

## **REPORT**

# **Most common body parts infected with scabies in children and its control**

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**Abstract:** Scabies a skin disease caused by mite *Sarcoptes scabiei* is common in Pakistan and spreads mostly where there is frequent skin to skin contact. In the present study children belonging to four age groups 0-3 years, 4-6 years, 7-9 years and 10-12 years attending Baqai Institute and Hospital Gadap from June-September 2013 were examined. The association between scabies of different human parts and age for boys was significant ( $p < 0.01$ ), while for girls it was highly significant ( $p < 0.001$ ). The most frequent body parts infected with scabies lesions were hands, head and feet. Oral ivermectin was effective antiscabietic for children as it was easy to administer and had good patient acceptability.

**Keywords:** Scabies, children, hands, head, feet, control, Karachi.

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## **INTRODUCTION**

Scabies or Norwegian “itch” is an infection of the skin caused by the parasitic mite *Sarcoptes scabiei*, when the mite invades the upper layers of skin it causes a vesicular eruption with intense pruritus. The infestation of skin is very common, found worldwide and effects all races and social classes and spreads rapidly under crowded condition where there is frequent skin to skin contact (Sterling, 1990, Komelasky, 1995, Solomon, 1995, Bilqees *et al.*, 2002; Bilqees *et al.*, 2003). The reported incidence of scabies in Karachi is 22.7% which is more than other skin infections and showing alarming increase which indicates a lack of awareness and thus is a common skin problem (Akhtar *et al.*, 2007). Rathi *et al.* (2001) stated that there is lack of knowledge regarding various aspects of scabies among general medical practitioners, therefore active interaction is needed to improve their awareness. Zeba *et al.* (2012) reported the frequency of scabies and its relationship to hygiene and other factors in patients attending out patient department (OPD) Department of Dermatology, Liaquat University of Medical and Health Sciences Hospital, Jamshoro, Sindh during June-July 2011. They found poor economic conditions, bad hygiene practices, overcrowding and unhygienic living conditions along with scarcity of water were associated with higher frequency of scabies. Ali (2012) stated that the scabies in male adults and male children occupied more or less similar proportion of 19.32 and 18.09 respectively in district Badin, Sindh, Pakistan. But no detail report is available on scabies in children of

Karachi, Sindh, thus the present studies were conducted to enhance knowledge about scabies in children.

## **MATERIALS AND METHODS**

A descriptive study was conducted on children at Baqai Institute and Hospital, Gadap from June-September 2013. The children belonged to four age groups 0-3 years, 4-6 years, 7-9 and 10-12 years.

A sample of children (both boys and girls) that was diagnosed of scabies were selected through non-probability purposive sampling to deterministic inclusion and exclusion criteria. The relationship between age and human body part affected was assessed using a chi-square contingency test (Zar, 1996).

## **RESULTS**

The association between scabies of different human parts and age for boys was found significant ( $p < 0.01$ ), while for girls it was highly significant ( $p < 0.001$ ) (tables 1 and 2).

The scabies infection of hands was found to be most prevalent in 0-3 year groups and lowest in 4-6 and 10-12 age groups in boys. The infection of head was highest prevalent in 0-3 years and lowest in 7-9 years group in boys. The infection of feet was highest in groups 4-6 and 10-12 years and lowest in 7-9 years. As far as other parts infected only one case was reported in 7-9 years and the infection was on buttocks of a boy children with hand, head and feet were photographed (fig. 1-3). The scabies infection of hands was highest in 0-3 age group in girls

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**Table 1:** Frequency of patients of different age groups having scabies of various body parts (boys).

Scabies	Years			
	0-3	4-6	7-9	10-12
Hands	17	3	5	3
Head	27	23	15	20
Feet	13	18	9	18
Others	0	0	1	0

$X^2 = 19.80$   $p < 0.01$  with 9 df.

**Table 2:** Frequency of patients of different age groups having scabies of various body parts (girls)

Scabies	Years			
	0-3	4-6	7-9	10-12
Hands	74	22	4	26
Head	70	17	2	11
Feet	5	30	3	7
Others	0	0	0	3

$X^2 = 75.96$   $p < 0.001$  with 9 df.

similar to that in boys and lowest in 7-9 years. The infection of head was highest in 0-3 years girls and lowest in 7-9 years. Moreover the highest infection site of feet was in 7-9 years. As far as other parts infected three cases were reported in age 7-9 years, two girls had scabies on abdomen and one on elbow.

In order to achieve good control of scabies, education and awareness improved hygiene conditions and availability of anti preparation in hospital is necessary. In the present study oral ivermectin was affective antiscabietic for children as it was easy to administer and had good patient acceptability.

## DISCUSSION

Scabies is a contagious skin infection by tiny usually unvisible mites. The disease is transmitted by close contact with infected people. Raza *et al.* (2009) identified risk factors for the infestation using logistic regression analysis. Itching in family/dormitory, mates, infrequent bathing, and changing of clothes, low education, sharing beds, overcrowding, sharing towels and large family size. Stanton *et al.* (1987) reported in resource poor community in urban Bangladesh, showed that virtually all children less than 6 years developed scabies in a period of 12 months. Jackson *et al.* (2007) in a community based study showed high prevalence 9.3% with 15.5% of this patients <15 years old. In Egyptian children the prevalence was estimated to be 5% but in Australian Aboriginal communities the prevalence was almost 50% (Hegazy *et al.*, 1999; Currie and Carapetis, 2000). Scabies is most commonly observed in the very young children followed by older children and young adults (Zeba *et al.*, 2014). Kolachi *et al.* (2000) studied scabies in Hospital Skin OPD of LUH, Jamshoro, Sindh and showed prevalence up to 34% in all age groups under 9 years. The treatment of scabies includes administration of scabicide gents (e.g. permethrin, lindane or ivermectin), as well as appropriate antimicrobial agent if secondary infection develops. Meabed (2013) suggested that in random samples of ordinary scabies patients treated with 2 oral doses of ivermectin 200 µg/kg one week apart had 100% cure rate.



Scabies infection in different body parts of children 1, head, 2, feet and 3 hand.

All the above results and comparisons testified that scabies is common in children and in the present study it was observed that hands, feet and head were the most common sites of infection and need proper treatment with scabicide agents.

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