

Assessment of Clinical Profile and Quality of Life in Scabies Patients at a Tertiary Care Centre

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Abstract

Introduction. Scabies is a highly contagious parasitic skin infestation caused by *Sarcoptes scabiei* mite causing social stigma in patients owing to skin lesions over the exposed body-parts. The present study was aimed at assessing the quality of life in scabies patients. **Material and Methods:** This is a prospective, observational, non-interventional study conducted by the outpatient Department of Dermatology at Subbaiah Institute of Medical Sciences, Shimogaduration of 6 months period among 70 patients with scabies were selected among all the newly diagnosed scabies cases who attended dermatology OPD. **Results:** The total 70 new scabies patients attending skin OPD during 6month duration period were included in the study. The most common age group affected was 21-30 years in 33 (47.1%) patients. Out of total 70 patients, 36 (51.42%) were males and 34 (48.57%) were females. Total 27 (38.57%) students were affected followed by 15 (21.4%) housewives and least were retired person. Total 69 (98.5%) patients presented with itching and 48 (68.57%) patients had night aggravation of itching leading to sleep disturbance. Multiple body parts were affected in almost all patients. Most common site affected was interdigital cleft in 68.57% cases and least were face. The most common lesion seen was papules in 56 (80.0%) cases followed by excoriations in 55 (78.5%) cases. In children, the domain affected maximum was work at school in 8 (28.5%) followed by play and feeling of embarrassment in 7 (25%) cases each. Children reported no or minimal effect on quality of life. None of the patient had severely impaired quality of life. In adults, the feeling of embarrassment was the most common manifestation in 30.9% of the patients followed by difficulty in working at the work place in 19% of the patients. The least commonly affected domain was feeling of depression which was seen only in 14.2% of adults. **Conclusion.** Scabies moderately affected the quality of life of the patients in the present study in the form of feeling of embarrassment, stigmata and shame associated with disease.

Keywords: Scabies, *Sarcoptes scabiei*, Clinical Profile, Quality of Life

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Introduction

Scabies is a common dermatologic problem caused by *Sarcoptes scabiei* mite. Although the infectious agent is seen worldwide, it is endemic in underprivileged, resource poor areas. [1] Prevalence of scabies is variable around the world. It has been calculated to be in the range of 0.27% to 46%. Every year around 300 million people suffer from scabies. Incidence in India, ranges from 13% in rural areas and 59% in urban. [2] It infects people of all age groups and can impair the quality of life considerably. Scabies is highly contagious and affects all races and social classes across the world. [3] The lesions of scabies often get eczematized and infected by bacteria such as *Staphylococcus aureus* and *Streptococcus pyogenes* and can lead to potentially fatal and serious indirect complications, including renal failure, invasive bacterial infections and chronic rheumatic heart disease. [4] Various factors which affect transmission includes overcrowding, poor hygiene and social attitude. Scabies is a remarkable global health burden. The greatest burden has been displayed in East and South-East Asia, Oceania and Tropical Latin America. [5] Institutions spend significant amount of

money, time and resources to manage the scabies outbreaks. [6] As it is not possible to eliminate scabies, the only option to reduce the burden of the disease is to limit the resultant physical and mental morbidities. [7] Morbidity is not only reflected by the degree of clinico-pathological manifestations but it also includes the emotional aspects of the disease process. Both physical and psychological aspects of morbidity may decrease the quality of life. [8] Patients with scabies suffer from social stigma significantly because its mode of transmission is mostly by direct person-to-person contact. It is not difficult to imagine, therefore, that scabies has a significant adverse impact on the quality of life (QoL) in such patients. Only a few studies have been conducted on the Clinical Profile and Quality of Life on scabies patients. Purpose of the present study was to examine the Quality of Life of the patients about the scabies infection.

Material and Methods

In this prospective, observational, non-interventional study conducted by the outpatient Department of Dermatology at Subbaiah Institute of Medical Sciences, Shimoga during 6 months period among 70 patients with scabies were selected among all the newly diagnosed scabies cases who attended dermatology OPD. Clinical diagnosis was made on the basis of characteristic clinical symptomatology and clinical signs of papules, excoriation marks and burrows.

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Inclusion criteria: Patients of either gender age between 5 to 60 years with scabies disease.

Exclusion criteria: Pregnant and lactating females, children less than 5 year of age and patients having atypical skin lesions and crusted scabies were excluded from the study.

Patients who had other chronic skin or systemic disease like psoriasis, atopic dermatitis, diabetes mellitus were excluded from the study.

Relevant data on demographic details, clinical findings, family history and relevant past history were noted in predesigned proforma. A pre-validated questionnaire about the quality of life impairment was distributed to the patients so as to be filled as a part of the study. Modified Dermatology Life Quality Index Questionnaire (mDLQI) for scabies by Worth et al. was minimally modified as per the requirement of Indian population[5]. Subsequently, a detailed analysis of the data was carried out.

Modified Dermatological Life Quality Questionnaire In Adult Scabies Patients

1. During the last week did you feel embarrassed or ashamed because of your skin condition: A/B/C/D
2. During last week did your skin condition affect your work activities: A/B/C/D
3. During the last week did your skin condition cause problem in your sexual relationship: A/B/C/D
4. During the last week did your skin condition affect your social contacts A/B/C/D

5. During the last week did u feel inferiority complexion or depressed A/B/C/D

Modified Dermatological Life Quality Questionnaire In Children Scabies Patients

1. During the last week did you feel embarrassed or ashamed because of your skin condition: A/B/C/D
2. During last week did your skin condition affect your school work: 4/3/2/1
3. During last week did your skin condition affect your playing: 4/3/2/1
4. During the last week did you have trouble with other children calling you names or teasing you because of your skin condition: 4/3/2/1
5. During the last week did your skin condition affect your friendships 4/3/2/1

1 Not at all, 2 Only a little, 3 Quite a lot and 4 Very much.

Statistical analysis

The descriptive statistics were used to describe the quantitative data and qualitative data was presented using frequency and analysed using Chi-Square test.

Results

In our study total 70 new scabies patients attending skin OPD during 1year duration period were included in the study. The most common age group affected was 21-30 years in 33 (47.1%) patients in table1.

Table 1: Incidence of chronic bacterial folliculitis in different age groups

Age in years	No. of patients
5-10	26 (37.1%)
11-20	2 (2.8%)
21-30	33 (47.1%)
31-40	7 (10.0%)
41-50	1 (1.4%)
>51	1 (1.4%)
Total	70 (100)

Table 2: Distribution of gender

Gender	Number of patients (Percentage)
Males	36 (51.42%)
Females	34 (48.57%)
Total	70 (100%)

In table 2, out of total 70 patients, 36 (51.42%) were males and 34 (48.57%) were females.

Table 3: Distribution of occupation of the patients

Occupation	Number of patients (Percentage)
Student	27 (38.57%)
Housewife	15 (21.4%)
Worker, Farmer, Laborer	8 (11.4%)
Business	2 (2.8%)
Professional	1 (1.42%)
Job	7 (10.0%)
Retired	1 (1.42%)
Others	9 (12.8%)
Total	70 (100%)

In table 3, total 27 (38.57%) students were affected followed by 15 (21.4%) housewives and least were retired person.

Table 4: Presenting complaints of scabies patients

Complaints	Number (%)
Itching	69 (98.5%)
Night Aggravation	48 (68.57%)
Skin Lesions	55 (78.5%)
Total	70 (100%)

In table 4, total 69 (98.5%) patients presented with itching and 48 (68.57%) patients had night aggravation of itching leading to sleep disturbance.

Table 5: Distribution of lesion of scabies on different body parts of the patients

Sites	No. (%)
Face	4 (5.7%)
Interdigital cleft	48 (68.57%)
Axilla	10 (14.2%)
Arms	22 (31.4%)
Elbow	7 (10.0%)
Forearms	19 (27.1%)
Hands	40 (57.14%)
Chest	4 (5.7%)
Abdomen	20 (28.57%)
Buttocks	12 (16.6%)
Genitals	29 (41.4%)
Legs	15 (21.42%)
Foot	8 (11.42 %)

In table 5, multiple body parts were affected in almost all patients. Most common site affected was interdigital cleft in 68.57% cases and least were face.

Table 6: Morphology of lesion of scabies

Sites	No. (%)
Nodules	3 (4.2%)
Vesicles	9 (12.8%)
Burrows	11 (15.7%)
Eczematization	37 (48.5%)
Excoriations	55 (78.5%)
Papules	56 (80.0%)

In table 6, most common lesion seen was papules in 56(80.0%) cases followed by excoriations in 55 (78.5%) cases.

Table 7: Impairment in quality of life in children

Severity of Impairment in quality of life (n=28)					Sex wise distribution of impairment (n=28)		
Questions	A (very Much)	B (quite a lot)	C (only a little)	D (not at all)	Male (n=16)	Female (n=12)	Total (n=28)
Feeling embarrassed	0	0	6 (21.4%)	22 (78.5%)	4(25.0%)	3(25.0%)	7(25.0%)
Affected studies	0	3(10.7%)	9 (32.1%)	16 (57.1%)	5(31.2%)	3(25.0%)	8(28.5%)
Affected playing	0	3(10.7%)	10(35.7%)	15(53.5%)	3(18.7%)	3(25.0%)	6(21.4%)
Experienced teasing	0	2 (7.14%)	7 (25.0%)	19 (67.8%)	3(18.7%)	1 (8.3%)	4(14.2%)
Affected friendship	0	1(3.5%)	2(7.1%)	25(89.2%)	1(6.25%)	2(16.6%)	3(10.7%)

In table 7, in children, the domain affected maximum was work at school in 8 (28.5%) followed by play and feeling of embarrassment in 7 (25%) cases each. Children reported no or minimal effect on quality of life. None of the patient had severely impaired quality of life.

Table 8: Impairment in quality of life in adult patients

Severity of Impairment in quality of life (n=42)					Sex wise distribution of impairment (n=42)		
Questions	A (very Much)	B (quite a lot)	C (only a little)	D (not at all)	Male (n=20)	Female (n=22)	Total (n=42)
Feeling embarrassed	1(2.4%)	5(12%)	21(50%)	15(35.6%)	7 (35%)	6 (27.2%)	13 (30.9%)
Difficulties at work	1(2.4%)	6(14.3%)	23(54.8%)	12(28.5%)	5 (25%)	4 (13.6%)	8 (19.0%)
Sexual relationship	0	5(12%)	20(47.7%)	17(40.3%)	3 (15%)	4 (18.1%)	8 (19.0%)
Social contacts	0	7(16.7%)	21(50%)	14(33.3%)	3 (15%)	4 (18.1%)	7 (16.6%)
Feeling depressed	0	4(9.6%)	21(50%)	17(40.4%)	2 (10%)	4 (18.1%)	6 (14.2%)

In table 8, in adults, the feeling of embarrassment was the most common manifestation in 30.9% of the patients followed by difficulty in working at the work place in 19% of the patients. The

least commonly affected domain was feeling of depression which was seen only in 14.2% of adults.

Discussion

Despite scabies being a public health problem in the developing countries for years, still there has been little progress in its control around the world. Scabies transmission via skin to skin contact takes around 20 minutes, so it spreads mainly within the families.[9] It usually affects the following regions more than others: wrist, hand, lower leg, ankle, and feet. 93% of infants were affected in more than one body region, while only 80% of grown-ups have shown the same.[10] Clinical manifestations of scabies take place from 2 to 6 weeks after initial infestation; however, reinfestation can occur rapidly within 24-48 hours. [11] Most cases of scabies were diagnosed by a history of generalized itching that has been reported to be worst at night. Pruritic papules have been seen in many cases on different sites, such as webs of the fingers, flexor of the wrists, and extensor of the elbows. To enhance the diagnosis of scabies, physicians do a microscopic examination to look for the mites of *Sarcoptes scabiei*. The number of mites that has been reported in many patients is 10-12. [12] Complications related to scabies are infections, furuncles, impetigo, adenitis, and phlegmons. According to the European guideline for the management of scabies, reducing the risk of transmutation of scabies has been described by avoiding any type of contact with patients and limiting sexual contact, and being always hygienic when living in a crowded area.[13]In our study, the most common age group affected in our study was 21-30 years in 33 (47.1%) patients followed by 5-10 years of age group in 26 (37.1%) patients. This is in accordance with the study conducted by Nair PA et al. wherein it was found in 44.11% of patients in the 21-40 years age group followed by 39.2% patients in 5-12 years age group. [14] In contrast to the study conducted by Das S et al. wherein 9% of the patients were in the 0-5 years age group, 22% in both 6-15 years and 16-30 years of age group.[15]In the present study incidence of scabies was approximately same in both sexes i.e. 51.42 % males and 48.57% females. A study conducted by Sambo et al. reported equal incidence in both males and females (1:1) whereas in the study by Das et al. males 70% outnumbered females 30%.[16,17] Itching is particularly severe at night in scabies and thus sleep disturbances are common. Nocturnal aggravation of itching was reported by 82% of the patients leading to sleep disturbances and this is similar to that reported by Nair PA et al. [18]The itching has been found to cause moderate to severe sleep disturbance in the vast majority of sufferers and as the scabetic skin characteristically include exposed areas of skin, social stigma is an issue.[19] There has been an increasing interest in assessing the quality of life of patients with skin diseases as well as in the development of methods of assessment. [20]In our study, most of the patients had multiple body sites infected with scabies of which the primary sites in decreasing order were inter-digital clefts 68.5%, hands 57.14%, genitals 41.4%, arms 31.4% and least were face. These findings are in accordance with a study conducted by Das S et al., [21]Lesions of scabies are due to allergic reaction to the mites and are usually bilateral, commonly seen on finger webs, side of fingers, flexor surface of wrist, along the waistline, elbow, anterior axillary fold, genitalia, buttocks, umbilicus and areola of female breast. [22]In the developing world, scabies has become an accepted part of everyday life. Infestation with scabies significantly affect the quality of life. Worth et al., have suggested that in many areas where scabies is endemic, quality of life is so poor that people do not consider scabies to be a problem and infestation is considered routine. [23]In our present were papules 80% followed by excoriations 78% and the least common were nodules 4.2%. These findings were comparable to the findings of a study conducted by Nair PA et al., [24] Eczematization and burrows infection was seen in 48.5% and 15.7% of the patients respectively which was similar to that in the study conducted by Das S et al.[13]wherein eczematization was present in 24% of the patients, although these values are much lower than the frequencies reported by a similar study conducted by Nair PA et al. [12]. Lesser complication rate in this study, may be attributed to the

underreporting by the patients due to difficult geography of the region, poverty, distance of the health centres from their homes or because of treatment at primary health care levels or by the quacks. It was observed in the present study that the two prime activities of children i.e. mainly outdoor sports/games and academics/study were adversely affected owing to intense itching of scabetic sites in 21.4% and 28.5% children respectively. This sustains that itching in scabies definitely hampers the quality of life in children. Teasing by fellow companions was seen in 14.2% of the children. Discord in friendship and social embarrassment due to scabies was reported in 10.7% and 25% of the children respectively. In the present study, the most commonly affected domain, as reported by the adult patients, was the feeling of embarrassment 30.9% followed by difficulty at work 19%, adversities in sexual relationship 19%, disharmony with social contacts 7% while depression was reported by only 14.2% of the patients. Above observations can be supported by the fact that poverty, ignorance, low education, poor hygiene, overcrowding increases the vulnerability of the disease. Work is affected due to excessive itching and disturbance of sleep. In country like ours where majority of population is living on daily wages, major domain affected in the form of work activity is going to affect patient's livelihood. It is very important to diagnose the condition at the earliest, improve hygienic conditions and educate and spread awareness about the disease. Children reported no or minimal effect on quality of life. None of the patient had severely impaired quality of life. As per Worth et al., categorization of mDQLI showed that about one-fifth of the patients did not feel any restriction. Scabies had a mild effect on quality of life in 28.1% (adults) and 39.7% (children). A moderate impact on quality of life was seen in 36.8% of adults and 25.9% of children and a large or very large effect on their quality of life was seen in 13.9% of patients with scabies.⁽⁷⁾Scabies infestation has a negative impact on the quality of life for infected individuals (similar to that of psoriasis) resulting in substantial stigmatization and ostracism as well as affecting social and sporting activities[20].

Limitations of the study: Participants were diagnosed only clinically. Authors did not employ any laboratory or microscopic tests for diagnosis. Small sample size was another limitation. Number of cases with secondary complications were less in this study.

Conclusion

Scabies moderately affected the quality of life of the patients in the present study in the form of feeling of embarrassment, stigmata and shame associated with this disease. All these findings were more frequently observed among adult patients as compared to children. More attention should be paid to this contagious disease, its sequelae and concomitant morbidities despite the disease not being life threatening.

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