# The changing pattern of hospital attendance for skin disease in Sri Lanka

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## Summary

Hospital clinic attendance pattern is a useful guide to the prevalence of skin disease in a community. In Sri Lanka few studies have been done in this regard in the past. The present survey was carried out at the dermatology clinic at Base Hospital, Matara and the results are compared with results of earlier studies. A total of 1133 patients were seen in a one-month period in 1992. The major disease groups seen were, dermatitis (eczema) 42.6%, fungal infections 12.9%, bacterial infections 6.3%, pigmentary abnormalities 6.3%, psoriasis 4.5%, viral infections 3%, and acne 2.9%. The clinic attendances for scabies and bacterial infections have decreased, whereas the attendance for acne and cosmetic dermatological conditions such as dermatosis papulosa nigra, skin tags and keloids have increased, when compared to the previous surveys. These changes may be due to increased awareness of treatable skin conditions, early treatment and greater concern about cosmetic dermatological problems.


**Key words:** Skin disease pattern, hospital clinic

## Introduction

Hospital clinic attendance pattern is a useful guide to the prevalence of skin disease in a community. It is of equal importance to the dermatologist, epidemiologist and the health policy planner. A few studies on the skin disease pattern at hospital clinics in Sri Lanka have been reported (1, 2, 3). However, as the socio-economic conditions and attitudes of the people have changed rapidly over the past five to ten years, a survey was carried out to assess whether the clinic attendance pattern too has changed.

## Study population and methods

All patients attending the skin clinic at the Base Hospital, Matara during one month (October 1992) were included in the study. Both 'new' and 'repeat' visit patients were recorded on a list of common skin diseases prepared by the author. Special care was taken to record one patient only once, even if he or she returned to the clinic during this one month. All the patients were seen and recorded by the author. The record was based on the major disease presentation or presentations and asymptomatic, incidental findings were not recorded.

## Results

During this period a total of 1133 patients were seen. The biggest number of patients attended for treatment of eczema/dermatitis (42.63%). The other major disease groups were fungal (12.89%), bacterial (6.35%), pigmentary abnormalities (6.27%), psoriasis (4.5%), viral infections (3%), and acne (2.91%). The detailed list, in descending order of incidence of disease is shown in Table 1, together with a comparison with the results of previous surveys.

## Discussion

Many factors influence hospital clinic attendance patterns. Referral patterns by doctors, diagnostic criteria, social awareness, affluence of the community, geographic, climatic and ethnic factors all are relevant in this regard (4).

Matara is the second largest city in the Southern Province. The Base Hospital, Matara attracts patients not only from Matara district but also from Hambantota district and sometimes from Monaragala district. The patients attending hospital clinics are mainly from the poor and middle socioeconomic classes. Both adult patients and children are seen at the dermatology clinic.

The results of this study differ from the study done by Athukorala *et al* in Galle during 1972-74

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**Table 1 – Clinic Attendance Patterns for Skin Diseases in Sri Lanka**

| | MATARA (1992) | KANDY (1982-86) | GALLE (1972-74) | JAFFNA (1971) | COLOMBO NORTH |
|---|---|---|---|---|---|
| 1. Dermatitis Eczema | 42.63% | 38.3% | 40.5% | 31.3% | 31.8% |
| 2. Fungal Infections | 12.89% | 12.6% | 9.2% | 22.4% | 12.2% |
| 3. Bacterial Infections | 6.35% | 10.6% | 8.1% | 8.6% | 9.1% |
| 4. Pigmentary abnormalities | 6.27% | | | | |
| Vitiligo | 5.38% | 5.9% | 2.5% | 2.7% | 2.3% |
| 5. Psoriasis | 4.50% | 7.3% | 3.6% | 3.1% | 3.9% |
| 6. Viral Infections | 3.00% | 4.9% | 5.6% | 3.6% | 3.6% |
| 7. Acne | 2.91% | 2.4% | * | 2.44% | * |
| 8. Papular urticaria (chronic) | 2.03% | * | * | * | * |
| 9. Benign tumours (seborrhoeic keratosis, Dermatosis, Papulosis nigra, Skin tags, keloids etc.) | 2.03% | * | * | 0.36% | * |
| 10. Lichen Planus | 1.68% | 1.9% | 0.6% | 0.6% | 2.5% |
| 11. Icthyosis | 1.41% | * | * | * | * |
| 12. Lichen Amyloidosis | 1.23% | 0.50% | * | * | * |
| 13. Leprosy | 1.23% | 0.9% | 0.9% | 0.6% | 2.5% |
| 14. Alopecia | 1.23% | 1.10% | * | 1.36% | * |
| 15. Urticaria (acute) | 0.97% | 4.70% | * | 1.65% | * |
| 16. Scabies | 0.88% | 2.4% | 11% | 9.1% | 8.3% |
| 17. Pityriasis Rosea | 0.79% | 1.70% | * | 0.90% | * |
| 18. Leg Ulcers | 0.71% | * | * | * | * |
| 19. Follicular Hyperkeratosis | 0.71% | * | * | * | * |
| 20. Exfoliative Dermatitis | 0.62% | * | * | * | * |
| 21. Unusual Naevi (Becker's, Naevus spilus Hairy Naevi etc) | 0.62% | * | * | 0.2% | * |
| 22. Bullous Diseases | 0.53% | 0.4% | * | 0.12% | * |
| 23. Pruritus | 0.53% | * | * | 1.54% | * |
| 24. Lichen simplex chronicus | 0.44% | * | * | 1.48% | * |
| 25. Connective tissue Diseases | 0.35% | 0.50% | * | 0.36% | * |
| 26. Drug Eruptions | 0.35% | 0.70% | * | 0.59% | * |
| 27. Nodular prurigo | 0.18% | * | * | * | * |
| 28. Miliaria | 0.09% | * | * | 0.59% | * |
| 29. Miscellaneous | 2.82% | | | | |
| | 99.98% | | | | |

* Data not available.

(1) in several aspects. The clinic attendance pattern in Galle (also in the southern Province, 28 miles north-west of Matara) showed a very high percentage of scabies; 11% as against 0.88% in Matara. In a recent study (1982-86), Perera *et al* reported 2.4% scabies at the dermatology clinic in General Hospital, Kandy (3). In two free clinics, organized by a non-governmental organization in Kataragama (June 1992) and Angunakolapelessa (October 1992) where the author saw 213 patients with dermatological complaints, only two cases (0.93%) of scabies were seen. The statistics obtained from the office of the Medical Officer of Health, Matara Division, too revealed a drop in the prevalence of scabies in the student population in Grades I, IV, VII (age groups 6 years, 10 years and 13 years) in the past five years. In 1987 in samples of student population in these age groups, prevalence of scabies was 3.15% whereas in 1992 (upto September) it was 1.76% (Courtesy M.O.H., Matara).

Therefore, it is evident that there is a significant drop in the prevalence of scabies in the clinic population, which in turn reflects the prevalence in the community.

It is generally accepted that scabies has cyclical fluctuations in the developed world (5). According to some authors, there is no definite evidence that this type of cyclical fluctuations in the incidence of scabies occurs in the developing countries (5). The reasons for the drop in scabies cases at the dermatology clinics in Matara may be:

1. greater awareness and early treatment
2. availability of cheap and effective treatment for scabies
3. improved living conditions
4. 'low incidence' period in a cyclical fluctuation pattern.

A combination of all these factors has probably led to a drastic reduction in prevalance of scabies in the community.

Acne was not a common presentation in the clinic surveys done in Galle, Jaffna and Colombo North (1, 2). However, in Matara 33 patients (2.9%) sought treatment for acne in one month. Once again, in the patient population at Kataragama and Angunakolapelessa (Hambantota District) at the free clinics, acne was the presenting complaint of 2.35% of patients. This too shows the greater concern for the cosmetic appearance and increased awareness of acne as a treatable condition among the population at large.

Clinic visits for leukoderma/vitiligo at Galle nearly two decades ago (1) averaged at 2.5% whereas pigmentary disorders were the presenting complaint of 6.27% of Matara patients (vitiligo 5.38%). This may also be due to greater concern about the appearance and awareness that there is effective treatment even though only partially. The view that people are more concerned about cosmetic appearance is further supported by the fact that a significant number came for treatment of dermatosis papulosis nigra, skin tags and keloids (1.32%) in this survey.

As in the other surveys on clinic attendance patterns in Sri Lanka, dermatitis/eczema was the commonest cause for clinic visits, endogenous eczema 29.83%, seborrhoeic dermatitis 3.88%, photosensitive dermatitis 3.35%, contact dermatitis 1.3%, varicose eczema 1.32, asteatotic eczema 1.06%, ear lobe eczema 0.44%, pompholyx eczema 0.53% and pityriasis alba 1.41%.

Of the fungal infections 10.5% were due to dermatophytoses (ring worm). Pityriasis versicolor, candidiasis and other fungal infections were found in 2.03%, 0.26% and 0.09% respectively. With regard to fungal infections, the need to treat them for a sufficient length of time and the need to wear appropriate clothing have to be emphasized; this is particularly important in dermatophytoses. In general, the persistent high incidence of fungal infections in Sri Lanka is probably related to the warm humid climate of the country. Pityriasis versicolor may affect a large proportion of the population in a tropical country; in some tropical countries its prevalence is estimated at 40% of the population whereas in temperate countries it is less than 1%

(6). In Sri Lanka, most of the people with pityriasis versicolor do not come for treatment, probably because they do not consider it as a disease or a treatable condition.

The bacterial infection group was smaller (6.35%) compared to Galle (8.1%), Kandy (10.6%), Jaffna (8.6%) and Colombo North (9.1%). This may be partly due to the wide use of topical and systemic antibiotics. Of the bacterial infections, a significant number was due to chronic folliculitis of legs or dermatitis cruris pustulosis et atrophicans (2.91%). Chronic folliculitis of legs appears to be commoner in the Matara region (Galle 1.54%, Jaffna 2.3%). Investigation into this problem revealed that it was commoner in people who had icthyosis, who scrubbed legs with rough objects and those who were in occupations such as masons, paddy farmers, fishermen, saw mill workers.

The occurrence of pyoderma and impetigo were rather low in the Matara clinic population (0.88% for each condition). Cellulitis accounted for 0.18% and other bacterial infections (excluding leprosy) accounted for 1.5%.

Leprosy was found in 1.23% of patients, comparing well with the past surveys (Galle 0.9%, Jaffna 0.6%, Colombo North 2.5%, Kandy 1.1%). However this figure may be the net result of several factors:

1. greater awareness of leprosy in the community due to the intensive social marketing approach by the Anti Leprosy Campaign in recent years.

2. some leprosy patients attending the Anti Leprosy clinics directly.

3. self-presentations of leprosy patients to the clinics may have plateaued following the dramatic increase in numbers that occurred soon after the advertising campaign started a few years ago.

**Table 2 – Hospital attendance for some common skin Diseases in U.K., Singapore, Western Australia and Pakistan compared with Sri Lanka figures (percentages).**

| | MATARA SRI LANKA (1992) | SINGAPORE (1981) | OXFORD U.K. (1980-81) | WYCOMBE U.K. (1980-82) | KARACHCHI PAKISTAN | PERTH WESTERN AUSTRALIA 1992 |
|---|---|---|---|---|---|---|
| Dermatitis | 42.6 | 25.6 | 11 | 19.9 | 18.7 | 10.3 |
| Fungal Infection | 12.9 | 10.9 | 2.1 | 2.6 | 12.6 | 3.3 |
| Bacterial infection | 6.3 | 2.8 | 1.2 | 1.8 | 12.6 | 2.1 |
| Pigmentary Disorders | 6.3 | 1 | * | * | * | 1.2 |
| Psoriasis | 4.5 | 1 | 3.7 | 4.7 | 0.7 | 14.1 |
| Viral Infection | 3.0 | 5.7 | 19.7 | 17.7 | 2.5 | 5.0 |
| Acne | 2.9 | 10.4 | 3.3 | 4 | * | 2.9 |
| Scabies | 0.9 | 7.6 | 1.1 | 0.5 | 25.2 | 1.2 |
| Lichen Planus | 1.7 | 0.1 | 0.9 | 1.1 | 0.3 | 0.8 |
| Malignant skin tumours | 0 | 0.1 | 3.0 | 4.5 | 0 | 10.3 ** |
| Alopecia Areata | 1.2 | 0.1 | 0.8 | 1.6 | * | * |
| Solar Keratosis | 0 | 0 | * | * | 0 | 15.3 ** |

* Data not available

** Australia has the highest incidence of skin cancers in the world.

Table 2 compares the statistics of the present survey with some statistics from Pakistan, U.K., Singapore and Western Australia.

Contrary to the belief among some (7), Sri Lanka, being an Asian country has a significant incidence of lichen planus and psoriasis, comparing well with the figures from Western countries. For example, lichen planus was seen in 1.68% in Matara, 1.9% in Kandy, 0.68% in Galle, 0.6% in Jaffna and 1.2% in Colombo North, whereas the figures for same from several centres in the U.K. are as follows: Edinburgh 0.5%, Manchester 0.9%, Leeds 1.6% and Oxford 0.9% (7). Clinic presentations for psoriasis was 4.5% in Matara and this is a slight increase from 3.6% in Galle. The Matara figures compare favourably with figures from Oxford 3.7%, Leeds 4.8% and Edinburgh 4.3% (7). Surveys done in Manchester and Durham have recorded 7.2% and 6.7% psoriasis in clinic patients which is comparable to the figure of 7.2% of psoriasis in clinic population in Kandy (3, 7).

The change in clinic attendance pattern in Sri Lanka in some ways resembles the figures from Singapore in that fungal infections are the major group next to dermatitis. In Singapore too, in the last few decades bacterial infections and scabies have decreased and acne has emerged as a major group (7). It is reasonable to predict that in Sri Lanka, the number of patients presenting at skin clinics for treatment of acne will increase considerably over the next decade. Despite the economic growth and improved living conditions, fungal infections are still very common in Singapore (8), the most likely explanation being the warm humid climate. Perhaps wearing western styled clothes in warm climates too have a bearing on the increased incidence of fungal infections.

There appears to be an increase in viral infections (mainly viral warts) among the clinic patients in the U.K. However, it is not certain whether this is due to a true increase in the incidence in the community or more people seeking treatment now. Interestingly, in a similar survey done by the author (1992) in Perth, Western Australia, there were 0.83% patients with Human Immuno Deficiency Virus (HIV) related skin diseases (4). Even in Sri Lanka, in the next decade, a significant increase in this group of patients can be anticipated. In some centres in the U.K. viral infections group has surpassed the eczema group of patients in hospital clinics (7), perhaps due in part to a large number of eczema patients being treated by general practitioners. However, there is no indication of a reduction in eczema patients in the hospital clinics in Sri Lanka.

If a similar survey is continued, recording only the first visit patients for a period of one year or more, any seasonal variations would not affect the results. This survey was limited to one month due to practical difficulties in a busy clinic. The second visit patients were included (but recorded only once) as generally most first visit patients return to the clinic for review in two to four weeks.

In summary, in this survey done at the Base Hospital, Matara, on the clinic attendance pattern of 1133 dermatology patients, the major disease groups were: dermatitis, fungal infections, bacterial infections, pigmentary disorders (esp. vitiligo), psoriasis, acne and viral infections.

A drop in the prevalence of scabies and a significant drop in the incidence of bacterial infections, esp. pyoderma and impetigo, may indicate greater awareness and early treatment of these conditions. A rise in the number of patients seeking treatment for acne, vitiligo, dermatitis papulosis nigra, keloids and skin tags may indicate greater concern for cosmetic appearance in the community.

A collective effort by the dermatologists and other health personnel will help to contain or further reduce the treatable and preventable infectious diseases such as scabies, bacterial infections and dermatophytoses.

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