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EPIDEMIOLOGY AND CONTROL OF SCABIES IN SKIN AND VD OUT PATIENT DEPARTMENT (OPD) OF BIRDEM GENERAL HOSPITAL, DHAKA, BANGLADESH

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ABSTRACT

Introduction: Scabies is a highly contagious disease caused by the mite Sarcoptes scabiei var hominis. The disease is seen in all socioeconomic groups & communities throughout the world. However, the prevalence of scabies varies widely from one country to other. The burden of scabies is highest in tropical countries, but recent data from Bangladesh is scanty. **Objective:** To find out Epidemiology and Control of Scabies in Skin and VD out Patient Department (OPD) Of BIRDEM General Hospital, Dhaka, Bangladesh. **Materials and Methods:** This cross sectional study was conducted on patients attending skin and VD outpatient department of BIRDEM General Hospital, Bangladesh during the ***period of July 2017 to June 2018***. 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 involved site. 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, a positive family history (i.e. at least one other family member with similar symptoms) and other pruritic skin diseases were excluded. **Results:** A total 19,455 patients attended to the skin and VD OPD, were included in this study. This study was total 12,680 were adult (male 9,114, female 5,433) and 4,908 were children. Children were defined as any subject 12 years old and younger. We identified 12,680 patients with scabies. The total prevalence was 65.1%. Prevalence in male, female and children were 54.9%, 76.4% and 71.6% respectively. Control in January was highest & 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. **Conclusion:** The present study showed a high prevalence of scabies in patients presenting to skin & VD OPD, BIRDEM General Hospital, Dhaka, Bangladesh. Prevalence was higher overall in children. Our data show that scabies is common in patients presenting to skin & VD OPD & this finding may be used as an indicator of the general population.

KEYWORDS: Scabies, Prevalence, Skin Disease, Socioeconomic groups.

I INTRODUCTION

Scabies is a highly contagious disease caused by the mite ***Sarcoptes scabiei var hominis***. Scabies infection is an important skin disease. It is public health problem. There are many public health problems from which people of the under developed countries suffer much because of ignorance, illiteracy, poverty and apathy towards health problem. All these factors exeunt in Bangladesh where scabies infection is a problem. It has associated with densely population, poverty, wanting of health education and social upheaval when hygiene becomes relatively unimportant. Scabies infection increase when people are herded together and facilities for washing the body and clothes are reduced. Anyone gets scabies but at higher risk includes; sexually active adults, prison inmates, people in institutional care, people live in crowded condition, people in child care facilities. Our geographical and socio-economic condition is suitable for scabies infection. There are a number of variables that can make people more susceptible to a scabies infection. The peoples who have recently taken a course of antibiotics or taken oral steroids are more likely to contact an infection. The patients who are suffering from diabetes, cancer or HIV which has weakened their immune system are commonly affected by scabies infection. Scabies is an intensely itchy parasitic infection of the skin that is caused by the Sarcoptes scabiei mite. The disease is seen in all socioeconomic groups & 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% & 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 & an increased incidence during winter months.[7] Scabies is primarily transmitted by close human contact & seldom through fomites. The disease is also more common in institutional environments such as prisons, old homes, day care centres, nursing homes, schools and orphanages where outbreaks of the disease are frequently reported. Spreading of this disease usually occurs in the wars, floods, earthquakes and other natural & gregarious unfavourable events in the critical times.[8] Nowadays, in spite of advance hygiene and decreased contamination rate, the disease still has the epidemic risk, which have not been eliminated in prisons, encampment, garrisons and other 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 of the skin and laying eggs in burrow.[9] Itching is commonly present and 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.

II OBJECTIVE

To find out Epidemiology and Control of Scabies in Skin and VD out Patient Department (OPD) Of BIRDEM General Hospital, Dhaka, Bangladesh.

III MATERIALS AND METHODS

This cross sectional study was conducted on patients attending skin and VD outpatient department of BIRDEM General Hospital, Bangladesh during the ***period of July 2017 to June 2018***. 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 involved site. 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, a positive family history (i.e. at least one other family member with similar symptoms) and 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 5,000 is considered as poor; income taka 5,000 - taka 10,000 is lower middle class; income taka 10,000-taka 20,000 is middle class; income more than taka 20,000 is considered as high socio-economic class.

IV RESULTS

A total 19,455 patients attended to the skin and VD OPD, were included in this study. This study was total 12,680 were adult (male 9,114, female 5,433) and 4,908 were children. Children were defined as any subject 12 years old and younger. We identified 12,680 patients with scabies [Table-1]. The total prevalence was 65.1%. Prevalence in male, female and children were 54.9%, 76.4% and 71.6% respectively [Table-2].

Table 1: Distribution of scabies patients according to socio-economic groups (N=12680).

Group	Number	Poor	Lower middle class	Middle Class	Upper class
Male	5010	2505-50.0%	1502-29.9%	515-10.2%	488-9.7%
Female	4155	2113-50.8%	1505-36.2%	362-8.7%	175-4.2%
Children	3515	2125-60.5%	905-25.7%	305-8.6%	180-5.1%
Total	12680	6743-53.1%	3912-30.8%	1182-9.3%	843-6.6%

Table 2: Prevalence of Scabies (N=12680).

Group	Total population		Scabies patients		Prevalence
	Number	Percent	Number	Percent	
Male	9114	46.8%	5010	39.5%	54.9%
Female	5433	27.9%	4155	32.7%	76.4%
Children	4908	25.3%	3515	27.8%	71.6%
Total	19455	100.0%	12680	100.0%	65.1%

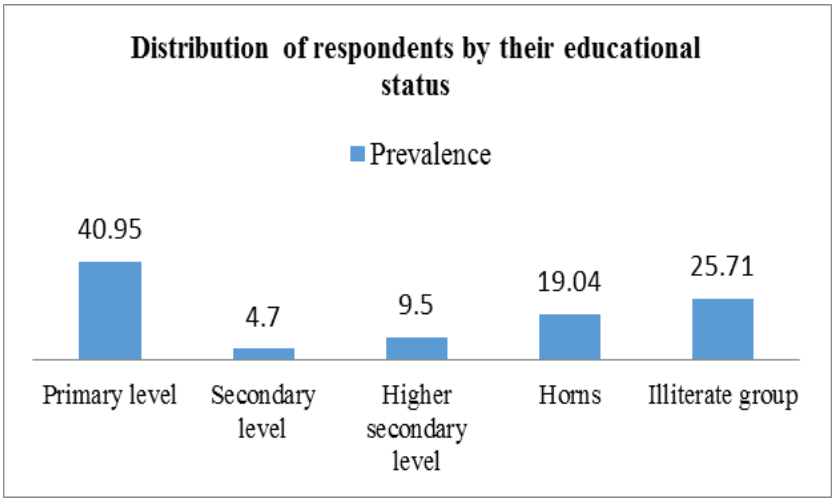

Figure-1: Distribution of respondents by their educational status.

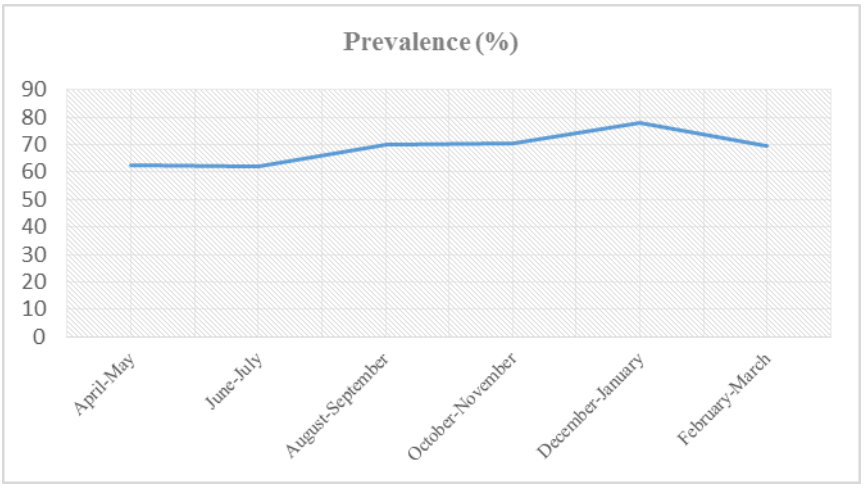

Figure-2: Distribution of scabies patients in different months of the year.

It was draw from the Figure that Scabies infection is not completely dependable on educational status but need consciousness that stop hygienic practice and avoid over crowded place. Health education should be included in educational curriculum and patients especially mothers and teachers should be educated in the light of health education, that the peoples can be introduced to the self-care system for themselves from the childhood. Health education through the mass media should be provided in simple, easily understandable way regarding the cause and preventive measures of scabies infection. School health should be introduced for practical application of hygienic practice [Figure-1]. And control in January was highest and was 78% [Figure-2].

V DISCUSSION

The total prevalence was 65.1%. Prevalence in male, female and children were 54.9%, 76.4% and 71.6% respectively. Prevalence in January was highest and was 78%. In addition, scabies is common in lower socioeconomic groups, attending outpatient 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 disease (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. Health education should be included in educational curriculum and patients especially mothers and teachers should be educated in the light of health education, that the peoples can be introduced to the self-care system for themselves from

the childhood. Health education through the mass media should be provided in simple, easily understandable way regarding the cause and preventive measures of scabies infection. School health should be introduced for practical application of hygienic practice. And control in January was highest and was 78%. 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, 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. Patients should be warned that itching may persist for one to two weeks after treatment, even if the mite is successfully eradicated.[16] Because of this delay in symptom relief it may sometimes be difficult to distinguish reinfestation from primary treatment failure. Contacts of cases are usually advised to treat themselves at the same time as the case in order to reduce the risk of reinfestation.[17] Prevention is rased on principles common to most infectious diseases, that is, limitation of contact with the mite. Using data from randomized controlled trials, this review examines the existing evidence of effectiveness of treatments for scabies. The incidence of scabies infection in the Bangladesh is not known. However, data on annual incidence of scabies seen in one health institution in Dhaka showed a rate of 45 per 1000 patients. These are the essential precautions in scabies reinfection. Clinicians and drug companies recommended treatment of family members and close contacts at the same time as cases, to improve cure rates and reduce reinfection. Seasonal variation in scabies infection. From the result of table, November, December and January show the highest control in scabies infection. In Bangladesh, these three month represent a winter season. On the other hand, July to October represent almost hot condition.

VI CONCLUSION

Our study provides a picture of the prevalence of scabies in urban Faridpur, 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 outbreak 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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