transmitted from objects but is most often transmitted by direct skin-to-skin contact, with a higher risk resulting from prolonged contact. Initial infections require four to six weeks to become symptomatic. Re infection, however, may manifest symptoms within as little as 24 hours. Because the symptoms are allergic, their delay in onset is often

mirrored by a significant delay in relief after the parasites have been eradicated.

Scabies 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.[2]

In industrialized countries, scabies is observed primarily in sporadic individual cases and institutional outbreaks. 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.[6] Scabies is most commonly observed in the very young, followed by older children and young adults. In situations where scabies is endemic, this most likely reflects reduced immunity as well as increased exposure.[7] 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 prevalence of scabies is 10%. In under developed countries overcrowding and poor hygiene are main causes of spread.[8]

Our study showed that 47.6% of our patients visiting dermatology outpatient department were suffering from scabies. As this was hospital based study and therefore 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 high figure suggests that adequate measures should be taken for control of this disease.

Around 37% of our patient were under the age of 19 years. A community-based study from Brazil showed point prevalence of 9.3% with 15.5%, of their patients <15 years old.[9] Many other studies showed the similar figures. A hospital based observational study in Tando Muhammad Khan showed that 50% of their patients were children under the age of 14 years[4] as compared to our study, where the patients under the age 19 years were 37%. 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%.[10,11] In Egyptian children, the prevalence was estimated to be 5% but in Australian Aboriginal communities the prevalence in this group approached 50%.[12]

The most affected age in our study was under 9 years that is almost (29%, 86 patients) followed by the group of 20-29 years (22.66%, 68 patients).

A hospital based study was conducted in skin OPD LUH Jamshoro in which the results showed that the prevalence was up to 34% in the age group of under 9 years.[13] This slight difference might be due to different socio-demographic characters of patients of Jamshoro and Hyderabad.

All the above results and comparisons testified that scabies is most common in children as compared to adults that might be due to low immunity level or direct physical contact with their mothers.

About 54% of patients affected from scabies were females as compared to males who were 46% (p= 0.66). The slight difference and percentage deviation to females might be due to the fact that most of the females specially housewives visit hospital regularly rather than males who are bread earners and busy working throughout the day in our socioeconomic setting, and not giving due importance to the illness. In contrast to this, a cross sectional study was conducted in Bangladesh in which female frequency was less than males, with very slight difference that might be due to socio-demographic or other factors of that particular area.[14]

More than 70% of our patients were living in low socio-economic conditions. It could be due to the fact that the majority of the population visiting the study venue was belonging to low socio-economic group. However the study did not suggest association with occurrence of scabies. (p=0.87).

A community based clinical survey with similar objectives was conducted in Taiwan, the results of the study coincides with our results as people living in low socio-economic conditions were having scabies among more than 80% of the case with teen agers and middle age group mostly affected.[15]

The low socio-economic status plays its role in increasing the occurrence of scabies through many mechanisms; the overcrowding is one of them. The role of overcrowding in this connection had been documented in many studies in the past[50]. The current study also backed those results as frequency of patients of scabies was approximately 74% in houses where the people living were six or more as compared to 26% in houses where people living per household were five or less.

A study with similar objectives was conducted in Karachi; the results showed the same high frequency of scabies standing at 60% in houses where the people living were six or more.[16] This finding might be due to better hygiene practiced by the above mentioned community

These all results confirm and authenticate the results and conclusions drawn by previous researchers as these factors also play a major role in spread of scabies.

5. Conclusion

The present study shows high frequency of scabies in patients visiting skin Outpatient Department at Liaquat University Hospital Hyderabad. We found poor economic conditions, bad hygienic practices, overcrowding and unhygienic living conditions, scarcity of water, sharing of towels and clothing materials associated with higher frequency of scabies.

References

[1] Raza N, Qadir SNR, Agha H. Risk factors for scabies among male soldiers in Pakistan: case-control study. East Mediter Health J 2009; 15 (5): 1105-10.
[2] Ursani NM, Baloch GH. Scabies epidemic at Tando Muhammad Khan, Sindh. J Pak Assoc of Derma 2009; 19: 86-9.
[3] Iqbal J, Mann M A, Shahid M. Scabies; Oral Ivermection as the Treatment. Professional Med J 2009; 16(2):263-6.
[4] Alsamarai A M. Frequency of scabies in Iraq: Survey in dermatology clinic. J Infect Dev Ctries 2009; 3(10):789-93.
[5] Rathi SK, Rathi HS, Lakhani H, Hasotia MF. Awarness about scabies among general medical practitioners (GPs) of Karachi, Pakistan. J Pak Med Assoc. 2001; 51(10): 370-2.
[6] Shah N, Abro MA, Abro AA, Khan A, Anwar F, Akhtar H.Disease pattern in earthquake affected areas of Pakistan: data from Kaghan valley. J Ayub Med Coll 2010;22(3):81-6.
[7] Karim SA, Anwar KS, Khan MA. Socio-demographic characteristics of children infested with scabies in densely populated communities of residential madrashas (Islamic education institutes) in Dhaka, Bangladesh. Public Health 2007; 121: 923-34.
[8] Sachdev TR, Gulati PV, Prasad P. A. study on prevalence of scabies in a resettlement colony (slum area) and its association with some socio-cultural and environmental factors. J Indian Asso Comm Dis 1982; 5(3–4):88–91.
[9] Lassa S, Campbell MJ, Bennett CE. Epidemiology of scabies prevalence in the U.K from general practice records. Br J Dermatol 2011; 164(6):1329-34.
[10] Hegazy AA, Darwish NM, Abdel-Hamid IA, Hammad SM. Epidemiology and control of scabies in an Egyptian village. Int J Dermatol 1999; 38: 291-5.
[11] Henderson CA. Skin disease in rural Tanzania. Int J Dermatol 1996; 35:640-2.
[12] Sharma RS, Mishra RS, Pal D. An epidemiological study of scabies in a rural community in India. Ann Trop Med Parasitol 1984; 78: 157-64.
[13] Kolachi HBA, Channa AS, Memon AH. Scabies in community of Jamshoro hills. Med Forum 2000; 19: 137-9.
[14] Karim SA, Anwar KS, Khan MA. Socio-demographic characteristics of children infested with scabies in densely populated communities of residential madras has (Islamic education institutes) in Dhaka, Bangladesh. Public health 2007; 121: 923-34.
[15] Javed M, Jairamani C.Pediatric dermatology: an audit at Hamdard University Hospital, Karachi. Journal of Pakistan Association of Dermatologist 2006; 16:93-6.
[16] Poudat A, Nasirian H. Prevalence of pediculosis and scabies in the prisoners of Bandar Abbas, Hormozgan province, Iran. Pak J Biol Sci 2007; 10: 3967-9