Tripolitana Medical Journal (2013) Vol. 2, No. 1, pp. 28-30

tmj

Short Communication

ISSN 2077-5628

The Demographic Features of Scabies in Misurata - Libya

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Received 3 January 2013/Accepted 9 May 2013

ABSTRACT

Scabies is a neglected ectoparasitic disease that is a major public health problem in many resource-poor regions. Scabies is a prevalent skin condition that affects people of all classes and ethnicities all over the world. The epidemiology of scabies among the cities and rural population in Libya is not adequately studied before.

The aim of the study was to determine the characteristics of patients with *Sarcoptes scabiei* and the magnitude of the problem (scabies infestation) among the patients attending Alanwar dermatology clinic which located in Misurata city.

This case series study was carried out on the medical records of 4616 patients with different skin diseases, resident in different districts in Misurata and visited Alanwar private dermatology clinic during the study period 2001-2006**.** The data was collected by reviewing the medical records and an epidemiological analysis of scabies cases was performed, with a focus on the age, sex and area of residency.

The study revealed that the overall percentage of scabies was 4% (186/4616). The total number of patients with scabies in the year 2001 were 64 patients out of 2050 patients with different dermatology complains (3.1%) and in year 2006 were 121 cases among 2566 cases (4.7%). The most affected age group in both years was in between 1 to 20 years, (51.6%), (33.6%) respectively, male was more affected by scabies in both years than females. The study also indicated that the disease is more predominant within patients living in areas with high crowding index (Algerhan). In conclusion, our data provided the first picture of the epidemiology of scabies in Misurata city, in view of our study results.

The study concludes that scabies infestation is present in our communities, and it commonly infests the younger age males, and people living in overcrowded areas.

Key words- *Scasbies; Demography; Misurata.*

INTRODUCTION

Scabies is a contagious common ectoparasite skin condition caused by the mite *Sarcoptes scabiei* Scabies is impressively democratic in its epidemiology, mites are distributed around the world, affecting all ages, races and socioeconomic classes in all different climates.[1] However, it is more often seen in crowded and unhygienic living conditions, and often accompanies poverty.[2,3] Globally, there is an estimated incidence of 300 million cases of scabies a year, one million of which occur in the United States.[4] Scabies is transmitted by direct contact. The mites burrow into human skin and lay their eggs, which later hatch and grow into adults. The characteristic symptoms of this condition include superficial burrows, and intense pruritus (itching); which tends to be more frequent at night, or after a hot bath. Scratching may lead to secondary bacterial infections, blisters and pustule lesions on the palms and soles of the feet. These are the characteristic locations of scabies in infants.[1,4] The most important complication of scabies is secondary bacterial infection, usually caused by Group A *Streptococci* which may cause acute post-streptococcal glomerulonephritis[5] that may followed by long-lasting renal damage.[5,6]

MATERIALS AND METHODS

This study was conducted by reviewing the medical records of patients who attended the Alanwar private clinic, Misurata (2001-2006) with dermatological symptoms. From 4616 patients of which all attended the clinic with different medical conditions, 185 patients were diagnosed with Scabies. Demographic data concerning the age, sex and place of residency was collected and audited from patient files into a predesigned work sheet. Each patient diagnosed with scabies case was partly undressed and examined by a trained dermatologist, to ensure scabies was diagnosed clinically. A history of intense itching and skin lesions in characteristic locations, particularly if there was a history of household contact with a case also helped in affirming the diagnosis.[1,4,5]The age range of our patients ranged from one month to 80 years, and the mean age was 20.

Data analysis: The collected data was coded and statistical package by social science (SPSS) software version 11.5. The mean, frequency and percentages were used in analysing, and later describing the data.

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RESULTS

As seen in figures 1 and 2, the total number of patients diagnosed with scabies out of 4616 patients presented with different various skin diseases at the clinic was 186. An overall percentage of 4% (186/4616). In the year 2001, the percentage of patients with scabies was 3.1% (64/2050). However the percentage increased slightly in the year 2006 to 4.7% (121/2566). Regarding the age distribution of the patients with scabies we found that the most affected age group was between one year to 20 years which constitutes 39.8% from the total, with (51.6% in 2001, and 33.6% in year 2006). As illustrated in (Table 1 and Figure 3), the lowest percentage for age groups was for the older people over 80 years being 0%, and 2.5% in 2001 and 2006 respectively. The calculations revealed that males were slightly more vulnerable to scabies than females with percentage of 52.7% and 47.3% for both respectively. In the year 2001, 15.6% of the patients with scabies were resident in the Algheran area with no patients from Almahjoob area. When we compared this result to the total number of patients the private clinic served (4616) they were slightly different. The Algheran area still came at the top with 15.7% of patients attending the clinic from this area. The Almahjoob area however, came in second with 14% of patients residing there.

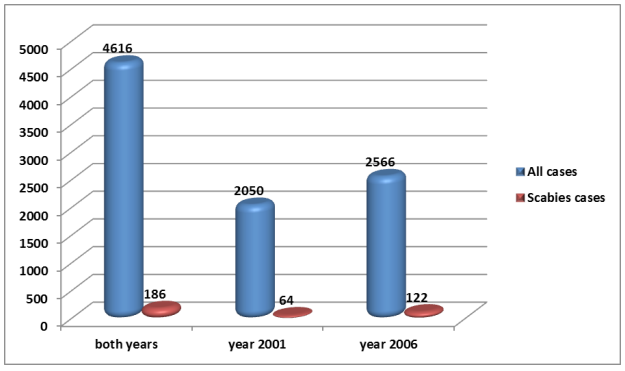

Figure 1: Number of total patients and patients with scabies (Alanwar dermatology clinic/Misurata city 2001 and 2006).

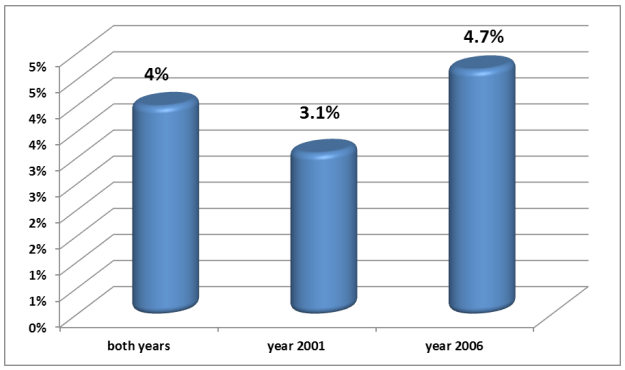

Figure 2: Percentages of patients with scabies among total attendees (Alanwar dermatology clinic/Misurata city 2001 and 2006).

Table 1: Age distribution of patients with scabies attending Alanwar dermatology clinic, Musrata city) on 2001 and 2006.

Age group	2001	2006	Total
< 1 year	4 (6.3%)	16(13%)	20(10.8%)
1-20 years	33(51.6%)	41(33.6%)	74(39.8%)
21-40 years	19(29.7%)	34(28%)	53(28.5%)
41-60 years	4(6.3%)	17(13.9%)	21(11.3%)
61-80 years	4(6.3%)	11(9%)	15(8%)
>80 years	0(0%)	3(2.5%)	3(1.6%)
Total	**64(100%)**	**122(100%)**	**186(100)**

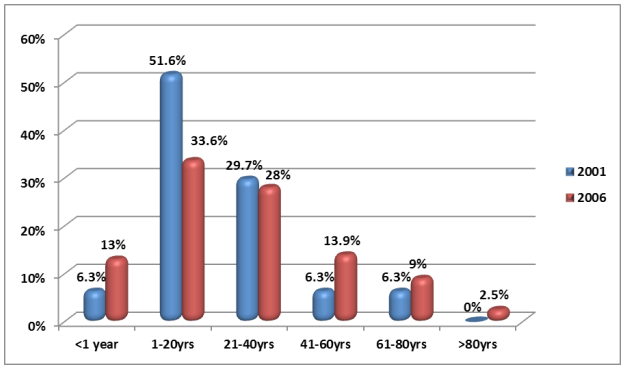

Figure 3: Age distribution of patients with scabies (Alanwar dermatology clinic/Misurata city 2001 and 2006).

Table 2: Distribution of patients with scabies (Alanwar dermatology clinic/Misurata city 2001 and 2006) according to place of residence.

Geographical areas in Misurata city	2001	2006
Algheran	15.6%	15.7%
Azzaroog	7.8%	5.8%
Misurata Elmadina	7.8%	5.8%
Tummina	12.5%	3.3%
Errmila	1.6%	3.3%
Kasser Ahmed	3.1%	5%
Elkararim	4.7%	0.8%
Aljazeera	4.7%	5.8%
Ben Abdon	6.3%	0.8%
Errwisat	6.3%	4.1%
Kerzaz	1.6%	2.5%
Elmahjoob	0.0%	14%

DISCUSSION

This study is the first report exploring the characteristics of scabies in Misurata city, Libya. Scabies is considered a prevalent contagious disease in nearby neighbouring countries and further afield. In Egypt, the prevalence ranging ranges from 5.4% to 80%.[7,8] In Brazil the infection rate was 9.8% in rural villages.[9] The prevalence is higher in other places such as Indonesia 27%, Tanzania 27% and 80% among primary school children in western Ethiopia.[10-12] With regards to the studied risk factors we found that the highest percentage of scabies was between 1 to 20 years old age group (39.8%). This figure may be attributed to that most of the patients in this age group are students who are exposed to the overcrowded environments in schools. The lowest percentages (8% and 1.6%) of infestation were in the age bracket between 61 to 80 years, and above 80 years respectively. Infants (<1 year old) constituted a 10.8% stake in our study. Comparing the age distribution of this study with the study carried on 2004 by Badia[13] in Benghazi, which found that the patient age group of 1 to 8 years old had the highest prevalence of 24.6%, infants made only 4.3% of his study population which was much lower than our statistic. In contrast to our findings, Badia[13] in Benghazi stated that number of females was higher than males among the 69 studied cases (55.1% and 44.9% respectively), the percentages were 52.7% and 47.3% for males and females in this study. Fathy FM et al.[14], studied the clinical and parasitological profile of scabies on 200 patients, referred to dermatology outpatient clinics in Sirte, Libya. There results revealed that females made 59% from the total number of patients with scabies, and children made 37.5%.

CONCLUSION

As scabies has potentially dangerous implications on public health. Along with the discomfort it causes, makes scabies a significant public health problem in Misurata. Although the present study revealed that the percentage of patients with scabies is small among the total dermatological patients, we still must consider it as a threat to our health.

RECOMMENDATIONS

Universal treatment among family members in households where scabies is present significantly will reduce the likelihood of acquisition among susceptible individuals. This is critical to protect young children, who are most at risk of infection. Also the scabies incidence can be reduced by improving socioeconomic, hygienic conditions, implementing a proper system of social education, and by promoting more efficient health service. Furthermore, a prevalence study to find out the overall prevalence of the disease on a larger scale is recommended.

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