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AN OBSERVATIONAL PROSPECTIVE STUDY TO ENUMERATE INCIDENCE, PREVALENCE AND OUTBREAK OF SCABIES IN INDIAN POPULATION

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ABSTRACT

Background: A mite is the infectious agent that causes scabies, a skin infection. At 300 million instances a year, it is projected to cause major morbidity globally. Scabies may afflict anyone from any socioeconomic background, although it is far more common in those living in poverty or close to other populated areas. Sarcoptes scabiei var. hominis Mouse infestation causes scabies, a skin ailment.

Aim: The purpose of this study was to evaluate the scabies epidemic in a recognised Indian community. Materials and Procedures: A year's worth of data collection and assessment served as the foundation for this prospective clinical trial. The gathered information was statistically assessed, and conclusions were drawn.

Methods: one year worth of data collection and assessment served as the foundation for this prospective clinical trial. The gathered information was statistically assessed, and conclusions were drawn.

Results: A mite is the infectious agent that causes scabies, a skin infection. At 300 million instances a year, it is projected to cause major morbidity globally. Scabies may afflict anyone from any socioeconomic background, although it is far more common in those living in poverty or close to other populated areas. Sarcoptes scabiei var. hominis Mouse infestation causes scabies, a skin ailment

Conclusion: Within the constraints of its research, the current study indicates that scabies is very frequent in the known Indian population, with a higher incidence in females than in males. Nevertheless, the current study included several drawbacks, such as biases related to geographic location, a limited sample size, and a brief monitoring time. Therefore, further long-term research with bigger sample sizes and longer observation periods will aid in coming to a conclusive result.

Keywords: outbreak, Indian subjects, Scabies, Sarcoptes scabiei var. hominis.

INTRODUCTION

A mite is the infectious agent that causes scabies, a skin infection. At 300 million instances a year, it is projected to cause major morbidity globally. Scabies may afflict anyone from any socioeconomic background, although it is far more common in those living in poverty or close to other populated areas. Sarcoptes scabiei var. hominis Mouse infestation causes scabies, a skin ailment. Sarcoptes scabiei var. hominis Mouse infestation causes scabies, a skin ailment. The pathophysiology of scabies involves the formation of a less than 0.5 mm burrow in the skin, which results in the deposition of antigens on the mice's exoskeleton together with their excreta, eggs, and saliva at the burrow site, causing a hypersensitive reaction.1

The afflicted victims' hands, wrists, ankles, and feet are frequently impacted by the lesion caused by the mouse infestation. Common scabies, often referred to as normal, classical, or common scabies, is characterised by a lower mite count in most infected patients, typically ranging from 5 to 15 in the body.2.

There is a different kind of scabies that is uncommon and referred to as crusted scabies (formerly known as Norwegian scabies). It is characterised by hyperkeratotic crusted skin and thousands to millions of mites.3. Scabies is mostly spread by direct contact, however it can also spread through the bites of infected fomites in patients who have never had an infestation. The incubation period for scabies is four to six weeks. Burrows and/or nodules are indicative of scabies. Because of scratching via excoriation, secondary bacterial infections might trigger a local immune response.4 Renal impairment and rheumatic heart disease are possible outcomes of this bacterial infection. An average person will notice about 11 mature female mites that burrow if the parasite burden is present.

Crusted scabies can occur in certain people with hyperkeratotic skin lesions with more than 4700 scabies per gramme.5. Therefore, the goal of the current study is to evaluate the scabies epidemic in a recognised Indian community.

MATERIALS AND METHODS

The goal of the current prospective clinical investigation is to evaluate the scabies epidemic within a recognised Indian community. The study was carried out after approval from the relevant ethical committee. The patients who visited the Institute's outpatient department of dermatology made up the study population. All subjects gave their written and verbal informed permission after being fully told about the study's concept.

Every research participant had their clinical appointments, first visits, drugs taken, medical history, and demographic information gathered.. The outbreak's characteristics, such as the numbers, demographics, and proportions of afflicted people, were noted. Every subject underwent the examination. All research participants provided skin scrapes, which were collected and inspected under a microscope the day after the sample collection. Using SPSS software version 21 (Chicago, IL, USA) for statistical assessment and one-way ANOVA and t-test for result formulation, the gathered data were examined. The data were presented as a mean, standard deviation, percentage, and number. At $p<0.05$, the significance threshold was maintained. The goal of the current prospective clinical investigation is to evaluate the scabies epidemic within a recognised Indian community.

RESULTS

A total of 312 participants of both genders with ages ranging from 52 to 84 years old and a mean age of 64.2±6.86 years were included in the research. Table 1 contains a list of the research individuals' demographic details. The study's findings indicate that 5.12% (n=16) of the patients had scabies, 6.08% (n=19) of the subjects were between the ages of 61 and 70, 54.80% (n=171) of the subjects were between the ages of 71 and 80, and 33.97% (n=106) of the subjects were above 80. In the current study, there were 66.02% (n = 206) females and 33.97% (n = 106) men with scabies (Table 1). The majority of the people who had scabies were found to be between the ages of 71 and 80.

On assessing the presence of skin lesions in the subjects with Scabies, it was seen that the skin lesions were present in 17.94% (n=56) subjects with scabies in the present study, whereas, Of the 200 scabies patients, 64.10 percent did not have any skin lesions. As shown in Table 2, 17.94% (n=56) of the scabies individuals in our study did not aware they had skin lesions. Table 2 presents the findings of the current investigation, which evaluated the kind of skin lesion and its related features in the scabies study subjects. Rashes were found to be present in 39.10% (n=122) of the scabies research patients. Of the research patients who had scabies, 20.83% (n=65) had itching. Table 2 indicates that 40.06% (n=125) of study participants who had scabies reported itching as a symptom.

DISCUSSION

The goal of the current prospective clinical investigation is to evaluate the scabies epidemic within a recognised Indian community. Three hundred and twelve participants of both sexes, ranging in age from 52 to 84 years, with a mean age of 64.2±6.86 years, participated in the study. The study's findings indicate that 5.12% (n=16) of the patients had scabies, 6.08% (n=19) of the subjects were between the ages of 61 and 70, 54.80% (n=171) of the subjects were between the ages of 71 and 80, and 33.97% (n=106) of the subjects were above 80. In the current

study, there were 66.02% (n=206) females and 33.97% (n=106) men who had scabies. The majority of the people who had scabies were found to be between the ages of 71 and 80.

These findings aligned with research conducted by Swe Reynolds PM et al6 in 2014 and Romani L et al7 in 2015, which evaluated people with similar demographics. When skin lesions were examined in the scabies individuals, it was found that while the skin lesions were missing in 64.10% (n=200) of the scabies subjects, they were present in 17.94% (n=56) of the scabies participants in the current study. 17.94% (n=56) of the scabies individuals in this research did not aware they had skin lesions. These findings concurred with research conducted in 2014 by Chung SD et al8 and Roberts LJ et al9 in 2005 where authors have depicted the comparable presence of skin lesions in the study subjects with scabies.

The results of this study indicate that 39.10% (n=122) of the study participants with scabies had rashes. The study also evaluated the kind of skin lesion and its related features in the scabies study subjects. Of the research patients who had scabies, 20.83% (n=65) had itching. Of the 125 study participants with scabies, 40.06% described their itching as a symptom. These results were in line with research by Mc Carthy JS et al. (10 in 2004 and Heukelbach J et al. (11) in 2005, in which the authors noted that scabies patients had rashes and itching and scratching.

CONCLUSION

Within the constraints of its research, the current study indicates that scabies is very frequent in the known Indian population, with a higher incidence in females than in males. Nevertheless, the current study included several drawbacks, such as biases related to geographic location, a limited sample size, and a brief monitoring time. Therefore, further long-term research with bigger sample sizes and longer observation periods will aid in coming to a conclusive result.

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TABLES

Characteristics	**Percentage (%)**	**Number (n=312)**
Mean age (years)	64.2±6.86	
Age Range (years)		
<60	5.12	16
61-70	6.08	19
71-80	54.80	171
>80	33.97	106
Gender		
Females	66.02	206
Males	33.97	106

Table 1: Demographic characteristics of the study subjects

Characteristics	**Percentage (%)**	**Number (n=312)**
Skin Lesions		
Present	17.94	56
Not present	64.10	200
Not known	17.94	56
Type		
Rash	39.10	122
Scratching	20.83	65
Itch	40.06	125

Table 2: Signs and symptoms of Scabies in the study subjects