

THE FREQUENCY OF SCABIES AMONG CHILDREN AT PRINCE HASHEM BIN AL- HUSSEIN HOSPITAL

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ABSTRACT

Objective: To determine the frequency of scabies among children at Prince Hashem Bin Al-Hussein Hospital.

Methods: Over a period of six months from July to December 1999, 216 patients (aged from one day to 14 years) who attended the dermatology clinic were examined to identify the frequency of scabies among this group of children. The median age was 5.6 years in males and 4.5 years in females. The median age of both sexes was 4.9 years.

Results: A total of 6540 children attended the dermatology clinic during the study period, 216 of them representing 3.3% were infested with scabies. Females outnumbered males at a ratio of 1.5:1. Cases peaked during winter and the extremities were the most common affected sites.

Conclusion: The frequency of scabies among children is relatively high, and it is more common in females than in males with a ratio of 1.5:1.

Key words: Scabies, Children, Frequency.

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Introduction

Scabies is a highly contagious skin infestation that affects some 300 million people worldwide, the disease occurs in developing as well as developed countries, and it affects all age groups ⁽¹⁾. It is a common parasitic infestation of the skin in Jordan. Scabies is caused by the mite *Sarcoptes scabiei*. It is usually transmitted through skin-to-skin contact although clothing and linen may act as fomites on which the mites can remain alive for 2 to 5 days ⁽²⁾. The female mite burrows under the surface of the skin to lay its eggs in a tunnel. Pruritis occurs after 2 to 4 weeks, and scratching leads to secondary skin lesions. Human scabies is one of the most frequent health problems among school children ⁽³⁾ and it is common in children and teenagers ⁽⁴⁾. It affects all races and social classes worldwide. Accurate figures of its prevalence are difficult to obtain and most reports are based on out-patient attendance records ⁽⁵⁾. The incidence of scabies in developed countries shows

cyclical fluctuations, for which there is, as yet, no satisfactory explanation ⁽⁶⁾. Human scabies is among the most contagious parasitic diseases ⁽⁷⁾. Overcrowding and poor personal hygiene are risk factors for scabies infestation ⁽⁸⁾. There are no previous studies determining the prevalence of scabies among Jordanian children. The aim of this study was to assess the extent of scabies among children attending Prince Hashem Bin Al-Hussein Hospital.

Methods

Over the period July to December 1999, all children (aged from one day to 14 years) who attended the dermatology clinic at Prince Hashem Bin AL-Hussein Hospital, in Zarqa District / Jordan were examined to identify the frequency of scabies among them.

There were 216 patients (86 males and 130 females) ranging in age between one day to 14 years. The median age in males was 5.6 years and in females 4.5. The

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median age of both sexes was 4.9 years. The diagnosis was based on the patient's history combined with physical and laboratory findings. History of pruritis with nocturnal exacerbation and the distribution of the eruption of inflammatory papules suggested the diagnosis ⁽⁹⁾. We looked for inflammatory papules and the sites of burrows in the hands, wrists, elbows, genitalia, buttocks and the axilla as the majority of mites may be found in these sites. Burrow scrapings of the skin established the positive diagnosis with demonstration of the mite, eggs or fragments of eggshells under the microscope using a low-power objective ⁽¹⁰⁾.

Results

A total of 216 children representing 3.3% of the study population were infested with scabies as shown in Table I. Females were more likely to be affected compared to males with a ratio of 1.5:1 and with a statistically significant difference ($p < 0.0001$). Children of 4-7 years were most commonly affected and those below two years were the least affected (Table II). Cases peaked during winter with the highest frequency occurring in November and December. As expected, the lowest frequency was from August to September as shown in Table III. The extremities were the most commonly affected sites followed by the trunk, genitalia, palms and soles, respectively, as shown in Table IV.

Discussion

Scabies was present in 3.3% of the study population. There were no previously published data or similar studies from hospital-based clinics in Jordan for comparison. However, this figure is close to that reported by other developing countries such as Mali and Malawi where infection rates were 4% ⁽¹¹⁾ and higher

than that reported by developed countries such as Poland where the rate was 0.75% ⁽²⁾. The higher rate of scabies in developing countries may be attributed to the lower socio-economic status. In developed countries such as the USA, a rate of 10% would be considered a major epidemic and give rise to a considerable concern ⁽⁸⁾. Four infants in our study group aged 1 to 3 months had a generalized eruption over the head, neck, face, palms and soles. Such a confusing clinical picture resulted in a delay in diagnosis and treatment and is consistent with a different clinical pattern of scabies ⁽¹²⁾. Children aged between 3 to 6 years were most commonly affected, especially in winter, which may be explained by overcrowding and sharing beds and clothes, which is similar to that reported from Egypt ⁽¹³⁾. Extremities in our sample were the most commonly affected sites, which is consistent with other studies ⁽¹⁰⁾ because the mite avoids areas with a high density of pilo- sebaceous follicles. In Australian aboriginal communities the scabies control program has succeeded in reducing the prevalence of scabies from 32.3% to $< 10\%$ in children ⁽¹⁴⁾.

Conclusion

This clinical study showed that the frequency of scabies among children is relatively high in Jordan, and it is more common in females than in males and showed that extremities were the most common sites.

Scabies control efforts should be intensified including prompt treatment of infested children and their families and health education of the public regarding the early manifestations of the disease and methods of prevention and control.

A large-scale study over a longer time period is needed to determine the disease trend.

Table I. Frequency of scabies among the study population.

Gender	Number of cases (%)
Female	130 (2)
Male	86 (1.3)
Total	216 (3.3)

Table II. Frequency of scabies among different age groups in both sexes.

Age group	Number of cases (%)	Males (%)	Females (%)
0 – 3 years	39 (18)	18 (8)	21(10)
>4 years – 6 years	125 (58)	50 (23)	75 (35)
> 7 years –14 years	52 (24)	18 (8)	34 (16)
Total	216	86 (40)	130 (60)

Table III. Frequency of scabies by month of the year.

Month	Number of cases (%)
July	17 (8)
August	25 (12)
September	34 (16)
October	40 (18)
November	47 (22)
December	53 (24)
Total	216 (100)

Table IV. Distribution of lesions among cases

Site of lesions	Number of lesions (%)
Palms & soles	13 (6)
Trunk	51 (24)
Extremities	117 (54)
Genitalia	35 (16)
Total	216 (100)

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