



## CLINICAL BURDEN OF SCABIES OBSERVED IN AN URBAN HEALTH CARE CENTRE

### Dermatology

|                               |                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dr. A. Thillaikkarasi*</b> | Assistant professor, Department of Dermatology, Venereology & Leprosy, Saveetha Medical College, Thandalam, Chennai *Corresponding Author |
| <b>Dr. Neha Mariam Joseph</b> | Post graduate, Department of Dermatology, Venereology & Leprosy, Saveetha Medical College, Thandalam, Chennai                             |
| <b>Dr. Sharada R.G.</b>       | Assistant professor, Department of Dermatology, Venereology & Leprosy, Saveetha Medical College, Thandalam, Chennai                       |

### ABSTRACT

**Introduction:** Scabies is a pruritic skin condition caused by a mite named as *Sarcoptes scabiei*. Scabies is a contagious disease which can spread easily to the family members, child care groups, school children and nursing homes through close physical contact. Scabies causes significant burden on the health of communities. Most patients of scabies complain of sleep and work disturbances due to the severe itching, and also some patients may develop complications such as secondary infections. Limited studies have been done in India regarding the impact of quality of life in scabies patients. **Aim:** To study the clinical burden of scabies patients attending Dermatology OPD at Saveetha Medical College. **Methodology:** Eighty-six patients having clinical history of scabies attending Dermatology OPD at Saveetha Medical College & Hospital was included in this study. Clinical details regarding age, sex, mode of transmissions of disease, quality of life, severity of diseases and associated complications was obtained and a detailed dermatological examination was done in these patients. An informed consent was obtained from the included patients. All findings were recorded on specialized designed proforma. **Result:** In our study we observed eighty-six cases of scabies, of which 41 (47.67 %) were males and 45 (52.33%) were females. The most common age group affected were 15-30 years (37.20%) of patients. Secondary infection occurred in 27 (31.40%) patients. More than fifty percentage of patients had some impact on quality of life. **Conclusion:** Successful outcome towards the treatment and management of scabies relies on many factors like adequate education, positive attitude and hygienic practices towards the disease. Our study concludes that knowledge, positive attitude and proper treatment is required for reducing the disease burden.

### KEYWORDS

Scabies, *Sarcoptes scabiei*, Quality of life

#### INTRODUCTION:

Scabies is one of the most common skin diseases seen in developing countries. It is a condition that affect families and have the greatest impact on young children and adults. The incidence, prevalence and complications of scabies make it a significant health problem in the developing countries and can impact the quality of life in these patients.<sup>[1-3]</sup>. We aim to study the quality-of-life index in patients with scabies in this study.

#### MATERIALS AND METHODS:

It is a cross-sectional study conducted in the Department of Dermatology, in a tertiary care center. The study was conducted over a period of 6 months, after obtaining ethical clearance from the ethical committee of the hospital. In this study we included all newly diagnosed patients attending skin OPD with clinical features suggestive of scabies. Adults and children greater than 5 years of age with diagnosis of scabies were included. Diagnostic criteria included itching, most severe at night, family history of itching, and characteristic lesions like papules, excoriations and burrows at classical sites like finger webs, genitals, etc. An informed consent was taken from all included patients. Data on demographic details, clinical findings, family history and past history was noted in predesigned proforma.

Questionnaire on the quality-of-life impairment was given to the patients to be filled and detailed analysis was done. These questions were based from Modified Dermatology Life Quality Questionnaire (mDLQI) for scabies by Worth et al.

#### Modified Dermatological Life Quality Questionnaire in Adult Scabies Patients

1. Did you feel embarrassed or ashamed because of your skin condition 0/1/2/3
2. Did your skin condition affect your work activities 0/1/2/3
3. Did your skin condition affect your work activities 0/1/2/3
4. Did your skin condition cause problem in your sexual relationship 0/1/2/3
5. Did u feel inferiority complexion or depressed 0/1/2/3

#### Modified Dermatological Life Quality Questionnaire in Pediatric Scabies Patients

1. Did you feel embarrassed or ashamed because of your skin condition 0/1/2/3
2. Did your skin condition affect your school work 0/1/2/3
3. Did your skin condition affect your playing 0/1/2/3
4. Did you have trouble with other children calling you names or teasing you because of your skin condition 0/1/2/3
5. Did your skin condition affect your friendship 0/1/2/3

3-Very much 2 – Quiet a lot 1 –only little effect 0- Not affected

Quality of life in patients of scabies calculated according to their questionnaire and answers. Total score was calculated by summing the score of each of the 5 questions resulting in a possible maximum of 15 and minimum of 0.

- 0-1 -- no effect at all  
2-5 -- mild quality of life impairment  
6-10 -- moderate impairment  
11-15 -- severe impairment

#### RESULT:

This clinical study included 86 cases of scabies patients selected from outpatient clinic in Dermatology, Venereology and Leprosy Department. Out of total 86 patients, 41(47.67%) were males and 45(52.33%) were females (Table 1).

The most common age group affected were 15 -30 years which comprised of 32 (37.20%) patients (Table 2).

Among the study group involved, students were highest in number 44(51.16%), followed by 13(15.16%) housewives. (Table3).

#### Clinical profile of patients with scabies:

Among the 86 patients 72(83.7%) of them had itching with nocturnal aggravation leading to sleep disturbance. Distributions of typical skin lesions were present only in 67 (77.90%) patients (Table 4).

Most of patients did not experience similar complaints in the past. Only 8 patients had past history of scabies (Table 5).

Secondary infections were observed in 27(31.40%) cases. Among them only 10 patients had lymph node involvement (Table 6).

**Table 1:** Sex distribution

| MALE        | FEMALE      |
|-------------|-------------|
| 41 (47.67%) | 45 (52.33%) |

**Table 2:** Age distribution

| AGE   | NUMBER (%)  |
|-------|-------------|
| 5-14  | 23 (26.74%) |
| 15-30 | 32 (37.20%) |
| 31-45 | 22 (25.58%) |
| >45   | 9 (10.48%)  |

**Table 3:** Occupation

| OCCUPATION | NUMBER (%)  |
|------------|-------------|
| Students   | 44 (51.16%) |
| Housewife  | 13 (15.11%) |
| Laborer    | 9 (10.46%)  |
| Business   | 5 (5.81%)   |
| Others     | 15 (17.46%) |

**Table 4:** Clinical complaints

| COMPLAINTS        | NUMBER (%)  |
|-------------------|-------------|
| Itching           | 86 (100%)   |
| Night aggravation | 72 (83.72%) |
| Skin lesions      | 67 (77.90%) |

**Table 5:** Past History

| PAST HISTORY | NUMBER (%) |
|--------------|------------|
| Present      | 8 (9.3%)   |
| Absent       | 78 (90.7%) |

**Table 6:** Secondary infections

| SECONDARY INFECTION | NUMBER (%)  |
|---------------------|-------------|
| Present             | 27 (31.40%) |
| Absent              | 59 (68.60%) |

**Impairment in quality of life in children:**

In paediatric group, 39.13% of cases (9 patients) had difficulties in doing school work followed by 26.08% of cases (6 patients) had difficulty engaging in play.

**Table 7: Impairment in quality of life in children**

| Severity of Impairment in quality of life (n=23) |               |                 |                   |                | Impairment (n=23) |
|--------------------------------------------------|---------------|-----------------|-------------------|----------------|-------------------|
| Questions                                        | 3 (very much) | 2 (quite a lot) | 1 (only a little) | 0 (not at all) | Total (n = 23)    |
| Feeling embarrassed                              | 0             | 0               | 5                 | 18             | 5(21.73%)         |
| Affected school work                             | 1             | 3               | 5                 | 14             | 9(39.13%)         |
| Affected playing                                 | 0             | 2               | 4                 | 17             | 6(26.08%)         |
| Experienced teasing                              | 0             | 0               | 3                 | 20             | 3(13.04%)         |
| Affected friendship                              | 0             | 1               | 3                 | 19             | 4(17.40%)         |

**Impairment in the quality of life in adult:**

Among the adult group, 50 patients faced difficulties in work activity (79.40 %), followed by 40 patients (63.5%) each, feeling of embarrassed and depressed due to the disease. Only 11 patients (17.46%) were affected in their sexual relationship.

Table 8: Impairment in quality of life in adult

**DISCUSSION:**

Scabies is one of the most common parasitic infestations of worldwide distribution with a variable impact on quality of life depending on the clinical situation. It occurs commonly in tropical climate, in poor people who live in crowded living conditions [3]. It has been considered as a public health problem in developing countries for decades, still there has been little progress in the control on a global scale [4].

The diagnosis of scabies is made by clinical history and examination, like complaints of intensely itchy rash, nocturnal aggravation, and a history of contact with known cases is often present. Examination may reveal skin lesions in a typical bilateral distribution involving areas of axillary folds, around the nipples, finger webs, side of fingers, flexor surface of wrist, along the waistline, elbow, umbilicus, lower abdomen, buttocks, genitalia and thighs. Some of the patients have characteristic serpiginous burrows lesions may be visible with the naked eye. [5].

A delayed type hypersensitivity reaction to mite allergens leads to skin inflammation leading to papules, pruritus and excoriation of the skin,

which leads to damage the skin barrier function. It may get complicated to secondary bacterial infections, eczema and long-term health consequences in the form of post streptococcal glomerulonephritis [6].

The most common age group affected in our study was 15-30 years in 37.2% patients followed by 5-14 years in 26.74% patients while in Das Set al., study found 9% patients were in the 0-5 years age group, 22% in both 6-15 years and 16-30 years of age group [7]. Sambo et al., who mainly studied the prevalence of scabies in school going children, reported 55.8% patients who were in the age group of 5-8 years; whereas 44.2% patients were in the age range from 9-12 years [8].

Females were affected more than males in our study but in study by Das S et al., where males outnumbered females [7]. Study by Sambo et al., reported almost equal male to female ratio of 1:1 [8].

Patients had complaints such as itching in everyone that is, in 100% of cases, night aggravation in about 83.72% and skin lesions in about 77.90% of patients. Secondary infections were present in about 31.4% of patients with scabies. In 9.3% of patients there were similar complaints in the past.

Infestation with scabies significantly affects the quality of life in almost all the cases in our study. 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 [9].

Patients with skin diseases may have their lives affected in many ways leading to anxiety, depression, anger and embarrassment, which lead to social isolation and absenteeism at work and school. Scabies infestation has a negative impact on the quality of life for infected individuals [10].

Data of Jin-gang et al., confirms that scabies patients frequently feel restrictions in their personal relationships [11]. Data collected at Xi'an Jiatong University (China) in 2008 using the DLQI Questionnaire indicated that the personal relationships domain was most affected by scabies infestation, with the symptoms and feelings domain scoring second highest [11].

A more recent study, in a Brazilian urban slum in Fortaleza found that the majority of female participants had a feeling of shame and 30% had social exclusion as a result of scabies infestation [9]. Moderate effect on quality of life was seen in 76% of adults suffering from scabies while none showed a large impairment on quality of life. In our study, among paediatric group, they are moderately affected in school work in 39.13% of cases (9 patients) followed by 26.08% of cases (6 patients) had impact on playing. In adult group major number of patients affected in work activities in 50 patients (79.40 %), followed by feeling of embarrassment and depression in 40 patients (63.5%). Sexual relationships were affected in 11 patients (17.46%) As per Worth et al., categorisation of mDQLI showed that about one-fifth of the patients had no 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 to very large effect on their quality of life was seen in 13.9% of patients with scabies [9].

**CONCLUSION:**

Scabies is a completely curable disease when treatment is taken appropriately, though it affects the quality of life for a brief period of time. It is important to emphasize to patients about the need for treatment of all family members and close contacts simultaneously to prevent recurrence. Assessing quality of life can help provide patients with better service, by acknowledging their real needs and prevent interference of treatment.

**Conflict of Interest:** No conflict of interest to declare.

**REFERENCES:**

1. RM Andrews, J McCarthy, et al. Skin disorders, including pyoderma, scabies, and tinea infections. *Ped Clin North Am*, 56 (2009), pp. 1421-1440.
2. M McDonald, BJ Currie, JR Carapetis. Acute rheumatic fever: a chink in the chain that links the heart to the throat? *Lancet Infect Dis*, 4 (2004), pp. 240-245.
3. "Epidemiology & Risk Factors". Centers for Disease Control and Prevention. November 2, 2010. Retrieved 18 May 2015.
4. Heukelbach J, Feldmeier H. Ectoparasites-The underestimated realm. *Lancet*. 2004;363:889-91.

5. Sardana K, Mahajan S, Sarkar R, Mendiratta V, Bhushan P, Koranne RV, et al. The spectrum of skin disease among Indian children. *Pediatr Dermatol*. 2009;26:6–13.
6. Hay RJ, Steer AC, Engelman D, et al. Scabies in the developing world – its prevalence, complications, and management. *Clin Microbiol Infect*. 2012;18:313–23.
7. Das S, Chatterjee T, Banerji G, Biswas I. Evaluation of the commonest site, demographic profile and most effective treatment in scabies. *Indian J Dermatol*. 2006;51(3):186–88.
8. Sambo MN, Idris SH, Umar AA, Olorukooba AA. Prevalence of scabies among school-aged children in Katanga rural community in Kaduna state, Northwestern Nigeria. *Annals of Nigerian Medicine*. 2012;6:26–29.
9. Worth C, Heukelbach J, Fengler G, et al. Impaired quality of life in adults and children with scabies from an impoverished community in Brazil. *Int J Dermatol*. 2012;51:275–82.
10. Bouvresse S, Chosidow O. Scabies in healthcare settings. *Curr Opin Infect Dis*. 2010;23(2):111–18.
11. Jin-gang A, Sheng-xiang X, Sheng-bin X, et al. Quality of life of patients with scabies. *J Eur Acad Dermatol Venereol*. 2010;24:1187–91.