Scabies in children in sector Gaza

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Abstract

Objectives: To present a profile of scabies in children in sector Gaza.

Methods: All patients who were seen in the outpatient clinic in Jordanian hospital in Gaza between 25/11/2010 and 24/01/2011 and who presented with itching, were examined for scabies. Patients were divided into three age groups: group I: 0-4 years, group II: 4-8 years and group III: 8-14 years.

Results: A total of 5430 children were seen in outpatient clinic for various diseases and conditions during the study period. 145 cases of scabies were reported with 98 males and 47 females. Scabies was higher in age group II: age 4-8 years, followed by group III; 8-14 years. The incidence of scabies among children seen in the clinic was 0.02% and was higher in males. The commonest manifestation was night itching followed by skin marks.

Conclusion: Scabies is a common disease among children in Gaza. Major contributing factors to this disease are: crowding, poor hygiene, scarce water supplies and low socio-economic class.

Key words: scabies, children, Gaza

Introduction

Scabies is an infectious skin disease caused by S. scabiei var. hominis. According to the WHO about 300 million persons per year develop scabies worldwide.(1) Scabies is a common dermatological problem managed by both pediatricians and dermatologists. It manifests itself in various forms in children and differs from that in adults in many ways.

The primary contributing factors in contracting scabies seem to be poverty and overcrowded living conditions. The incidence rate of scabies is 28/100,000 inhabitants. The incidence is higher in the elderly (51/100, 000 in persons aged >75 years) and a higher incidence was also found in immigrants (88/100,000).(2)

Scabies is highly contagious and is spread from person to person by direct skin contact. Transfer from clothes and bedding occurs rarely and only if contaminated by infectious people immediately beforehand.(3) Infestation occurs when pregnant female mites burrow into the skin and lay eggs. After two or three days the larvae emerge and dig new burrows. They mature, mate, and repeat this cycle every two weeks. The main symptoms of scabies are caused by the host immune reaction to burrowed mites and their products.(4) Symptoms appear within two to six weeks of the initial infestation, but reinfestation can provoke symptoms within 48 hours.

The most common presenting lesions are papules, vesicles, pustules, and nodules. The pathognomonic sign is the burrow-a short, wavy, grey line that is often missed if the skin is eczematised, excoriated, or impetiginised. (5)

The purpose of this study is to present data on scabies in children seen at the Jordanian field hospital in Gaza strip.

Methods

All children attending the pediatric outpatient clinic at the Jordanian field hospital in Gaza between 25/11/2010 and 24/01/2011,with itching, were included in this prospective study. Patients were divided into three age groups. Group I: age 0-4 years. Group II: age 4-8 years and group III: age 8-14 years.

Patients with high clinical suspicion and the presence of clinical skin symptoms were included. Confirmation of the diagnosis was based on the positive microscopical examination.

Clinical symptoms were defined as generalized skin itching increased at night associated with scratching, excoriated papules, vesicles and burrows. Patients presenting with localized skin itching or itching increased at day and night, or with no specific time of exacerbation or diagnosed with other diseases were excluded. The diagnosis was based on the patient's history with physical and laboratory findings.

This study used the clinical examination (by the presence of burrows or erythematous papular, vesicular, pustular or bullous lesions associated with itching and a positive family history) followed by microscopic test to confirm the diagnosis. The symptoms of scabies include intense itching (especially at night) with irritation of involved skin with redness and blisters formation. The skin irritation is more likely to be seen in the areas between the fingers and toes; around the wrists or navel, in the folds of the elbow, armpit, belt-line, abdomen, groin and the genital area. The head, neck, palms, and soles of the feet are usually spared, except in babies.

The mite infestation was confirmed using scraping test. The sampling was carried out from the children suspected to have scabies infestation and carried out on the patients with pruritus, nodules, and papular rash. The lesions are gently scraped to remove the topmost skin cells and particles which were preserved in oily material then were mounted on the microscope slide. The skin particle samples including adult mites were referred as positive samples.

Results

From a total of 5,430 children who were examined and treated for different diseases, one hundred and seventy five patients (3.2%) had itching in addition to other symptoms; 30 were excluded because they were diagnosed to have other diseases that cause itching (chicken pox and measles) and the remaining were diagnosed to have scabies. Distribution by age groups is illustrated in Table 1.

From the total 5,430; 500 patients presented with different skin manifestations, 120 patients presented with napkin dermatitis, 110 patients with skin impetigo, 80 patients with viral exanthem due to several viral infections, 20 patients with chicken pox, 10 patients with insect bite reaction (papular urticaria), 10 patients with infected eczema and 5 patients presented with a picture of german measles and rubeolla and 145 patients were diagnosed by clinical examination and positive microscopic test as scabies, Table 2.

All scabies-infested patients presented with the main complaint of itching; additional complaints were irritability, skin infections, scratch marks on skins. One hundred (69%) patients complained of generalized itching especially at night and 45 (31%) of localized itching, Table 3.

Commonest site for the scabies skin lesion was genitalia in 53 (36.5%) patients, followed by periumbilicus 39 (26.8%) patients, trunk 23 (15.8%) patients, interdigital webs 20 (13.7%) patients and axilla 10 (6.8%) patients, Table 4.

Discussion

Scabies is a contagious disease caused by a mite. The condition of 'scabies' is caused by an allergic reaction to the fecal material of the mite Sarcoptes scabei var hominus. It is an exceedingly common disease of world -wide distribution. It is endemic in many developing countries.

Although scabies is more common where overcrowded conditions prevail, it can affect any individual irrespective of social status, personal hygiene, profession, gender, age or ethnic origin. It is primarily characterised by itching, vesiculation and pruritus. Signs of reddish, slightly elevated tracts may also occur. Miniature papules, vesiculations, pustules and excoriations soon appear. Scratching of these areas may lead to secondary bacterial infection. A recent review of the prevalence of childhood skin diseases in developing tropical and subtropical countries concluded that the prevalence of scabies is in the range of 1-2%. (6)

Lice, Ringworm and Swimmer's itch, Measles and Chickenpox, to mention a few can present with itching. (7) These diseases must be differentiated from scabies.

Scabies can be both one of the easiest and one of the most difficult conditions to diagnose. Scabies should be suspected in infants or children with generalized pruritus of recent onset and characteristic eruption. The site, severity, duration and timing of the itch are all useful in the diagnosis. Nocturnal itch is very characteristic of scabies. A history of itching in other members of the family should be sought and may give a clue to the diagnosis. The classical eruption of scabies presents as pruritic papules, vesicles, pustules and linear burrows.(8) In our study the most frequent symptom was night itching, followed by scratch marks and burrows. Less common were secondary skin infection and day itching.

In infants and young children, scabies often affects the face, head, neck, scalp, palms, and soles. Widespread eczematised erythema is common, particularly on the trunk, and is sometimes more troublesome than are

Table 1: Demographics

Gender/age group	0-4	4-8	8-14	total
Male	8	63	27	98
Female	6	27	14	47
Total	14	90	41	145

Table 2: Common skin lesions seen in the clinic

Clinical manifestation	Number	%
Napkin dermatitis	120	24
Impetigo (urticaria)	110	22
Viral exanthema	80	16
Chicken pox	20	4
Insect bite	10	2
Infected eczema	10	2
Measles	5	1
Scabies	145	29
Total	500	100%

Table 3: Clinical manifestations

Clinical manifestation	male	female	0-4	4-8	8-14
day Itching	30	23	5	55	19
night Itching	93	45	11	90	41
irritability	57	29	14	75	17
skin infections	10	7	5	13	9
scratch marks	93	37	11	78	37
burrows	85	35	9	73	33
vesicles	61	29	6	59	26

Table 4: Distribution of skin lesion

Site of skin lesion	Number of lesion (%)
Genitalia	53(36.5%)
Periumbilicus	39(26.8%)
Trunk	23(15.8%)
Interdigital webs	20(13.7%)
Axillae	10(6.8%)
Total	145(100%)

lesions at typical sites. Very young babies do not scratch and may just seem miserable or feed poorly.(9) Genitalia and periumbilicus were the commonest site of itching, although other areas were affected (trunk, axilla and interdigital webs) in the present study. Also the study showed that the most common affected age group is between 4-8 years with male predominance.

The factors generally thought to explain the high prevalence and incidence of common skin infections in developing countries are poverty related and include: a low level of hygiene, including difficulties accessing water; climatic factors; and overcrowding living conditions.(10, 11)

Scabies in our study is common and frequent because of poverty, overcrowded living conditions, low socioeconomic condition and poor hygiene. But it is less common than in other countries and communities. In remote Aboriginal communities in Australia's

Northern Territory, scabies is endemic, with up to 50% of children and 25% of adults infested at some times. (12) Prevalence of scabies in African children can be as high as 40-80%,(13) although a figure of 4.7% has been reported in Nigerian school children. (14)

Conclusion

Scabies is a common health problem among children in Gaza; the disease can be reduced by improving socioeconomic, hygienic conditions and by implementing a proper system of social education, as well as by promoting a more efficient health service. Work needs to continue on addressing these all-important factors to bring about long-term change.

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