Pattern of Skin Disease in Karachi

Pages with reference to book, From 73 To 78

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Abstract

Three thousand seven hundred and ninety seven skin cases were studied in Dermatology outpatient Department of the Jinnah Postgraduate Medical Centre, Karachi over one year. The incidence of various diseases is compared with those from Bangkok, Shiraz, London and Ibadan. Scabies, eczema, pyogenic and fungus infections were the most common problems encountered (JPMA 35: 73, 1985).

Introduction

Ecological records of diseases are always of great significance. Their value is not only social, geographical and ethnological but also epidemiological and preventive. In a country like Pakistan where the expenditure on health is a fraction of the gross national budget such studies are all the more necessary to rationalise the use of meagre resources available.

It is never easy to evaluate the exact incidence of a disease unless large groups of unselected population are studied. Estimates based on patients attending a hospital are biased since it is mainly the lower social class that turns up for consultation. Again the clinical acumen of the consulting doctors and availability of investigative and follow up facilities are of paramount importance. Despite these and other pitfalls, incidence of diseases based on hospital figures is considerably helpful if the limitations are kept in mind.

Material and Methods

This paper is based on 3797 cases seen in the skin outpatient department of Jinnah Postgraduate Medical Centre, Karachi, over one year i.e.March, 1977 to February, 1978. This centre is a teaching institute for the medical postgraduates and undergraduates. The patients attending this hospital not only come from all parts of Karachi but also from interior of Sind and other provinces particularly Baluchistan.

The coastal city of Karachi with its hot and humid climate, progressive industrialisation and unhygienic living conditions, particularly in the less affluent parts has a fair share of skin disease. There is a perpetual migration of people into Karachi from other parts of Pakistan in search of job or business. Also being a cosmopolitan city we are able to see certain exotic dermatoses normally foreign to this region.

Results

Age and sex distribution is shown in Table I.

Table – I
Age and Sex distribution.

Age in years	Male	Female
0–10	479	450
11–20	565	496
21–30	526	399
31–40	240	225
41–50	141	116
51–60	73	43
61–70	20	7
71–80	10	4
Above 80	3	0
Total	2057	1740

Table II

Comparative Incidence of Common Dermatoses (%).

		Karachi	Bangkok	Ibadan	London	Shiraz
1.	Scabies	22.7	12.6	0.95	0.8	N.M.
2.	Eczema	18.7	30.1	10.3	32.0	31.0
3.	Pyogenic Infections	12.8	5.0	7.6	4.0	11.2
4.	Fungus Infections	12.6	12.2	14.3	3.2	17.0
5.	Pruritus	4.1	N.M.	1.8	0.9	N.M.
6.	Urticaria	3.1	4.5	1.0	1.7	3.3
7.	Acne Vulgaris	2.8	2.0	5.6	1.2	5.8
8.	Virus Infections	2.5	N.M.	7.9	3.8	1.8
9.	Pigmentary Disorders	2.4 (L1.1) (M1.3)	N.M.	L4.3	L1.9	5.9 (L2.8) (M3.1)
10.	Miliaria	0.9	N.M.	N.M.	N.M.	N.M.
11.	Tumours	1.1	N.M.	1.8	0.6	4.6
12.	Alopecia	0.9	N.M.	0.7	3.6	1.6
13.	Pityriasis alba	0.9	N.M.	N.M.	N.M.	N.M.
14.	Drug Eruptions	0.8	N.M.	3.3	0.3	1.3
15.	Genodermatoses	0.7	N.M.	N.M.	N.M.	1.4
16.	Psoriasis	0.7	N.M.	0.5	5.6	2.4
17.	Papular Urticaria	0.6	4.9	N.M.	N.M.	1.0
18.	Pediculosis	0.5	N.M.	0.08	0.1	N.M.
19.	Leprosy	0.4	2.7	3.4	0.06	0.5
20.	Lupus Erythematosus	0.4	N.M.	1.2	0.4	1.2
21.	Tuberculosis	0.3	N.M.	0.6	0.1	0.6
22.	Lichen Planus	0.3	N.M.	6.2	1.3	0.6
23.	Pityriasis rosea	0.2	N.M.	2.2	1.5	N.M
24.	Rosacea	0.2	N.M.	N.M.	N.M	N.M.
25.	Hyperhidrosis	0.2	N.M.	N.M.	N.M.	N.M.
26.	Purpura	0.2	N.M.	N.M.	N.M.	N.M.
27.	Pemphigus	0.1	N.M.	N.M.	N.M.	N.M.
28.	Leishmaniasis	0.08	N.M.	N.M.	N.M.	2%
29.	Gonorrhoea	0.05	N.M.	N.M.	N.M.	N.M.
30.	Syphilis	Nil	N.M.	0.6	0.03	N.M.

N.M. = Not Mentioned
* = Include Molluscum Contagiosum only
L = Leucoderma
M = Melasma

Table -II lists the incidence of skin diseases seen in their order of frequency. These figures are compared with those from Bangkok[1], Shiraz[2], London[3] and Ibadan.[4] Scabies, eczema, pyogenic and fungus infections alone account for 66.7% of the total dermatoses seen in Karachi while in Bangkok the frequency of these diseases is 59.9%, for Ibadan 33.2%, London 40% and Shiraz 59.27. Figures from Shiraz do not include any case of scabies.

Table – III

Comparative Incidence of Fungus Infections (%).

	Karachi	Bangkok	Ibadan	London	Shiraz
Pityriasis Versicolor	4.3	–	2.8	0.2	5.3
Tinea Corporis	3.4	–	7.7	0.6	0.9
Tinea Cruris	3.0	–	–	–	0.2
Tinea Capitis	0.7	–	2.3	0.2	10.3
Tinea Pedis	0.4	–	0.08	1.3	0.2
Tinea Unguium	0.4	–	0.9	0.2	–
Candidiasis	0.4	–	–	–	–
Mycetoma	0.07	–	0.5	–	0.1
Total:	12.67	12.2	14.28	2.5	17.0

Table – IV

Comparative Incidence of Various Types of Eczema (%).

Types of Eczema	Karachi	Bangkok	Ibadan	London	Shiraz
Contact	3.3	19.5	0.5	2.3	0.6
Seborrhoeic	1.6	4.2	1.7	6.7	2.4
Atopic	0.6	N.M.	0.3	3.6	9.4
Lichen Simplex	2.8	N.M.	1.1	2.5	4.4
Stasis	0.1	N.M.	Nil	0.4	N.M.
Nummular	1.3	N.M.	N.M.	N.M.	0.8
Other	9.0	N.M.	6.7	16.9	13.3
Total:	18.7	23.7	10.3	32.4	30.9

* N.M. = Not mentioned.

Tables III and IV list the comparative incidence of various types of fungus infections and eczema as seen in different centres.

Discussion

Scabies is the most common problem encountered in Karachi accounting for almost one in four cases. Congestion, joint family system, water shortage, poor hygienic conditions, lack of health education and

rapid urbanisation are the aggravating factors. Incidence of scabies is known to vary in cycles[5] Perhaps we were riding a crest at the time in Karachi. Mehregan[2] makes no mention of scabies in his study in neighbouring Iran. Presumably the incidence there is insignificant. While one can understand a low figure of 0.8% in London,[3] a similar figure from Ibadan[4] where much the same ecological factors reign as in Karachi, can only be explained on the basis of cyclical variation just mentioned. This view is further strengthened by the findings in Nigeria[4] where a fall in the incidence of scabies was noted from 25%in 1950 to 1l%in 1960.

Pyogenic infections mainly due to staphylococcus aureus, also formed a high percentage of the skin cases seen. The common modes of presentation were impetigo contagiosa, boils, folliculitis and in summer months poritis and periporitis. The reasons for this increased incidence must be a high humidity most of the year round, poor hygienic conditions and a high prevalence of predisposing itchy conditions like scabies, pediculosis and prickly heat. A lot can be done to reduce this high figure by improving living conditions and proper health education as was achieved in London. Incidence of pyogenic infections there had fallen from lO.7%[6] at the turn of the century to 3.9% fifty years later[3]

Our overall figure of fungus infections is comparable with other centres except London. Pityriasis versicolor is the most common type of mycosis accounting for 4.3% of total cases. Heat and high humidity are the main responsible factors.

Tinea Corporis and tinea Cruris are next with 3.4% and 3% respectively. In certain parts of Europe e.g. Scotland, tinea cruris does not occur in females. However, females do suffer in India and Pakistan where Haroon[7] reported a male to female ratio of 8:1. It is surprising that Shrank & Harman[4] make no mention of tinea cruris in their study. Perhaps they have listed these cases under tinea corporis.

Incidence of tinea Capitis (0.7%) is low in our study, as compared to 10.3% reported from Shiraz.[2] Black dot ringworm was the most common mode of presentation whereas Mehregan[2] mentioned favus as the main clinical type. We had only four cases of favus. Surprisingly twenty out of seventy three cases of tinea capitis reported by Khan & Anwar[8] in the same city suffered from favus.

A solitary case of tinea pedis was isolated amongst 1156 skin patients in Ibadan.[4] This was attributed to lack of wearing shoes. also reported a similarly low incidence in Iran (0.2%). In our study this figure stood at 0.4%.Constant wearing of shoes might be the reasQn for the high incidence in London.[3] 0.4% of our fungal infections were due to tinea unguium. The incidence of onychomycosis is certainly higher but in the absence of any symptoms few consult a dermatologist.

Fungi isolated from various types of mycotic patients in their order of frequency were Trichophyton rubrum, Epidermophyton floccosum, Trichophyton tonsurans, Trichophyton violaceum, Microsporum gypseum, Trichophyton mentagrophytes and Trichophyton schoenleinii. There were fifteen cases of candida albicans (3.1%).

While Vibhagool[1] did not give a break up of fungal infections from Bangkok, another worker from the same city listed candida albicans (42.2%) as the most common fungus followed by Trichophyton rubrum (32.6%) and Trichophyton mentagrophytes (14.2%). Kortrajaras[9] mentioned that pityriasis versicolor was extremely common in Thailand but did not give exact figures.

Fourteen studies from various parts of neighbouring India showed the commonest fungus to be Trichophyton rubrum[10] The incidence ranged from 56.7% to 92.6%. Trichophyton violaceum, Trichophyton mentagrophytes and Epidermophyton floccosum were also frequently isolated.

Mycetoma is not seen in Karachi but isrelatively common in interior of Sind from where all three of our cases originated.

Incidence of eczema though not as high as in Bangkok,[1] Shiraz[2] and London[3] should increase in future with rapid industrialisation in Karachi. Prevalence of various types of eczema was as follows:

(i) Contact dermatitis (3.3%): It was the most common form of eczema seen. There were 86 cases of

allergic contact dermatitis and 41 of primary irritant dermatitis. Rubber, nickel and hair dye were the main allergens encountered. House wife's dermatitis due to water and detergents and cement dermatitis in masons were the chief examples of the primary irritant type. Figure of 19.5% from Bangkok[1] seems exceedingly high.

(ii) Lichen simplex chronicus (2.8%) : It is very common in Pakistan. Our figure is comparable with that from London[3]. Its incidence seems low in Ibadan[4] and high in Shiraz.[2]

(iii) Seborrhoeic dermatitth (1.6%) : Our incidence is the lowest compared to all other centres.

(iv) Atopic dermatitis (0.6%): our figures seem exceedingly low Shiraz[2] and London[3].

(v) Stasis eczema (0.1%): Stasis ulceration and eczema is uncommon. It is interesting that not a single case of this type was recorded in Ibadan. Even in United Kingdom the incidence is variable while in London[3] a figure of 0.4% is reported and in Glasgow[11] the incidence is 1.7%. This difference must be due to hereditary factors involved.

Urticaria is a common problem in Karachi. Drugs e.g. penicillins and analgesics, and worm infestations are the main reasons. Thirty two cases of drug eruptions were recorded, fifty percent of which were due to fixed eruptions. Even in Shiraz[2] and Ibadan[4] the usual form of drug eruption is of this type. Main offending drugs causing fixed eruptions in our study included metamizole, and sulphonamides. Pasricha[12] from India also lists the same drugs as two of the major aetiological factors.

We recorded 97 cases of viral infections. There were 38 cases of herpes zoster, 26 of warts, 17 of molluscum contagiosum, 14 of herpes simplex and one each of vaccinia and variceila. Our incidence of warts is only one tenth of that seen in London. It is interesting to note that in London this figure was as low as 0.1% in 1903.[7]

Our incidence of acne vulgaris is only half of that reported from Shiraz[2] and Ibadan[4] and double that of London.[3] Quite contrary to the popular belief that females consult more often with acne the male to female ratio was almost equal.

Incidence of leucodèrma though lower than Other centres, certainly evokes severe emotional and social upheaval in Pakistan. Lots of misconceptions and taboos are associated with this condition. Melasma is also common and affects males and females equally.

There were 15 cases of naevi and 26 cases of genodermatoses. Amongst the latter, ichthyosis vulgaris (6 cases), neurofibromatosis (4 cases), xeroderma pigrnentosum (3 cases) and congenital erythropoietic porphyria (3 cases) were the main types encountered. Congenital erythropoietic porphyria seems more common in Pakistan compared to other forms of porphyria. Only about 80 cases of this type in both sexes have been reported[13] but we have alone collected eight cases since, all in males. Forty eight cases of tumours were recorded out of which 41 were benign and 7 malignant. Only three patients presented each with basal cell and squamoup cell carcinomata. There was a solitary case of malignant melanoma. Pigmented skin of Karachiites certainly acts as a protective factor against cutaneous malignancies as also noticed in Ibadan.[4] One reason for lower incidence of tumours in our series may also be due to direct referals to the surgical and radiotherapy departments of such patients.

Nineteen out of thirty five cases of hair loss were due to alopecia areata. lnterestingly our incidence of pediculosis capitis is higher than in Ibadan. This is perhaps because of the fact that the scalp, even of girls, is frequently shaved in Nigeria[4] and our girls grow long hair and wash them less frequently. Papular urticaria is certainly a problem in Karachi though our incidence is only one eighth of that reported from Bangkok. Children born outside Pakistan and visiting homeland for the first time show a very severe form perhaps due to lack of immunity against the local insects.

Psoriasis appears to be less common in Karachi than Shiraz and London. Out of the 28 cases recorded three had arthropathy, two exfoliative dermatitis and one pustular psoriasis. Despite the frequent use of coticosteroids in the treatment of psoriasis in Pakistan pustular psoriasis seems rare.

We recorded 16 cases of lupus erythematosus out of which three were of systemic and thirteen of

chronic discoid type. This incidence is practically the same as reported from Shiraz[2] and London.[3] Increased propensity in the West Africans[4] is interesting since it is said to be only half as frequent in negroes than in whites.[14]

Although pulmonary tuberculosis is very common in Karachi cutaneous tuberculosis is rare. We recorded only 14 cases of the latter out of which eight had tuberculosis verrucosa cutis, four lupus vulgaris, and one each of scrofuloderma and tuberculide. Low incidence of lupus vulgaris in the East has not been satisfactorily explained.[15]

Leprosy fortunately is not so common as in Thailand[1] and Nigeria, [4] We have nearly 25,000 lepers in Pakistan more than half of which are in Karachi alone. Desai[16] reported that there were an estimated two million cases of leprosy in the neighbouring India. The high incidence of lepers in Karachi is perhaps due to the fact that large majority of them had migrated here from the endemic areas of India during partition of the subcontinent in 1947.

Cutaneous leishmaniasis is not endemic in Karachi. All the three cases that we saw had either come from Baluchistan or had been there for a visit. Baluchistan neighbours Iran where Mehregan[2] reported a two and half fold incidence of leishmaniasis.

Sexually transmitted diseases are uncommon in Karachi. Only two cases of gonorrhoea were seen while no patient reported with syphilis. Chancroid, lymphogranuloma venereum, granulorna venereum and herpes genitalis are virtually non-existent.

Conclusion

Scabies remains the main problem facing dermatologists in Karachi followed by infections of various types. Naturally improved hygiene and better health education can do a lot to change this situation. Steps should be taken to prevent leprosy from becoming a menace as in India. With rapid industrialisation in Karachi incidence of contact eczema is bound to rise. Since Karachi is a cosmopolitan city and an important international sea and airport, dermatologists should be prepared to treat exotic dermatoses normally not seen here.

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