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Original Article

Prevalence of Scabies in Skin and VD OPD of DMCH

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Abstract

The burden of scabies is highest in tropical countries, but recent data from Bangladesh is scanty. This cross sectional study was carried out to find the prevalence of scabies in skin & VD OPD of DMCH during the period of April 2009 to March 2010. We estimate the prevalence of scabies in patients of Dermatology out patient department of a tertiary hospital. The study was conducted between months April 2009 to March 2010. A total 67,198 patient attended to the Skin & VD OPD, were included in this study. We identified 46,366 patients with scabies. The total prevalence was 69%. Prevalence in January was highest, and was 78%. Most cases were uncomplicated but 17.28 % of complicated scabies patients were found. Scabies was more in poor socio-economic group than others. The present study indicated a high prevalence of scabies in patients presenting to Skin & VD OPD, DMCH. Prevalence was higher overall in children. Our data show that scabies is common in patients presenting to skin & VD OPD, and this finding may be used as an indicator of the general population.

Introduction

Scabies is a highly contagious disease caused by the mite Sarcoptes scabiei var hominis. The disease is seen in all socioeconomic groups and communities throughout the world.[1] However, the prevalence of scabies varies widely from one country to other.[2] For example, in some developing countries, the prevalence has been reported to be between 5.8 % and 83% among the rural population.[3,4] Scabies is a major public health problem in many developing countries.[5] The burden of the disease is highest in the tropical countries, where scabies is endemic. Scabies is particularly common in poor communities with crowded living conditions.[6] Some studies have suggested higher rates in urban areas and an increased incidence during winter months.[7] Scabies is primarily transmitted by close human contact and seldom through fomites. The disease is also more common in institutional environments such as prisons and old homes, day care centers, nursing homes, schools and orphanages where outbreaks of the disease are frequently reported.[8] Spreading of this disease usually occurs in the wars, floods, earthquakes and other natural and gregarious unfavorable events in the critical times.[8] Nowadays, in spite of advance hygiene and decreasing the contamination rate, the disease are again the epidemic risk, which have not been eliminated in the prisons, encampment, garrisons and other

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general dwellings and can easily spread because of low personal and environmental hygiene.[8] A female of S. scabiei can survive around 30 days in the host body penetrating the stratum corneum (not deeper than stratum granulosum) of the skin and laying eggs in the burrow.[9] Itching is commonly present and, due to subsequent scratching, leads to secondary infection. Acute glomerulonephritis caused by nephritogenic strains of streptococci is a known complication, particularly in the tropics.[10] Eczematization is a recognized complication of scabies.

Materials and methods

This cross sectional study was conducted on patients attending Skin and VD OPD, Dhaka Medical college Hospital, Dhaka, during the period April 2009 to March 2010.

All patients attending the dermatology out patient department during a period of 12 months (April 2009 to March 2010) were included in the study. Cases of scabies were diagnosed according to conventional criteria. A presumptive diagnosis of scabies is based on symptomatic complaints of pruritus and physical examination of the site involved. Entire body of each patient was examined. Scabies was diagnosed clinically by the presence of erythematous papular, vesicular, pustular or bullous lesions associated with itching and a positive family history (i. e. at least one other family member with similar symptoms). Other pruritic skin diseases were excluded.

The patients were examined clinically for the presence of lymphadenopathy and secondary infection. Secondary infection was defined as the presence of pustules, suppuration or ulcers.

Patients' family income monthly below Taka 5000 is considered as poor; income Taka 5000- Taka 10,000 is lower middle class; income Taka 10,000-

Table 1. Distribution of patients according to age.

Group	Age in years (Mean ± SD)	
	Total population	Scabies patients
Male	29.6 12.02	25.3±11.36
Female	27.7 10.35	23.7±10.64
Children	4.6 6.72	3.4±5.79
Total	24.5 11.433	21.5±11.245

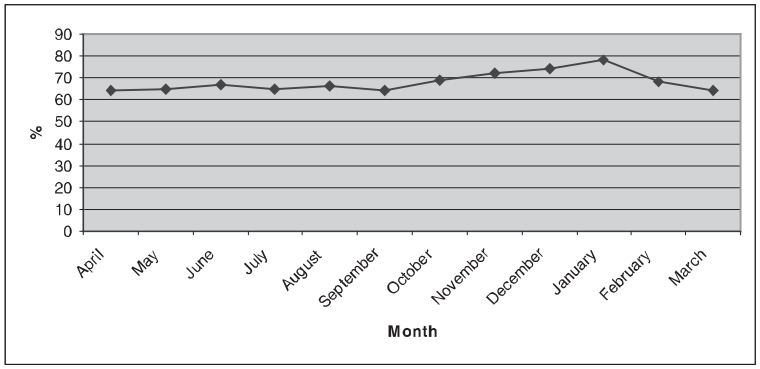
Table 2. Distribution of scabies patients according to socio-economic groups

Group	Number	Poor	Lower Middle class	Middle Class	Upper class
Male	18,342	11782 (64.24%)	4523 (24.66%)	1213 (6.61%)	824 (4.49%)
Female	16,298	10786 (66.18%)	3952 (24.25 %)	1173 (7.20 %)	387 (2.37 %)
Children	11,726	7328 (62.49 %)	2836 (24.19 %)	931 (7.94%)	631 (7.94%)
Total	46,366	29896 (64.48%)	11311 (24.40%)	3317 (7.15%)	1842 (3.97%)

Table 3. Prevalence of Scabies

Group	Total population		Scabies patients		Prevalence of Scabies
	Number	Percent	Number	Percent	
Male	27,833	41.42	18,342	39.56	65.90
Female	23,156	34.46	16,298	35.15	70.38
Children	16,209	24.12	11,726	25.29	72.34
Total	67,198	100	46,366	100	69.00

Figure 1. Distribution of scabies patients in different months of the year



Taka 20,000 is middle class; income more than Taka 20,000 is considered as high socio-economic class.

The values for quantitative data were reported as mean ±SD, while that of qualitative data were presented as percent. The numbers were compared with regard to gender and age.

Picture 1. Uncomplicated scabies

Picture 2. Complicated scabies

Results

A total 67,198 patient attended to the Skin & VD OPD, were included in this study. Of this total 50989 were adult (male 27,833, female 23,156) and 16,209 were children. Children were defined as any subject 12 years old and younger. We identified 46,366 patients with scabies.

The age ranges (10 days to 72 years), mean age of the study populations was 24.5 years with a standard deviation of 11.433. Whereas the age ranges (3 months to 69 years), mean age of scabies patients was 21.5 years with a standard deviation of ±11.245. (Table 1)

The total prevalence was 69.00%. Prevalence in male, female and children were 65.90%, 70.38% and 72.34% respectively. (Table 3) Prevalence in January was highest, and was 78%. (Figure 1)

Discussion

The total prevalence in this study was 69.00%. Prevalence in male, female and children were 65.90%, 70.38% and 72.34% respectively. Prevalence in January was highest, and was 78%. In addition, scabies is common in lower socio-economic group, attending out patient department. In this study, scabies diagnosis was based on clinical signs and symptoms.

The prevalence of scabies varies widely from one country to other;[2] for example, in some developing countries, the prevalence has been reported to be between 5.8 % and 83% .[3,4]

Scabies is 1 of the 6 major epidermal parasitic skin diseases (EPSD) that is prevalent in resource-poor populations, as reported in the Bulletin of the World Health Organization in February 2009.11 Prevalence rates are extremely high in aboriginal tribes in Australia, Africa, South America,[12] and other developing regions of the world. In 2009 retrospective study of 30,078 children in India, scabies was found to be the second most common skin disease in all age groups of children, and the third most common skin disease in infants.[13]

Worldwide, the prevalence of scabies has been estimated at 300 million cases annually.[14] In the United States and in other developed regions around the world, scabies occurs in epidemics in nursing homes, hospitals, long-term care facilities, and other institutions. It is seen frequently in the homeless populations but occurs episodically in other populations as well. No recent published data are available on its incidence in the United States. A study published in 2009 conducted in Brazil identified major risk factors for scabies in an impoverished rural community. The risk factors were young age, presence of many children in the household, illiteracy, low family income, poor housing, sharing clothes, and towels, and irregular use of showers.[15]

The limitation of hospital-based study may overestimate or underestimate true incidence of the disease. However, the increase in the prevalence of the disease may reflect the impact of the problem on the community.

Conclusion

Our study provides a picture of the prevalence of scabies in urban Dhaka, among the different socio-economic conditions. The epidemiological characteristics of the disease should be considered in the design of disease control program. Scabies prevalence was high in the studied population, and there is possibility of out break and future epidemicity. Mass treatment of scabies either by oral ivermectin or topical permethrin is suggested. Contact tracing is an important approach for scabies control and prevention.

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