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RISK FACTORS OF SCABIES IN PATIENTS ATTENDING AT TERTIARY CARE HOSPITAL

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Abstract:

Objective: The objective is to find the risk factors among the patients attending department of medicine, OPD of Bahawal Victoria Hospital, Bahawalpur.

Study design: Descriptive cross-sectional study

Place and Duration of study: Department of Medicine, OPD Bahawal Victoria Hospital, Bahawalpur. From 1st March to 25th September 2017.

Materials and Methods: It is a descriptive cross-sectional study. Study was performed in Department of Medicine, OPD Bahawal Victoria Hospital, Bahawalpur. People with scabies seeking care in Department of Medicine Bahawal Victoria Hospital, Bahawalpur, were selected for the study. Convenient type of sampling technique was used to calculate the sample size. Total number of 1082 patients of both male & female gender and of all ages suffering from scabies was included in the study. Subjects were assessed by gender, age, their residence (rural or urban), marital status, status of education, monthly income, itching, body part of itching, time of itching (day or night) and other things like sharing of clothes, sharing of towels, oral hygiene, washing hands, close contact with pets etc. Data was analyzed using SPSS computer software version 23.

Results: Overall, there were 100% (n=1082) scabies patients were included, in this study, both genders. Itching was presented in 90.1% (n=975) patients, while 57.1% (n=618) patients were also having red lesions. Regarding the part of body involved in itching, 36.5% (n=395) and 67.5% (n=730) patients experienced itching on face & nipples, 44.4% (n=480), 76.9% (n=832), 63.7% (n=689) and 85.6% (n=926) patients experienced itching on web spaces, soles, wrist and around umbilicus respectively. 38.1% (n=412) patients experienced it in axilla and 66.6% (n=721) on palms, while 56.7% (n=614) patients experienced itching on genitalia. Out of 1082 patients, 91.7% (n=992) patients were having these symptoms at day time, 4.7% (n=51) at night time, while 3.6% (n=39) having these symptoms at both day & night time.

Conclusion: According to our research scabies is more common among males due to more exposure of males to the external environment. People with weak immune systems and the elderly are more at risk of developing scabies. Scabies is more common among rural communities because of low standard of quality of life and poor health education.

Keywords: Risk Factors, Scabies, itching, skin lesions

Introduction:

Scabies has proved to be troubling the humanity for a long time now and it is an ectoparasitic infection. Causative agent of scabies is known as Sarcoptes scabiei (1). Scabies is a derivation from the original Latin word “scabere” which means scratch (2). According to estimation annual incidence of scabies is more than 300 million cases worldwide (3). Clinical presentation of scabies involves generalized itching which worsens at night, pustules, papules, nodules and sometimes utricaria (4). The common body parts where these skin lesions occur are fingers, web spaces, wrists, periumblical region, axillae, genitals, abdominal wall and buttocks (5). Super infection by bacteria can cause certain complications and in rare cases death. Previous studies have provided with the possible risk factors for scabies including, overcrowding, war, sporadically sexual contact, malnutrition and poor hygiene (6). Norwegian scabies and crusted scabies are more severe form of scabies (7). Mode of spread of scabies involve, scratching, simply touching other human’s skin and picking up mites under the nail. Other modes of transmission are by spreading onto other objects like toilets, towels, clothing, keyboards, bedding and furniture (8). In fact it can spread from anything onto which these causative agents might have been rubbed off, especially from a person who has been heavily infested.

The causative parasite of scabies is able to survive away from its host for almost 14 days, but it cannot survive away from human skin for more than 2 or 3 days (9). It can transmit through any household from one person to another, usually through clothing, towels and bedding i.e. from one bed partner to other, between class fellows and people working day care. Not only in household conditions but scabies outbreaks have also been reported in hospitals, nursing homes and long term day care facilities. But its transmission can be prevented by interventions like, washing clothes with very hot water and drying them under extreme heat. For other items, permethrin spray can be used to intervene with the transmission (10). Scabies is highly contagious in our community and it is a major health problem in developing countries such as ours (11). Scabies is preventable but good data regarding relevant risk factors in our geographical situation is important to understand the ways in which preventive measures can be effective in our region. So, our study will concentrate on these preventive measures.

Materials and Methods:

It is a descriptive cross-sectional study. Study was performed in department of medicine OPD Bahawal Victoria Hospital, Bahawalpur. Duration of study was from 1st March to 25th September 2017. Ethical approval for the study was obtained from Hospital Ethics Committee and informed consent was taken from the patients taking part in the study. People with scabies seeking care in Department of Medicine, Bahawal Victoria Hospital, Bahawalpur were selected for the study. Convenient type of sampling technique was used to calculate the sample size. Total number of 1082 patients of both male & female gender and of all ages diagnosed as scabies was

included in the study. Patients unwilling to take part, suffering from secondary bacterial infection or diagnosed otherwise were excluded from the study. Precautionary measures were taken by the health care personnel to avoid an outbreak of scabies within the hospital. Examination of the skin of patients was done thoroughly by experienced physician of medicine department. Predesigned and pretested questionnaire was used to collect data. Data was analyzed manually in the department of community medicine**.** Subjects were assessed by gender, age, their residence (rural or urban), marital status, status of education, monthly income, itching, body part of itching, time of itching (day or night) and other things like sharing of clothes, sharing of towels, oral hygiene, washing hands, close contact with pets etc. Data was analyzed using SPSS computer software version 23.

Results:

Overall, there were 100% (n=1082) scabies patients were included, in this study, both genders. Gender distribution showed that there were more males than females i.e. 75.4% (n=816) and 24.6% (n=266) respectively. 92.2% (n=998) patients belonged to rural areas and 7.8% (n=84) patients belonged to urban areas. 42.6% (n=461) patients were married and 57.4% (n=621) were un-married. Distribution of educational status showed that there were 42.1% (n=456) patients illiterate, 32.2% (n=348) below matric, 18.7% (n=202) matric and 7% (n=76) intermediate.

Itching was presented in 90.1% (n=975) patients, while 57.1% (n=618) patients were also having red lesions. Regarding the part of body involved in itching, 36.5% (n=395) and 67.5% (n=730) patients experienced itching on face & nipples, 44.4% (n=480), 76.9% (n=832), 63.7% (n=689) and 85.6% (n=926) patients experienced itching on web spaces, soles, wrist and around umbilicus respectively. 38.1% (n=412) patients experienced it in axilla and 66.6% (n=721) on palms, while 56.7% (n=614) patients experienced itching on genitalia. Out of 1082 patients, 91.7% (n=992) patients were having these symptoms at day time, 4.7% (n=51) at night time, while 3.6% (n=39) having these symptoms at both day & night time.

63.4% (n=686) patient was diabetic. 43.3% (n=469) patients were sharing their beddings with their family members. Most of the patients i.e. 55.5% (n=600) said that they wash their hands. Out of 100% (n=1082), 34.9% (n=378) patients shared towels. Distribution of way of walking in homes showed that there were 6.9% (n=75) patients walked with bare foot, 91% (n=984) walked with shoes, 1.2% (n=13) walked sometimes with bare and with shoes, and 0.9% (n=10) were paralyzed. While 65.4% (n=59) patients used drugs.

Table. 1

Demographic Variables

(n=1082)

Characteristics	Frequency	Percentage (%)
Gender		
Male	816	75.4
Female	266	24.6
Total	**1082**	**100.0**
Area		
Rural	998	92.2
Urban	84	7.8

Total	**1082**	**100.0**
Marital Status		
Married	461	42.6
Single	621	57.4
Total	**1082**	**100.0**
Educational Status		
Illiterate	456	42.1
Below Matric	348	32.2
Matric	202	18.7
Intermediate	76	7.0
Total	**1082**	**100.0**

Table. 2

Risk Factors of Scabies

(n=1082)

Characteristics	Frequency	Percentage (%)
Itching	975	90.1
Red Lesions	618	57.1
Web Space	480	44.4
Palms	721	66.6
Soles	832	76.9
Writs	689	63.7
Axilla	412	38.1
Genitallia	614	56.7
Nipples	730	67.5

Around Umbilicus	926	85.6
Face	395	36.5
Scabies in diabetics	686	63.4
Sharing of biddings	469	43.3
Sharing Towels	378	34.9
Washing Hands	66	55.5
Usage of Drugs	708	65.4

Table. 3

Symptoms and Signs of Scabies

(n=1082)

Characteristics	**Frequency**	**Percentage (%)**
Time of Appearance of symptoms		
Day	992	91.7
Night	51	4.7
Both	39	3.6
Total	**1082**	**100.0**
Way of walking in Homes		
Bare Footed	75	6.9
With Shoes	984	91.0
Sometimes Bare & Sometimes Shoes	13	1.2
Unable to Walk	10	0.9
Total	**1082**	**100.0**

Discussion:

Pattern of skin diseases suggests that scabies is one of the most common diseases which prevail in developing countries. It puts large number of individuals and families in severe distress by making them spend their valuable income just to get rid of the infection. With high prevalence of secondary infections in these communities, scabies can result into major health complications. The stigma this disease carries can cause severe problems for patients as scabies has a strong association with poor economical conditions and overcrowded places. In these poor socioeconomic conditions, scabies cannot be treated solely by drug therapies but it also requires educational programs to reduce its stigma and betterment of these socioeconomic conditions (12).

Expanded public health initiatives are needed to control the spread of scabies as it is not much benign disease to control itself (13). In 2009 a study about the risk factors associated with the spread of scabies among the soldier of Pakistan Army was conducted, in which logistic regression analysis was used to identify the risk factors of scabies infestation. Infrequent bathing, itching in dormitory rooms, infrequent changing of clothes, sharing beds, low education and going away from the barracks were the risk factors thus identified. But according to that study large family size, hospitalization, overcrowding and sharing of towels were not significant risk factors (14).

One of the reasons behind failure of the treatment of scabies is poor compliance of the patients or misdirected information about the treatment, for which patients who live in close contact with the infected or infested person should receive proper guideline from healthcare personnel (15). Most commonly scabies parasite is transmitted by person to person contact, but in more severe form of scabies i.e. crusted scabies it can also be transmitted by bedding or clothing. It is usually diagnosed on clinical basis and treatment is most often consists of topical antiscabietics. In case of sexual contact, further intervention for its treatment may be required (16).

A study was conducted in Bangladesh to determine the risk factors for scabies and it was found that among the understudy factors, decrease in wealth (direct or indirect) and poor hygiene was strongly associated with increased incidence of apparent infestation. But overall rate of scabies infection was almost similar in all socioeconomic classes. Prevalence of scabies in nursing homes was studied by LG Arlian et al. It was found that mites were embedded within the fomites and there was suitable host environment for them. So conclusion was made that a person can get infested with these mites in any contaminated environment either at home, school or work. But very few numbers of mites were found on bedding, floors and furniture of the nursing homes. Fomites are not the major source of infestation at nursing homes but these are in private homes (18). Domesticated animals are another source of transmission of scabies (19). Untrained health personnel, workers unfamiliar with atypical presentation, lack of knowledge about epidemiology of scabies, diagnostic delay, long intubation period and incomplete monitoring are the factors which contribute to the initiation of an epidemic (hospital acquired and nosocomial) (20, 21).

Conclusion:

According to our research scabies is more common among males due to more exposure of males to the external environment. People with weak immune systems and the elderly are more at risk of developing scabies. Scabies is more common among rural communities because of low standard of quality of life and poor health education.

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