Frequency of scabies with relation to season in patients attending The outdoor patient department of a tertiary care hospital

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ABSTRACT

Objective: Scabies is a frequently diagnosed condition at hospitals worldwide, particularly in the developing world. It is the commonest cause of intense itching of skin.

Methodology: This descriptive cross sectional study was conducted at the outpatient department of Ayub Teaching Hospital, from Jan 2012 to Dec 2014. Data of the patients attending the OPDs was collected and grouped month- and season-wise for each year. The descriptive data was presented as tables and graphs.

Results: We found that the frequency of scabies increased over the period of study i.e. 3.8% in 2012 to 4.23% in 2014.The winter season has highest frequency of scabies (28%) as compared to other seasons.

Conclusion: Scabies is a contagious disease and spreads by proximity, therefore its incidence increases in winter.

Keywords: Scabies, Winter, Itching, Poverty, Contagious.

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INTRODUCTION

Scabies is one of the commonest transmissible diseases present worldwide. It is more common in developing world and is a result of infestation with an ectoparasite Sarcoptes scabiei var hominis.[1,2] Infestation with this ectoparasite is highly contagious and causes intense itching / pruritis on the body.[3] The intense itching characteristic of scabies infestation leads to scratching of skin and at times, a broad specturm of secondary bacterial infections of the scratched skin represented by impetigo at one end to septicemia and death at the other end of spectrum.

"Scabere"[4] is a latin word which means "scratch". The association of scabies with the mites was first described by Giovan CosimoBonomo in 1687.[2] Scabies is highly transmissible and is transmitted from person-to-person via skin-to-skin contact as well as via contact with the contaminated bed clothes, towels, and undergarments of a scabies patient.[5,6] Two distinct presentations of scabies have been identified, namely classical scabies and Norwegian or crusted scabies which is more contagious than the classical one.[7]

A number of diagnostic techniques are available for diagnosis of scabies including but not limited to clinical diagnosis, microscopic diagnosis, dermatoscopic diagnosis, antigen detection / PCR-based diagnosis, intra-dermal testing for scabies and antibody detection techniques etc.[8-11]

Scabies is highly prevalent in low socioeconomic population. Pakistani population, being low middle socioeconomic, is at risk for this infection. Studies elucidating frequency of scabies among native population of Abbottabad are lacking. The current study, hence, explores frequency of the infection among outdoor patients visiting Ayub Teaching Hospital Abbottabad.

METHODOLOGY

This is cross section study conducted in Ayub Teaching Hospital, Abbottabad from Jan 2012 to Dec 2014. In this study, the data of outdoor patient department of skin diseases is recorded and all those patients were enrolled who presented with clinical diagnosis of scabies. The age groups were adopted as per WHO guidelines as follow;

Since the study was conducted in Abbottabad, five seasons were recognized as follows:

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RESULTS

From Jan 2012 to Dec 2014, a total of 156765 patients attended the Skin OPD out of which 6301 were clinical diagnosed as scabies. There were 3174 (50.4%) male and 3127 (49.6%) female in scabies patient. The frequency of scabies is almost same between male and female and statistically non-significant as shown in Table 1. During 2012 to 2014, the occurrence rate of scabies is highest in age group<15 years i.e. 3153 (50%)as shown in figure 01. Among different season in Abbottabad, winter is the most common season regarding frequency of scabies and there were 1784 (28%) cases reported in this season during the study period shown in Table 2 and figure 2. The difference of frequency rate among season is also statistically highly significant (p-value <0.000). Similarly, the incidence of the scabies is on the rise with passage of time which shown by the per year frequency rate i.e. 3.89% in 2012, 3.93% in 2013 and 4.23% in 2014 (figure 03).

Age groups	Description
<15	Young and adolescent
15-45	Adult
>45	Old age and elderly

Season	Months
Spring	March, April
Dry Summer	May, June, July
Wet Summer	August, September
Autumn	October, November
Winter	December, January, February

DISCUSSION

The results of this hospital based study showed that patients with scabies made up from 3.89% to 4.23%during time period of 2012 to 2014 of all patients presenting to the skin OPD. Currie et al have also reported a roughly 5% prevalence of scabies in Edinburgh(1815,2000) and Denmark(1900-1970).

A year wise analysis suggested no difference between the age structure of male and female patients with scabies with respect to the frequency of scabies during the study period (p> 0.05). Additionally, there was no statistically significant difference between the two genders with respect to frequency of scabies. However, these results are inconsistent with results reported by Lassa and colleagues who found that scabies was present in approx 8.5% of UK population with females affected more than males. A study from Haripur, Pakistan reported that the prevalence of scabies was more in female patients, lower socio-economic class, un-cemented houses and having domesticated animals at home.

We noted that the highest number of scabies cases occurred

Table 1: Gender distribution of Scabies patients with different age groups (2012-2014)

Age Group (in years)	Gender		Total	P-value
	Male	Female		
<15	1593 (50.5%)	1560 (49.5%)	3153(100.0%)	0.368*
15-45	1122 (49.4%)	1147 (50.6%)	2269(100.0%)	
>45	459 (52.2%)	420 (47.8%)	879(100.0%)	
Total	3174 (50.4%)	3127 (49.6%)	6301(100.0%)	

*Chi-square value is 2.001

Table 2: Seasonal distribution of Scabies patients in different years (2012-2014)

Season	Year			Total	P-value
	2012	2013	2014		
Spring	373 (35.0%)	319 (30.0%)	373 (35.0%)	1065 (100.0%)	0.000*
Dry Summer	378 (31.9%)	393 (33.2%)	413 (34.9%)	1184 (100.0%)	
Wet Summer	219 (23.3%)	322 (34.3%)	399 (42.4%)	940 (100.0%)	
Autumn	410 (30.9%)	519 (39.1%)	399 (30.0%)	1328 (100.0%)	
Winter	625 (35.0%)	550 (30.8%)	609 (34.1%)	1784 (100.0%)	
Total	2005 (31.8%)	2103 (33.4%)	2193 (34.8%)	6301 (100.0%)	

*Chi-square value is 2.001

Fig 2: Age group distribution of Scabies patients (2012-2014)

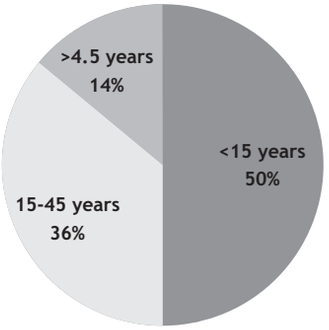


Fig 2: Frequency of scabies patients in different season (2012-2014)

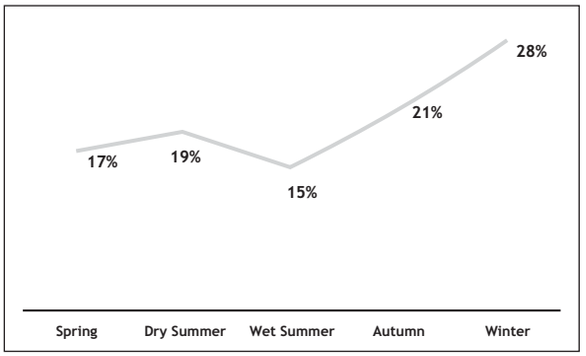
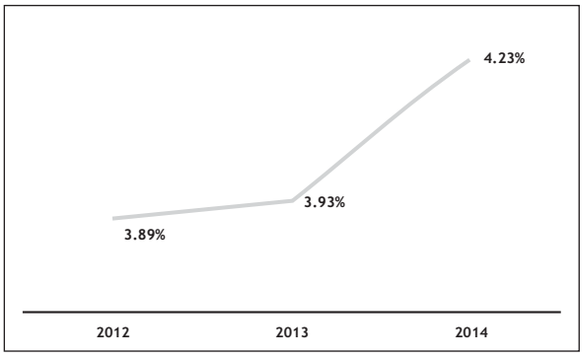


Fig 3: Frequency (%) of Scabies cases in different years (2012-2014) among patients attending Skin OPD.



during winter season over the period of study. The high incidence of scabies could be explained because of the need to stay indoors due to harsh weather conditions which increases the chances of person-to-person disease transmission. This observation is consistent with that by Christopherson who found that the maximum number of scabies cases were diagnosed during winter.

The overall frequency of scabies in our study i.e., 4.02% (average of 03 years between 2012 to 2014) is much less than that reported in Pakistani patients by Mujeeb and colleagues who observed that the prevalence of scabies in patients with different skin diseases was 53.67%, 49.68%, 60.90%, 63.52% and 63.91% in the years 1996, 1997, 1998, 1999 and 2000 respectively. Another study from Rawalpindi, Pakistan reported a 38.15% prevalence for scabies. The authors observed that the prevalence of scabies was higher in winter, in males and in school-going children ($p<0.05$). A recently published study from Iraq reported that scabies was more prevalent in males and during winter months.

Scabies is a common contagious skin disease that has a high infection rate with seasonal variation pronounced more during winter and autumn seasons affecting both genders alike. We have to rely on record of data rather actual observation of patient due to which documenting a more detail clinical, socioeconomic and cultural findings was not possible.

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