Volume : 2 | Issue : 11 | Nov 2013 • ISSN No 2277 - 8160

Research Paper | Medical Science

Prevalence & Risk Factors for Scabies among OPD Population of Tertiary Care Hospital

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KEYWORDS :

Introduction:

Scabies is one of the most common skin disorders in children. Scabies is also known as Seven year itch. It is a contagious skin infection caused by the mite Sarcoptes scabiei. Because of its strong contagious capacity, infections in school children arise very frequently. It spreads to people of all age groups, genders, races and socioeconomic levels & in different communities. Approximately 300 million cases were reported worldwide each year (1). The disease may be spread from objects, but easily transmitted by direct skin-to-skin contact, with a higher risk with prolonged intimate contact such as sexual contact. This disease is also common in healthcare practitioner due to frequent contact with potential carriers. In a previously unexposed healthy individual, the interval between exposure and the onset of itching is usually 4-6 weeks. In persons who have previously had scabies, re-exposure may produce symptoms in 48 hours or less due to allergic symptoms are persists for many days even after eradication of parasites. Scabies causes unbearable itch, secondary infection, post-infective complications such as glomerulonephritis, and the high risk of spreading the infestation to close contacts (2). As of 2010 it affects approximately 100 million people (1.5% of the population) and was equally common in both genders. The most characteristic lesion of scabies infestation is the burrow, the excavated tunnel in which the mite lives. These burrows are usually thin, curvy, elevated tracts that measure 1–10 mm. secondary bacterial skin infection is a common complication of scabies infestation that, can lead to sepsis and even death. Several studies have shown that overcrowding, poor public health education, sleeping habits, overcrowded sleeping space, sharing of clothes, sharing of towels, incorrect hygiene practices have frequently been cited as risk factors for scabies throughout the world(4,6). However, no study has so far been carried out in Western Uttar Pradesh to identify risk factors for scabies. Moreover, published data on the clinical and epidemiological aspects of this preventable disease in Western Uttar Pradesh are scarce. Hence this study is undertaken by Department of Skin & Venereal Diseases of Rohilkhand Medical College & Hospital Bareilly to reveal risk factors associated with Scabies among OPD population & Its Prevalence in OPD population.

Materials & Methods –

Research Setting-

This was a cross-sectional study conducted at dermatology outpatient department of the Rohilkhand Medical College & Hospital Bareilly over a period of 6 months from January 2008 to June 2008. Average Daily OPD is approximately 60.Total monthly OPD is near about 1500. OPD Patients reporting sick to the above-mentioned hospitals were interviewed in detail and examined thoroughly.

Study design and sampling –

For this cross-sectional study design the following considerations were employed for sample size calculation. Assuming a prevalence of Scabies 9.7 % and the applying a margin of error of 20%, the sample size would be 900(5). Using non-probability purposive sampling, we selected 900 patients

Socio-demographic data were gathered, including: age in years, residence rural or Urban, educational status, Monthly family income, family size, presence of history of itching among family members, frequency of bathing, changing cloths <3 times / week, use of Soap, Sharing towels.

Data analysis-

Data entry and data processing was carried out using SPSS 10.0 software. Both descriptive and inferential data analyses were applied using the appropriate statistical tests of significance including χ^2-test & *Z*-test for proportions. Categorical variables were expressed in percentages with 95% confidence intervals. Confidence interval of 95% and significance level of *p* .05 were applied.

Results & Discussion –

This is the first study from western Uttar Pradesh to identify risk factors for scabies among OPD population. Although the sampled population is not representative of the general population even though it provides important findings regarding risk factors for scabies.

Total 900 subjects were analyzed for Scabies. Out of which 523(58%) belongs to rural area where as 377 (42%) from urban area. The age of included cases ranged from 3 to 83 years with a mean of 45.78 yrs. Out of which 170 cases were suffering from Scabies. The Prevalence rate among OPD population was found to be 18.89%. The prevalence of skin diseases in the pediatric age group was very high. Different studies have shown cross-sectional prevalence rates of scabies ranging from 0.2 to 70% (5-11).

Socio-demographic characteristics of the included cases are provided in Table I. Urban cases constituted 58% of the total cases. The total number of family members of the included children ranged from 3 to 17 persons with mean of 5.11 ± 2.08 with no significant difference between urban and rural families (5.11 ± 2.08 for urban vs. 6.46 ± 1.89 for rural families, *p* =0.46).

Mean age of urban respondent was 46.4±18.89 yrs. as compared to 39.8±17.54 of rural respondent; no significant difference found between urban and rural families (46.4±18.89for urban vs. 39.8±17.54 for rural families, *p* =0.46). Mean family income of urban respondent was 14,344 Rs. as compared to 9,720 Rs. of rural respondent.

Table-1 Baseline Characteristics of Study Population

Characteristics	Urban	Rural	t value, p value
No.(%)	377	523	-
No. ofScabies Patient	53	117	-
Age (mean±S.D.)yrs	46.4±18.89	39.8±17.54	t,0.25,p,.80
Family Income (Rs.) (mean ±S.D.)	14,344±1,233	9,720±980	-
Family Members	5.11±2.08	6.46 ± 1.89	t,0.48,p,.64

Table 2: Prevalence of Scabies according to Risk Factors

Risk Factors	n (%) Scabies	Not having the Scabies n (%)	P value
Type of Community			
Urban	53 (14.06)	324(85.96)	Chi square=9.88, p value0.002
Rural	117(22.37)	406(77.63)	

Age Group			
1 – 10	36(29.03)	88(70.97)	
11-20	43(30.93)	96(69.07)	
21-30	17(22.67)	58(77.37)	
31-40	17(13.82)	106(86.18)	Chi square=33.3, p=0.000
41-50	11 (9.82)	101(80.18)	
51-60	14(12.84)	95(87.16)	
61-70	12(16.67)	60(83.37)	
71-80	13(25.49)	38(74.51)	
81-90	7(14.29)	42(85.71)	
Educational Status of Respondent			
<5 yr	94(44.34)	118(55.66)	
5 - 10yr	50(21.09)	288(78.91)	Chi square=123, p=0.000
>10 yr	26(7.43)	324(82.57)	
Family Size			
<5	86(18.70)	374(81.30)	p =0.880
>5	84(19.10)	356(80.90)	
Family Income			
<10,000	114(22.53)	392(77.47)	Chi square =1.35 p value=0.246
>10,000	56(19.05)	238(80.95)	
Bath per week			
<3	42(37.5)	70(62.5)	Chi square=20.6, p=0.000
>3	128(18.6)	560(81.4)	
Infrequent Use of Soaps(<3 times/week)			
Yes	24(16.9)	118(83.1)	Chi square=.435, p=0.510
No	146(19.26)	612(80.74)	
Sharing Towels			
Yes	82(31.79)	176(68.21)	Chi square=39.2, p=0.000
No	88(13.71)	554(86.29)	
History of Itching in other family members			
Yes	92(65.71)	48(34.29)	Chi square=23.7, p=0.000
No	78(10.26)	682(89.76)	

In our study we found that total prevalence of Scabies in OPD population was 18.89%. In urban population it was found to be 14.06% which was lower than rural population in which the prevalence of scabies was around 22.37%. Similar results were shown by Buczek et al (12).

The Table 2 clearly specifies that Scabies was most common in children. It was more common in older age group as compared to middle age group. Maximum prevalence was found in younger age groups as compared to older age groups. In children 1 -10 yr. of age group the prevalence of Scabies 29.03% which was much higher as compared to 41 – 50 yr age group in which the prevalence of Scabies was 9.82%.In older age group (81-90yrs.) the prevalence of Scabies was 14.29%.Similar results were shown by Buczek et al (12) in their study most of the cases were in between 6 to 15 year of age.

Respondent with less than five year education was found in our study to be important risk factors contributing towards development of scabies and prevalence rate of Scabies in this group was 44.34% as compared to respondent who completed 10 year of education the prevalence rate was 7.43%. Less-educated individuals were more prone to having scabies. The reason was probably multifold one is that less-educated people are less aware of the importance of personal hygiene and second one is the majority of children are included in this category & in many studies it is shown that children are potentially susceptible for Scabies & its complications.

Although Scabies was more common in children with more than 5 family size (19.10%) as compared to Family size less than 5 (18.70%) but there was no statistical significant association was found(p >0.05). Family income & infrequent use of soap were not significantly associated with prevalence of Scabies (p>0.05).

The important risk factors in our study were those pertaining to personal hygiene. In children who shares towel the prevalence of Scabies was 31.79% as compared to children use their own towel was much lower 13.71%. Association between sharing towel and prevalence of Scabies was found significant (p<0.000).

Respondent which bath daily or most of the days the prevalence of Scabies cases is much lower (37.5 %) as compare to those who didn't take bath regularly (18.6%).Significant association (p<0.00) was found between habit of bathing & prevalence of Scabies.

The most important risk factor for Scabies was perhaps "History of itch in other family members". The prevalence of Scabies in respondents in which one or more family members was also having the itch was found 65.71%.This was very high as compared to those in which this history was negative(10.26%). Highly significant association was found (p<0.000). Similar results were shown by Buczek et al (12).

Family size, on the other hand, was not significantly associated with the occurrence of scabies in our study as contrary to Bandey et al which showed significant relationship between family size & prevalence of Scabies (13). This finding confirms the important risk factors in our study were those pertaining to personal hygiene.

Conclusion & Recommendation

It is clearly shown by our study that personal hygiene plays important role in development of Scabies. Respondent who shares towel with others or not take daily bath are more prone for development of Scabies. There is a need for public health programmes to educate the population to understand the preventive aspects of diseases like scabies. CD

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