

## PATTERN OF SKIN DISEASES

### PATTERN OF SKIN DISEASES IN INDIA †

(Based on diagnostic register of B. Y. L. Nair Ch. Hospital, Bombay)

By

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Disease pattern in general is determined by what are called ecologic factors. Human ecology is defined as man's relationship with his environments which are biologic, social, economic, political, geographical, seasonal, mental etc. Besides these, there are some ancillary factors also. All these together determine the disease pattern in a given geographic area. We are here concerned with the pattern as emerging from a limited area in Bombay viz. Nair Hospital. As will be pointed out later even this small study vividly reflects the overwhelming effects of human ecology. Recently there have been numerous articles among others by Drs. Desai, Canizares, and Dostrovsky on the relationship between human ecologic factors and biocoenosis. All these factors have been summarized in Table No. 5. However in this connection certain local features may be pointed out. Geographically Bombay is a city island i. e. a coastal place with a hot humid perspiring climate for most part of the year. Besides, though it is *Urbs Prima in Indis* it is still a developing city both economically and industrially. In the post independence decade there has been great influx of lacs of populations in Bombay for above reasons. Besides, lacs of displaced persons have settled down in Bombay. This has created great over crowding and congestion in residential quarters. All these points will be further commended when we examine the individual incidence of diseases as found in the pattern in Tables I to 4.

In India it will be seen that the pattern of skin diseases for that matter pattern of diseases of any other organ will be same. More or less it is a story of infection for that matter one of recurrent infection, a result of under developed economy and social backwardness. This is more so in hospital practice where poor people attend and therefore infections loom large. Whereas in private practice it is the allergy and other diseases figure prominently thus emphasizing the above twin fundamental factors. It is perhaps truism to say that index of infection in a country will provide counter index of its economic and social backwardness. Besides these primary factors there are many other secondary factors, which are largely direct results of the former, which determine the pattern. Over and above these general factors, there will be some local factors incidental to each country, city, town and village which also affect the pattern though to a lesser degree. Now we come to

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the consideration of skin disease pattern as found from the diagnostic register of B. Y. L. Nair Hospital, Bombay in 1960. Table No. 1 gives the various diseases under different group headings as per the proforma provided by the organizers of the conference.

Table 1

## SUMMARY OF THE PATTERN OF SKIN DISEASES IN INDIA

*Survey from the Diagnostic Register of B. Y. L. Nair Hospital, Bombay-8 for the year 1960.*

Total No. of Skin Cases: 11924

(1) <i>Infections:</i>		<i>No. of Cases</i>
Fungus Diseases	...	375
Leprosy	...	586
Pyoderma	...	1249
Scabies	...	2259
Viral Infections	...	92
Other Infections (T. B. etc.) i. e. Skin Tuberculosis	...	77
Total of Infections		4638 (38%) excluding V. D.
(2) <i>Non-Infectious Skin Disorders:</i>		
Allergy & Eczema	...	1227 (10%)
Acne	...	184
Collagen Diseases	...	116
Cancer	...	3
Drug Eruptions	...	424
Deficiency Dermatoses	...	700 (6%)
Dermatitis Herpetiformis Pemphigus, Other Bullous eruptions	...	14
Erythema Multiforme	...	31
Lichen Planus	...	67
Leucoderma & other Pigmentary Dermatoses	...	225
Psoriasis	...	47
Seborrhoeic Dermatitis	...	58
Remaining Skin Disorders	...	4120

TABLE 2.

Gives percentage proportions of infections and non-infections.

(1) Total No. of cases	...	11924 (100%)
(2) No. of Infections	...	4638 (38%)
(3) No. of Non-infections	...	7286 (62%)

TABLE 3.

Gives analysis of infections under different etiological microbes.

<i>Infections</i>			
(1) Fungus Diseases	...	...	375 ( 7%)
(2) Leprosy	...	...	586 (12%)
(3) Pyoderma	...	...	1249 (25%)
(4) Scabies	...	...	2259 (50%)
(5) Viral Infections	...	...	92 ( 3%)
(6) Others (T. B. etc.)	...	...	77 ( 3%)
Total			4638 (100%)

TABLE 4.

Shows classification of non-infections.

<i>Non-Infections</i>			
(1) Ailergy Eczema	...	...	1287 ( 14%)
(2) Drug Eruptions	...	...	424 ( 5%)
(3) Deficiency Dermatoses	...	...	700 ( .6%)
(4) Pigmentary Dermatoses	...	...	225 ( 2,5%)
(5) Others	...	...	4640 (72,5%)
Total			7286 (100%)

TABLE 5

Ecologic factors affecting the disease pattern are summerized.

*Factors Affecting Disease Pattern.*

1. *Economic Factors.*
  - a) Poverty
  - b) Under and malnutrition
  - c) Influx of population groups—crowding and congestion
2. *Environmental Factors.*
  - a) Hygiene and Sanitation
  - b) Climate
  - c) Geography
  - d) Vectors of disease
3. *Social.*
  - a) Illiteracy
  - b) Customs and Habits
4. *Others.*
  - a) Susceptibility
  - b) Race
  - c) Mental
  - d) Local or Individual

TABLE 6

As a direct corollary of ecologic factors, preventive measures have been summarized.

*Preventive Measures*

- 1) Improvement in standard of living, i. e. better economy.
- 2) Education of the Public in Health Rules.
- 3) Improvement in Environmental Hygiene.
- 4) Improved Nutrition.
- 5) Eradication of Vectors of disease.
- 6) Immunological Protection.

*Discussion*—In what follows, it will be our attempt to correlate the ecologic factors with the pattern as presented here.

From the figures in table No. 2 we find that various infections of skin constitute 38% of the total case load. If venereal disease case load is added to this then the percentage of infections rises to 50%. In other words half the number of total case attendance consists of infections some of which are chronic and recurrent. Desai has rightly classified them as diseases of poor economy. Of the infections scabies and other parasitic infections comprise 50% of the total number of infections. These clearly bring out the importance of living conditions. In post war period Bombay has experienced influx of new populations both from hinterland and of displaced persons. This has brought about shortage of living quarters and hence over crowding and congestion. It is just possible that there is about 50% repeat attendance of scabies cases, because of easy contagion. Ignorance of health rules also plays its part in these infections and infection to contacts. Pyodermas comprize 25% of infections. They together with parasitic and most of the viral infections constitute acute infections of skin. As with scabies here also these are reinfections and also infections to contacts. They mainly emphasize the etiologic role of poverty, under nutrition and therefore poor resistance and also of poor living standards. Fungus diseases constitute 7% of infections. They with leprosy and T. B. constitute chronic infections. Geographical factors of season, climate and altitude are well illustrated in the fungus group. Bombay is an island and its coastal climate is mostly hot humid and perspiring practically all the year round. However inspite of this, its incidence is smaller than the other two conditions discussed above. This illustrates the benevolent influence of social custom viz. universal habit of taking regular baths. This is again well illustrated in people from south in Bombay who suffer less than others as they are in the habit of taking bath twice a day. Regarding leprosy it is more a social problem. If social stigma is removed there is no reason why with available specific treatment it cannot be controlled. It also emphasizes the role of public health measures. As regards noninfections we find that eczemas and drug rashes comprize 19% of the total of noninfections. Here the role of ancillary factor of situation is emphasized. Though Nair Hospital is an entirely free hospital, its draining area is middle class and therefore we find

so high a percentage of allergic reaction. It is higher than the fungus percentage. Most of these eczemas are contact dermatitis due to topical applications and some occupational contactant allergens. Bombay is a big city with rapidly developing industries. Industrial dermatitis is likely to increase in near future. This group represents the capacity of skin to react. It is said brown skin can withstand the insults from these contactants better than the white one. It may be half truth; resistance of brown skin may be due to tanning capacity and partly to the fact that in brown skin, exposure rate to contactants is much less in an economically less developed area.

Curiously enough we see only 6% of deficiency dermatoses. This will again emphasize the factor of the location of the hospital as earlier pointed out. Some of the dyschromic conditions are governed by genetic and ethnic factors. Rest of the noninfections include congenital and other rare disorders.

To summarize, the hospital pattern mainly consists of (1) Dermatoses of poor economy (2) Eczemas and allergy (3) Trouble some three viz psoriasis, lichen planus and bullous dermatoses and (4) the rest. When we compare the hospital figures with those of private practice we find the following percentage distribution. (1) Infections 27% (2) social diseases i. e. V. D. 1% (3) allergy and eczemas 27% (4) troublesome three 9% and (5) the rest 34%. In office practice the common 10 diseases met with are in order of decreasing rate. Allergy and eczema, fungous infections, vitiligo and other dyschromias, psoriasis, lichen planus, acne, seborrhoeic dermatitis and pyoderma.

The purpose of this study is obviously to get at the real causes of disease and not the superficial ones like bacteria, deficiency etc. etc. though they are important for immediate treatment. This study of ecologic and epidemiologic factors only will enable us to devise proper preventive measures which are summarized in Table No. 6. It is clear from the above discussion that socioeconomic conditions have more influence on disease pattern than mere geography, race and other factors. For instance all these diseases of poor economy are still percent in poorer countries of Europe like Spain, Portugal and European Russia. The pattern as presented here is expressive of poverty, ignorance and an unfavourable biocoenotic balance between man and microbe. The balance can be changed by education of the public in health rules, improvement in environmental hygiene, eradication of vectors of disease, improved nutrition and application of techniques of immunological protection leading to better resistance. All these in turn depend on better economy and social progress. This is aptly reflected in the differences in hospital vs. private practice patterns and also in the incidence of common individual diseases. Ecology provides third dimension to a disease. It is important to know it for devising preventive measures. Every skin and V. D. department of hospital should orient thinking to the genesis of disease and their prevention and thus realise the utility of paramedical personnel like health visitors, special workers and others.

Absence of this facility transforms the entrance and exist of a clinic into a revolving door through which the same patient goes round and round.

#### SUMMARY

(1) The basic pattern of skin diseases as found from hospital record is the same as for diseases of any other system.

(2) This pattern accords with the general ecologic situation prevailing in the country viz. poverty, social backwardness and illiteracy.

(3) Infections take a heavy toll to the extent of 38%. The role of improved economy and social conditions is emphasized as regards the eradication of infections.

(4) The skin and V.D. departments must have paramedical personnel to educate the public.

(5) Study of ecology enables one to retrospect and forecast economic, nutritional, social, environmental and to a less extent climatic and geographical factors prevailing at a particular period of human existence.

It is my pleasant duty to thank the Dean, B.Y.L. ch. Nair Hospital for readily supplying me with the hospital figures.

#### REFERENCES.

- (1) Canizares Orlando, Georaphic Dermatology, Arch. of Derm. 82: 870, 1960
- (2) Desai, Sarat C. Ecologic Perspective of Dermatologic Problems in India, Arch. of Derm. 82: 701, 1960.
- (3) Dostrovsky. A. et al. Seasonal Factors in Pathogenesis of Skin Diseases, Arch. of Derm. 84: 750, 1961.

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