THE CHANGING PATTERNS OF SCABIES AMONG IN-PATIENTS IN SINGAPORE (1982-1989)

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ABSTRACT

One hundred and fourteen patients with scabies admitted to a dermatological ward between 1982 and 1989 were studied retrospectively. There was a change in the epidemiological pattern over the eight-year period. We noticed an increase of two to three fold in the incidence of in-patients with scabies. At the beginning of the decade the majority of the patients were below 20 years but towards the end of the decade the same proportion of patients were above 50 years. There was also a change in the racial distribution of scabies from a Malay predominance to a Chinese predominance. We also noticed a change in the residential status of these patients; more patients admitted towards the end of the decade came from institutional homes. The changing epidemiological pattern brought with it new problems both in diagnosis and in the prevention of scabies.

Keywords: Scabies, epidemiology

INTRODUCTION

Scabies, a condition caused by the mite, sarcoptes scabiel var hominis is a highly contagious condition. It occurs worldwide affecting all population groups. Over the past two decades there have been renewed interest in the cpidemiology of scabies. There are changes in the incidence of scabies, in the occurrence of atypical forms and in the population groups affected. This short report gives an account of the changing epidemiology of scabies among in-patients in Singapore.

METHODS AND MATERIALS

We studied retrospectively all patients with scabies admitted to a dermatological ward between 1982 and 1989 (the dermatology ward of the Tan Tock Seng Hospital). A total of 114 patients were studied in terms of the epidemiology of scabies over the eight year period.

RESULTS

Over the 8 year period the hospital admissions for scabies increased two to three times (Fig. 1). In the early years more than 70% of the patients were below 20 years old whereas the same proportion of patients were above 50 years in the later years (Fig. 2).

There was also a change in the racial distribution (Table I). More Malays (more than 50%) had scabies in the early years (1982 - 1984) whereas this dropped to less than 50% towards the end of the decade. Chinese formed the bulk of the admission (more than 70%) towards the end of the decade.

We also noted a change in the residential status of these patients. In the early years (1982 - 1984) the majority of patients came from their own homes whereas in the later years there were more patients with scabies from institutional homes (Table II).

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Fig 1. Patients with Scabies (1982 - 1989)







DISCUSSION

Over the nine year period the in-patient admission for treatment of scabies rose two to three fold. However over the same period of time the rate of population increase is around one percent. On the whole there had been an increase in the incidence of scabies (both in-patients and outpatients) in other countries^(1,2).

Traditionally, scabies is common among three population groups. In many countries it occurs commonly in children and adolescents^(3,5). This is also true in Singapore in the early part of this decade. The cluster of scabies among this group is related to the overcrowding seen in homes and also in schools. In this infectious condition, overcrowding is a more important factor than hygiene in the spread of scabies^(6,7). With the improvement in housing and the establishment of better schools there is less overcrowding and hence a decline in scabies among children and adolescents.

Table I: Racial Distribution of Patients

Year		Race		Total
	Chinese	Malay	Indian/Sikh	
1982	4 (40%)	4 (40%)	2 (20%)	10
1983	4 (36.4%)	6 (54.5%)	1 (9.1%)	11
1984	2 (18.2%)	7 (63.6%)	2 (18.2%)	11
1985	2 (40%)	1 (20%)	2 (40%)	5
1986	22 (75.8%)	6 (20.7%)	1 (34.5%)	29
1987	25 (83.3%)	2 (6.7%)	3 (10%)	30
1988	13 (72.2%)	4 (22.2%)	1 (5.6%)	18
1989	12 (54.5%)	8 (36.4%)	2 (9.1%)	22

Table II: Residential Status of Patients

Year	c	From Iwn Home	Insti	From tutional Home	Total
1982	7	(70%)	3	(30%)	10
1983	11	(100%)	0	(0%)	11
1984	10	(90.9%)	1	(9.1%)	11
1985	2	(40%)	3	(60%)	5
1986	26	(89.7%)	3	(10.3%)	29
1987	19	(63.3%)	11	(36.7%)	30
1988	13	(72.2%)	5	(27.8%)	18
1989	14	(63.6%)	8	(36.4%)	22
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The second group at risk for scabies is the sexually active where scabies is transmitted via intimate contact⁽⁸⁾. This is less frequently seen in Singapore. None of the patients admitted during this period acquired the infection via sexual contact.

The military personnel forms the third group of persons at risk of contacting scabies. This, like the first group, is related to the close and prolonged contacts within the camps. This is why the incidence of scabies in shipboard navy personnel is higher than their colleagues based ashore⁽⁹⁾. Sporadic outbreaks are seen but there is no increase in incidence in this group.

From our study we noted that there appeared to be changes in the epidemiology of scabies among in-patients in Singapore. The bulk of patients with scabies had shifted from the childhood and adolescents group to an older population. More than 70% of the patients in the beginning of the decade were below 20 years old whereas towards the end of the decade the same proportion of the patients were above 50 years old. The majority of these older patients came from private or government-run long-stay institutional homes. At the beginning of the decade the patients even the older ones stayed in their homes. This contrasted with the end of the decade where it was not uncommon to see older patients from institutional homes. The shift from a young "scabies population" to an older one was a result of several factors. Firstly, in most of the homes there was prolonged close contact between the residents. Secondly, the older population had a decreased immunity to infestation by scabetic mites. Thirdly, Norwegian scabies⁽¹⁰⁾ with its high mite load was the most common form of scabies seen in these older patients probably as a result of their lower immunity. As the mite load was high in this form of scabies fomite like bedding played a role in the spread of scabies among the residents of these homes. Lastly, the presence of thick exfoliating scales often present as a problem in diagnosis and such delayed clinical diagnosis encouraged the spread of scabies before treatment could be instituted.

Another observation was that scabies tend to affect certain races more at certain times. Racial differences in the incidence of scabies had been seen elsewhere^(11,12). However, the disparity in incidence rates might have been due to differences in social and environmental factors. The high incidence among the Malays at the beginning of the decade could be related to the overcrowded homes in the kampongs. As these people enjoyed better housing with less overcrowding the incidence of scabies dropped towards the end of the decade. The higher proportion of scabies among the Chinese population could probably be related to the higher proportion of older Chinese staying in the long-stay institutional homes.

Lastly, there was a delay in diagnosis. The pruritus and scaling were often misdiagnosed as xerosis of old age. The presence of thick exfoliative scales was diagnosed as some form of dermatitis. These old folks were often less mobile and the inaccessibility to treatment further delayed the diagnosis.

CONCLUSION

Thus we see changes in the epidemiological pattern of scabies among in-patients in a dermatological ward. The higher proportion of older patients brings with it problems in management.

Early and accurate diagnosis must be made. The contacts in institutional homes must be examined and treated early for scabies and until complete clearance. The beddings and clothing need to be treated to prevent spread of infection via formites.

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