

Frequency of Scabies in Male and Female Patients Attending the Skin OPD at Ayub Teaching Hospital (ATH), Abbottabad

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Received: December 09, 2020

Accepted: February 13, 2021

Designation, Pak International Medical College, Peshawar

Abstract

Objective: To compare the mean pain score after fascia iliaca compartment block (FICB) versus femoral nerve block (FNB) for positioning for subarachnoid block for patients undergoing arthroplasty of hip joint

Material and Methods: This prospective study aimed to estimate the frequency of scabies among male and female patients who visit the skin OPD of Ayub Teaching Hospital (ATH), Abbottabad in 2013. For this, a one-year study was conducted at the OPD of ATH, Abbottabad.

Results: The data of the patients who were diagnosed with scabies were collected. Results were analyzed using chi-square test to know the heterogeneity of proportions of scabetic patients in the year 2013. It is found in present study, more cases were reported in winter and autumn as compared to summer-1, summer-2, and spring. While no difference is observed between male scabetic patients and female scabetic patients with the respect of their age and gender.

Conclusion: In conclusion, results demonstrated that the prevalence of scabies may trigger in the winter and autumn seasons while the summer and spring seasons had fewer reported cases.

Keywords: Scabies, Scabetic Patients, *Sarcoptes scabiei*

Conflict of Interest: None

Funding Source: None

Introduction

Developing countries face a high prevalence of skin diseases in all around the world¹. These skin diseases vary from simple acne to scabies and sometimes turn into Stevens-Johnson syndrome, toxic epidermal necrolysis, and purpura fulminans². Patterns of skin disease vary from country to country and region to region due to ecological, genetic issues³. Social customs and hygienic conditions of the person also play a vital role in the prevalence of skin diseases³. Most skin diseases cause a burden on the health department due to high morbidity but not increased mortality ratio⁴. However, scabies is one of the common transmissible diseases effected annually 300 million people all around the world⁵. This ectoparasitic dermatosis occurs due to infestation of *Sarcoptes scabiei* var. *hominis* causes intense itching and pruritis. This itching leads to scratches and results in impetigo. This disease has been reported for more than 2500⁶. Its first description as "Lice in the flesh" was given by Aristotle in 384 to 322 BC however in 1687 Bonomo and Cestoni accurately described the cause of

Scabies in a letter⁶. Generally, scabies is divided into two major categories according to the symptoms; classical scabies and Norwegian or crusted scabies⁷. Transmission of scabies takes place via skin-to-skin contact, towels, bedsheets, and undergarments if these have been contaminated by the infected person within the last 4 to 5 days⁸. The clinical manifestation of the onset of the symptoms may occur after 10 weeks⁹. A variety of methods are available for scabies diagnosis including microscopy, dermatoscopy, intradermal skin test, antigen detection, PCR diagnostic, etc^{9,10}. Variety of treatment-induced in the medical field to eradicate the infection^{11,12}. Pakistan is a low socio-economic country which faces a high prevalence of scabies in recent decades. However, very limited studies were conducted to update the prevalence of scabies in the Abbottabad region of Pakistan. We conducted this study intending to explore the prevalence and proportion of scabetic cases among skin OPD. We also highlighted the distribution of scabies by age, sex, and seasonal patterns.

Identification of a disease is required in pervaded individuals along with the brief treatment in light of the

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Prevalence Rate (%)	3.33	4.45	4.31	3.53	3.57	2.22	3.0	2.79	3.87	4.91	5.5	5.46

fact, just because misdiagnosis can lead the way towards breakout, morbidity, and the burden on the world’s economy.¹¹

About 300 million individuals are infected with scabies every year.¹² The high predominance corresponds with inadequate hygiene, poverty and poor healthful status¹³. Scabies is exceptionally pervasive in Africa, Southeast Asia, Australia, and South America.¹⁴

This paper is aimed to discuss the frequency of Scabies in male and female patients attending the skin OPD in 2013 in Pakistan. The scabies is found more among young adults and the children. So, we aim to explore the frequency of scabies between male and female patients in 2013.

Methodology

This prospective study was conducted in Ayub Teaching Hospital Abbottabad from January 2013 to December 2013. During the three-year framework, all the patients visiting OPD with severe dermatosis were included under the category of clinically diagnosed diabetics. The data was collected with the collaboration of the working unit of Ayub teaching hospital.

According to WHO guidelines patients under age 15 were categorized as children, 15-44 were classified into young and adult groups whereas above 45 were defined as adults and elderly groups.

The classification of the scabetic patients were done on the basis of age and sex. Three groups are derived on the basis of age and two groups are derived on the basis of sex.

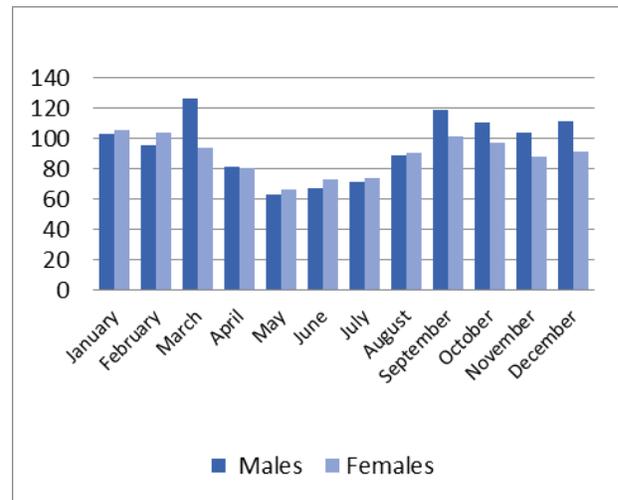
Age (years)	MALE Scabetic Patient	FEMALE Scabetic Patient
>45-Adults and Elderly	166	139
15-44 – Adolescents and young adults	373	421
<15 Children	501	503

A square chic test was performed to study the pervasiveness rate in these five seasons. To compare the age of male and female patient’s chic square analysis was done on scabetic patient.

Results

Classification of scabetic patients on the basis of month-wise breakup, visit the OPD of Ayub Teaching Hospital, Abbottabad is shown on Table I

Chic square (χ^2) is appropriate test, for analyzing the hypothesis in which age structure of male and female scabetic patients were compared.



Comparison of male and female scabetic patients, month-wise in year 2013

Chi-square analysis of data classified into five seasons: Test for heterogeneity of proportions of scabetics in skin OPD patients in five seasons during the year 2013. Table II

No difference was observed between male and female patients with respect to age –structure ($X^2 = 5.04$; $df = 2$; $P > 0.05$)

Discussion

Scabies is a neglected skin disease¹⁵ in Pakistan caused by a parasite known as *Sacroptes scabiei*. The prevalence of scabies among patients shows the persisting epidemic status in Pakistan. It was a hospital based study, where data was collected from the skin OPD of Ayub Teaching Hospital (ATH), Abbottabad. The duration of the study was one year from January 2013 to December 2013. The main objective of the study was to find out the frequency of scabies among male and females patients visiting the

Out of 730294 patients, 2098 patients were diagnosed with scabies who visit the OPD of ATH, Abbottabad in 2013. They constitute 0.29% of the total OPD patients. The $\sum X^2 = 5.04$ indicates that there is no significant difference between male scabetic patients and female scabetic patients with respect to age-structure. It is not in

Table I: The classification of the scabetic patients

MONTHS	Total Skin OPD Patients	Total Scabetic Patients	Male Scabetic Patients			Female Scabetic Patients		
			<15 Children	15-44 Adolescents & Adults	>45 Adults & Elderly	<15 Children	15-44 Adolescents & Adults	>45 Adults & Elderly
January	4680	156	39	25	18	32	28	14
February	3642	162	41	36	4	40	40	1
March	3900	168	34	29	13	45	28	19
April	4281	151	36	30	4	37	35	9
May	4816	172	43	18	20	40	31	20
June	4602	102	31	17	4	30	20	0
July	3958	119	25	20	6	39	26	3
August	4231	118	38	23	1	29	30	2
September	5141	199	45	38	9	51	42	14
October	5090	250	60	50	27	49	48	16
November	4891	269	58	39	41	63	40	28
December	4247	232	51	48	19	48	53	13
TOTAL	53479	2098	501	373	166	503	421	139

accordance with the study of The Health Information Network (THIN) for 9 years (1997-2005) which estimate that the 8.5% of UK population were diagnosed with scabies¹⁷. Out of which 27,776 were females while 22,037 were males.

OPD of ATH, Abbottabad. There were total 156765 patients, out of which 6304 were diagnosed with scabies. So, the scabetic patient constitute 4.02% of the total skin OPD patients. It is in accordance with the data of Edinburgh (1815,2000) and Denmark (1900-1970) where 5% people were diagnosed with scabies.¹⁶

During the year 2013 overall, 2098 patients were diagnosed as scabetic from a total of 730294 patients

Table II: Proportions of scabetics in skin OPD patients in five seasons during the year 2013

SEASON	Scabetic Patients	Non scabetic Patients	Prevalence%	Total
Winter (December to February)	550	12019	4.37 d	12569
Spring (March-April)	319	7862	3.89 ad	1881
Summer-I (May to July)	393	12983	2.93 b	13376
Summer-II (August-September)	317	9055	3.38 ab	9372
Autumn (October-November)	519	9462	5.19 c	9981
Total	2098	51381	3.92	53479

examined at the OPDs of all specialties. The scabetic patients constituted 0.29% of the total OPD patients.

Total five seasons were included in the case study. In the year 2013, little cases were reported in summer-1 and summer-2 while in winter and autumn high cases were

reported. Chi-square analysis was performed to test the proportion of scabetics among skin OPD patients. It ($\sum X^2 = 91.71$) indicates a difference among five seasons.

- The prevalence rate of summer-1 and summer-2 were comparable ($\sum X^2 = 3.59$).
- The prevalence rat in spring and summer-2 were comparable ($X^2=3.36$; $df=1$; $P>0.05$).
- The prevalence rate in spring and winter were comparable ($X^2=2.80$; $df=1$; $P>0.05$).

The prevalence of disease varies from season to season during the whole year. The high frequency was observed during winter. It is in accordance with the study in Denmark¹⁸ which shows that the high cases were reported during winter as compared to summer.

Conclusion

Scabies is an infectious disease in which the parasite excavates inside the skin and cause serious itching. This study is aimed to determine the frequency of scabies among male and female patients. Chi-square test was performed on scabetic patients who visit the OPD of ATH, Abbottabad. It is found in present study more cases were reported in winter and autumn as compared to summer-1, summer-2, and spring. While no difference is observed between male scabetic patients and female scabetic patients with respect of their age and sex.

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Authors Contribution:

^{1,3}Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work & Final approval of the version to be published
^{2,4,5} Drafting the work or revising it critically for important intellectual content;