

Clinical Profile of Scabies at Tertiary Care Hospital

Joy Dhirendranath Das¹, Nisit K Surti²

¹Department of Dermatology, Venereology and Leprosy, Assistant Professor, Vedantaa Institute of Medical Sciences, Saswand, Dahanu (Palghar) Maharashtra

²Department of Dermatology, Venereology and Leprosy, Associate Professor, Vedantaa Institute of Medical Sciences, Saswand, Dahanu (Palghar) Maharashtra

Received:18-10-2022 / Revised 18-11-2022 / Accepted: 23-12-2022

Corresponding author: Dr. Nisit K Surti

Conflict of interest: Nil

Abstract

Introduction: Scabies is a widespread cutaneous ailment that can affect anyone. The female mite burrows into the host's stratum corneum to lay her eggs, which starts the infection. It later transforms into nymphs, larvae, and adults. The webs in fingers, flexor surfaces of the wrist, axillae, elbows, buttocks, and genitalia are the most common locations to find the burrow, which is a wavy line. Primary lesions referred to as papules, vesicles, and nodules with Secondary lesions such as eczematous eruptions, excoriations, infections, and crusting are usually seen.

Aims and Objectives: To analyze the clinical profile and quality of life in scabies.

Methods: A non-interventional cross-sectional study was conducted on 155 patients. Itching, especially at night, a family history of itching, and distinctive lesions like excoriations, papules, and burrows in well-known places like webs in the genitals, fingers, etc. were required for the diagnosis.

Results: A total of 66 (42.5%) students and 31 (20%) housewives were affected. A total of 154 patients (99.3%) had itching as their primary complaint, and 123 patients (79.3%) experienced nighttime itching that made it difficult to sleep. The severity of impairment in quality of life is seen more in questionnaire of C (only a little). The distribution along the sex is slightly more in females as compared with males. 24.5% of adults have no effect on quality of life while moderate is seen in 24.3% adults. No adults had very large effects.

Conclusion: The study concluded that papules are the most commonly occurring lesion in scabies. The study also concluded that scabies decreased the quality of life. However, there was no significant reduction in quality of life.

Keywords: Scabies, Quality Of Life, Papules, Sarcoptes.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

A mite infestation causes a contagious skin disorder known as scabies. The *Sarcoptes scabiei* mite penetrates the skin and produces excruciating irritation. Itches like this are persistent, especially at night [1,2]. Family members and other skin-to-skin contacts pose the most danger because skin-to-skin contact is how the infectious

organism is spread. The World Health Organization (WHO) designated scabies as a neglected skin disease in 2009, and it is a serious health issue in many impoverished nations. People who are infected need to be identified and treated right away since a misdiagnosis can cause outbreaks,

morbidity, and an elevated financial burden [2,3].

Sarcoptes scabiei var. *Hominis* is the mite responsible for scabies. It is an arthropod from the Acarina order. Both the epidermal and dermal layers of people and animals contain *Sarcoptes scabiei*. Scabies is a widespread cutaneous ailment that can affect anyone [4,5]. The female mite burrows into the host's stratum corneum to lay her eggs, which starts the infection. It later transforms into nymphs, larvae, and adults. In the following continents: Africa, Australia, South America, and Southeast Asia, scabies is extremely common. The high frequency is associated with deprivation, low nutrition, homelessness, and poor cleanliness [6,7].

Scabies is typically spread through close contact with someone who is infected. Adults can contract the disease through sexual interaction. Elderly people are considerably more vulnerable, especially if they reside in long-term care institutions where outbreaks can result in high expenses and morbidity [8,9]. Institutional outbreaks, secondary soft tissue and skin infections, and additional expenditures all contribute to the agony. The key to a successful eradication is an early diagnosis and prompt treatment for individuals who are afflicted [9,10].

Between three and six weeks after the first infection, the pruritic reaction and secondary cutaneous symptoms start, and they are driven by inflammation and allergy-like reactivity to mite products. The webs in fingers, flexor surfaces of the wrist, axillae, elbows, buttocks, and genitalia are the most common locations to find the burrow, which is a wavy line. Secondary lesions that also include eczematous eruptions, excoriations, infections, and crusting are referred to as papules, vesicles, and nodules [11-14].

Scabies can be treated in a number of ways. The effectiveness of conventional treatment methods is comparable when

drugs are used as prescribed, according to the evidence. This would include systemic ivermectin, topical crotamiton, and topical permethrin [15,16]. These drugs seldom cause negative side effects. Permethrin 5% cream applied topically is efficient and popular. Usually, the cream is used for two weeks, once a week [17,18].

Materials and methods

Study design

A non-interventional cross-sectional study was conducted on 155 patients during the period of one year who came to the dermatology outpatient department. Patients between the age of 25-60 years are included in the study. Itching, especially at night, a family history of itching, and distinctive lesions like excoriations, papules, and burrows in well-known places like webs in the genitals, fingers, etc. were required for the diagnosis. Confirmed diagnosis was obtained from the hospital. The patients were questioned about the different factors influencing the quality of life by employing a questionnaire.

Inclusion and exclusion criteria

Patients who came to the outpatient department of our hospital who follow the study protocol and give informed consent for the study are included. Patients who provide informed consent for the study are included in the study. Of the total 155 patients included in the study.

Children under the age of five, pregnant and breastfeeding women, and patients with crusted and atypical scabies were disqualified from the trial. Asthma, hypertension, diabetes, epilepsy, other chronic dermatological and systemic disorders, as well as psoriasis, acne, and other similar conditions were also disqualified from the study.

Statistical analysis

The study used SPSS 25 and MS Excel for effective analysis. The continuous

variables were expressed as mean±standard deviation while discrete variables were expressed as mean±standard deviation. Quantitative data were described using descriptive statistics, whereas qualitative data were represented utilizing frequencies. The study used ANOVA for continuous variables while for discrete variables, chi-square statistical analysis was done.

Ethical approval

The patients were given a thorough explanation of the study by the authors. The patients' permissions have been gotten. The concerned hospital's ethical committee has accepted the study's methodology.

Results

Table 1: Demographic characteristics of the patients in this study

Demographic characteristics of patients	Number of patients; n (%)
Age (years)	
25-41	105 (67.7%)
41-61	45 (29.3%)
61-80	5 (3.2%)
Gender	
Females	75 (48.3%)
Males	80 (51.6%)
rural/ urban	
Rural	93 (60%)
Urban	62 (40%)
Literacy	
Illiterate	52 (33.5%)
Literate	103 (66.4%)
Occupation	
Housewife	31 (20%)
Farmer, labor, worker	12 (8.3%)
Student	66 (42.5%)
Job	22 (14.1%)
Professional	2 (1.2%)
Business	4 (2.5%)
Retired	2 (1.2%)
Others	16 (10.3%)
Clinical profile of scabies patients	
Complaints of patients	
Night aggravation	123 (79.3%)
Itching	154 (99.3%)
Skin lesions	131 (84.5%)

Table 1 shows that 93 patients (60%) and 62 (40%) patients, respectively, were from rural and urban areas. 103 patients in total (66.4%) were literate. A total of 66 (42.5%) students and 31 (20%) housewives were affected. A total of 154 patients (99.3%) had itching as their primary complaint, and 123 patients (79.3%) experienced nighttime itching that made it difficult to sleep. 15 patients (9.7%) reported having previously experienced a similar complaint. Only 35 individuals (22.6%) had secondary infections. Involvement of the lymph nodes was observed in 4 (2.5%) instances. Papules were the most frequent lesion, appearing in 84 cases, followed by excoriations in 82 cases.

Past experiences of patients	
Absent	140 (90.3%)
Present	15 (9.7%)
Lymph node involvement	
Present	4 (2.5%)
Absent	151 (97.4%)
Secondary infections	
Absent	121 (78.06%)
Present	35 (22.6%)
Distribution of lesions	
Sites	
Hands	95 (61.3%)
Wrist	44 (28.4%)
Interdigital cleft	114 (73.5%)
Arms	49 (31.6%)
Abdomen	52 (33.5%)
Thorax	12 (7.7%)
Forearms	50 (32.3%)
Elbow	17 (10.9%)
Axilla	20 (12.9%)
Foot	15 (9.7%)
Legs	30 (19.4%)
Nipple	6 (3.9%)
Perimammary	22 (14.2%)
genitals	63 (40.6%)
Morphology of lesions	Number
Vesicles	7
Papules	84
Eczematization	50
Burrow	11
Excoriation	82
Nodules	6

Maximum 52% adults had a small effect on the quality of life (table 2). The severity of impairment in quality of life is seen more in questionnaire of C (only a little). The distribution along the sex is slightly

more in females compared with males. 24.5% of adults have no effect on quality of life while moderate is seen in 24.3% adults. No adults had very large effects.

Table 2: Quality of Life impairment in this study

Questions	Problem in sexual relationship	Feeling embarrassed	Affected the work activities	feeling depressed	Affected social contacts
Severity of Impairment in quality of life (n= 155)					
A (very much)	0	3 (1.9%)	3 (1.9%)	0	0
B (quite a lot)	20 (12.9%)	21 (13.5%)	25 (16.1%)	25 (16.7%)	20 (12.9%)
C(only a little)	74 (47.3%)	80 (51.6%)	87 (56.1%)	75 (48.3%)	80 (51.6%)
D(not at all)	61 (39.3%)	51 (32.9%)	40 (25.8%)	60 (38.7%)	55 (35.4%)
Sex wise distribution of impairment (n=155)					

Male (n= 77)	52 (67.5%)	50 (64.9%)	63 (81.8%)	50 (64.9%)	55 (71.4%)
Female (n=78)	43 (55.1%)	53 (67.9%)	52 (66.6%)	43 (55.1%)	41 (52.5%)
Total (n=155)	95 (61.2%)	97 (62.5%)	118(76.1%)	89 (57.4%)	97 (62.5%)
P value	0.546	0.808	0.578	0.622	0.375

Discussion

Scabies is an infectious disease that spreads quickly from individual to individual, especially in those with poor hygiene. It is mostly associated with poverty and overcrowding. We encounter a lot of patients with scabies who are from rural areas. In both urban and rural parts of India, the prevalence ranges from 13.5% to 60%. Due to itchiness, many people report having trouble sleeping and having trouble enjoying their leisure and work activities. There is hardly any research on patient life quality in India. The objective is to investigate the demographic information, clinical profile, and life quality in scabies patients [19,20]

Nair et al., state that scabies is a serious and frequently occurring health issue that is very contagious. Unless it is treated promptly and effectively, it can negatively impact patients and their families' quality of life by causing work-related issues, difficulty sleeping, and psychosocial problems. This might be easily avoided if scabies patients are diagnosed and managed as soon as possible. Adequate awareness is also required to prevent recurrences. Scabies can be detected early even at outlying hospitals thanks to the patient profile [20].

Scabies not only causes skin sores but also significant morbidity and social shame. However, people with scabies have not had their quality of life (QoL) examined. The purpose of the study was to evaluate the Dermatology Life Quality Index (DLQI) questionnaire's practicality and internal consistency while evaluating the effect of scabies on participants' QoL. According to the study's findings, the patient's QoL was only slightly impacted by scabies. Sulphur might be thought of as

an effective treatment for scabies patients [21].

In populations with few resources in underdeveloped nations, scabies is quite common and is linked to significant morbidity. Rarely has the impact of parasitic skin illness on individuals' life quality been studied. In order to evaluate the life quality of children and adults suffering from scabies who lives in an urban slum in Fortaleza, the state capital of Ceará State, Brazil, a modified version of the Dermatology Life Quality Index (mDLQI) was created. According to the study's findings, scabies significantly reduced the quality of life for both children and adults who lived in a slum. Women suffered the most from constraints [22].

There are consequences for control measures at the community level due to the characteristics of endemic scabies that are unique in resource-poor and deprived populations. These distinct elements are discussed in a recent study. In many places with few resources, scabies is endemic and has a prevalence of 20% or more [23]. Social attitudes, access to healthcare, migration, hygienic conditions, congestion, and housing circumstances all have an impact on the transmission of diseases. Most commonly in youngsters, endemic scabies causes severe infestations, problems, and aftereffects. It is normal for people with scabies to lose sleep due to scratching. Acute post-streptococcal glomerulonephritis and subsequent group A streptococcal infections are complications. Shame, limitations on free time, and stigmatization are frequent. Scabies can be treated with a number of topical medications, but eradicating them from a population is a difficult undertaking [24].

Scabies is indeed a neglected illness that needs to be recognized as a serious public health issue since it contributes to morbidity in several communities with limited resources. Future research is required in the areas of epidemiology, transmission dynamics, clinical considerations, sustainable management, and socioeconomic considerations in resource-limited populations [25,26].

Conclusion

The study concluded that scabies mostly occurs in interdigital cleft, forearms and hands. The study also shown that there are various types of lesions including papules, excoriation and eczematization and many more. The study concluded that papules are the most commonly occurring lesion in scabies. Further, the study has concluded that the scabies decreased the quality of life. However, there was no significant reduction in quality of life but few patients had severe impairment of quality of life. The author suggests that there is a need to conduct counseling sessions and mental support. This conclusion would contribute significantly in the overall management of scabies.

References

1. Swe PM, Christian LD, Lu HC, Sriprakash KS, Fischer K. Complement inhibition by *Sarcoptes scabiei* protects *Streptococcus pyogenes* - An in vitro study to unravel the molecular mechanisms behind the poorly understood predilection of *S. pyogenes* to infect mite-induced skin lesions. *PLoS Negl Trop Dis*. 2017 Mar;11(3):e0005437.
2. Micali G, Lacarrubba F, Verzi AE, Chosidow O, Schwartz RA. Scabies: Advances in Noninvasive Diagnosis. *PLoS Negl Trop Dis*. 2016 Jun;10(6):e0004691.
3. Stamm LV, Strowd LC. Ignoring the "Itch": The Global Health Problem of Scabies. *Am J Trop Med Hyg*. 2017 Dec; 97(6):1647-1649.
4. Ramos-e-Silva M, Giovan Cosimo Bonomo (1663–1696): Discoverer of the etiology of scabies. *Int J Dermatol*. 1998;37:625–30.
5. Brook I. Microbiology of secondary bacterial infection in scabies lesions. *J Clin Microbiol*. 1995;33:2139–40.
6. Hengge UR, Currie BJ, Jager G, Lupi O, Schwartz RA. Scabies: A ubiquitous neglected skin disease. *Lancet Infect Dis*. 2006;6:769–79.
7. Heukelbach J, Feldmeier H. Scabies. *Lancet*. 2006;367:1767–74.
8. Walton SF, Currie BJ. Problems in diagnosing scabies, a global disease in human and animal populations. *Clin Microbiol Rev*. 2007;20:268–79.
9. Chosidow O. Scabies and pediculosis. *Lancet*. 2000;355:819–26.
10. Chosidow O. Clinical practices. Scabies. *N Engl J Med*. 2006; 354: 1718–27.
11. Neynaber S, Wolff H. Diagnosis of scabies with dermoscopy. *CMAJ*. 2008;178:1540–1.
12. Dressler C, Rosumeck S, Sunderkötter C, Werner RN, Nast A. The Treatment of Scabies. *DtschArztebl Int*. 2016 Nov 14;113(45):757-762.
13. Werbel T, Hinds BR, Cohen PR. Scabies presenting as cutaneous nodules or malar erythema: reports of patients with scabies surreptitiously masquerading as prurigo nodularis or systemic lupus erythematosus. *Dermatol Online J*. 2018 Sep 15;24(9)
14. Vasanwala FF, Ong CY, Aw CWD, How CH. Management of scabies. *Singapore Med J*. 2019 Jun;60(6):281-285.
15. Anderson KL, Strowd LC. Epidemiology, Diagnosis, and Treatment of Scabies in a Dermatology Office. *J Am Board Fam Med*. 2017 Jan 02; 30(1):78-84.
16. Chouela E, Abeldano A, Pellerano G, Hernandez MI. Diagnosis and

- treatment of scabies: A practical guide. *Am J Clin Dermatol.* 2002;3:9–18.
17. Dupuy A, Dehen L, Bourrat E, et al. Accuracy of standard dermoscopy for diagnosing scabies. *J Am Acad Dermatol.* 2007;56:53–62.
 18. Neynaber S, Muehlstaedt M, Flaig MJ, Herzinger T. Use of superficial cyanoacrylate biopsy (SCAB) as an alternative for mite identification in scabies. *Arch Dermatol.* 2008; 144: 114–5.
 19. Kandi V. Laboratory Diagnosis of Scabies Using a Simple Saline Mount: A Clinical Microbiologist's Report. *Cureus.* 2017 Mar 19;9(3):e1102.
 20. Nair P. A., Vora R. V., Jivani N. B., & Gandhi S. S. A Study of Clinical Profile and Quality of Life in Patients with Scabies at a Rural Tertiary Care Centre. *Journal of Clinical and Diagnostic Research: JCDR,* 2016;10(10): WC01–WC05.
 21. Jin-gang A., Sheng-xiang X., Sheng-bin X., Jun-min W., Song-mei G., Ying-ying D., Jung-hong M., Qing-qiang X., & Xiao-peng W. (2010). Quality of life of patients with scabies. *Journal of the European Academy of Dermatology and Venereology: JEADV,* 2010;24(10): 1187–1191.
 22. Worth C., Heukelbach J., Fengler G., Walter B., Liesenfeld O., & Feldmeier H. Impaired quality of life in adults and children with scabies from an impoverished community in Brazil. *International Journal of Dermatology,* 2012;51(3): 275–282.
 23. Heukelbach J., Mazigo H. D., & Ugbomoiko U. S. Impact of scabies in resource-poor communities. *Current Opinion in Infectious Diseases,* 2013;26(2): 127–132.
 24. Heukelbach J., Wilcke T., Winter B., & Feldmeier H. Epidemiology and morbidity of scabies and pediculosiscapitis in resource-poor communities in Brazil. *British Journal of Dermatology,* 2005;153(1): 150–156.
 25. Hay R. J., Steer A. C., Engelman D., & Walton S. Scabies in the developing world—its prevalence, complications, and management. *Clinical Microbiology and Infection,* 2012;18(4): 313–323.
 26. Chakroborty B., Parvin S., Hossain M. M., & Hossain M. J. Self- Examination of Breast of the Students of Nursing College in Bangladesh. *Journal of Medical Research and Health Sciences,* 2022;5(12): 2339–2344.