

INCIDENCE OF DERMATOMYCOSES IN KARACHI IN RELATION TO VARIATION IN CLIMATIC CONDITIONS

Pages with reference to book, From 293 To 295

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Abstract

The study was aimed initially to find out the prevalence of dermatomycoses in Karachi and its correlation with prevailing climatic conditions and humidity. The results indicated a direct relationship between dermatomycoses and climatic conditions. With the rise in temperature and humidity a corresponding rise in prevalence of dermatomycoses was recorded. The incidence increases in summer and comes down in winter. More persons are exposed during May to August and then a gradual decline occurs. High temperature and humidity are the factors conducive for increased incidence (JPMA 37: 293, 1987).

INTRODUCTION

Climatic conditions and seasonal variations have a direct influence on the incidence of certain mycotic infections, incidence of coccidioidomycoses in California reaches its peak during the dry, dusty, fall months and ebbs during the wet winter months^{1,2}. In Uruguay, Mackinnon³ reported that sporotrichosis occurs mainly during the fall and early winter months.

Mycotic infections are more common in tropical and sub-tropical regions on account of high temperature and humidity and it is universally established that dermatophytic infections are primarily concentrated in hot and humid areas of the tropics⁴ Alongwith these climatic conditions, congregation of a large number of people and their poor standards of hygiene give impetus to high prevalence of infections.

Pakistan' is located between 22° and 37° north of equator. Its coastal regions experience high temperatures coupled with high humidity due to moisture laden winds blowing from the sea.

The present study deals mainly with dermatomycoses in relation to climatic conditions and seasonal variation. Karachi experiences continental type of climate in the northern portion of the city and a coastal type of climate nearer the sea. This accounts for high incidence of dermatomycoses in Karachi during May to August.

MATERIAL AND METHODS

The present work includes the studies of dermatomycoses carried out during November, 1979 to July, 1982. Data regarding the normals of temperature, relative humidity and rainfall for this period was procured from Meteorological Department (Table I).

TABLE - 1
Average Climatic Conditions of Karachi during
November, 1979 to July, 1982.

Month and Year	Temperature in °C		Humidity in %		Rainfall in m.m.
	Mini- mum	Maxi- mum	Mini- mum	Maxi- mum	
November, 1979	17.9°C	32.4°C	52%	64%	0.00
December, 1979	23.0	26.9	45%	65%	13.5
January, 1980	10.7	25.3	40%	67%	00.00
February, 1980	13.5	28.6	40%	67%	00.00
March, 1980	18.3	31.2	47%	72%	10.9
April, 1980	24.2	35.9	49%	77%	00.00
May, 1980	27.9	34.9	62%	74%	00.00
June, 1980	28.4	35.0	66%	77%	43.20
July, 1980	27.6	32.7	73%	80%	45.00
August, 1980	26.6	32.0	66%	76%	00.40
September, 1980	25.5	31.8	64%	78%	00.00
October, 1980	22.1	34.3	50%	75%	23.80
November, 1980	16.8	31.2	35%	60%	06.90
December, 1980	12.0	26.6	41%	68%	63.60
January, 1981	12.6	25.7	37%	64%	00.00
February, 1981	13.3	28.4	34%	75%	25.00
March, 1981	18.6	30.3	51%	77%	03.40
April, 1981	22.9	34.8	51%	78%	03.60
May, 1981	26.1	35.5	57%	73%	00.00
June, 1981	28.2	35.6	62%	75%	00.00
July, 1981	27.4	33.1	69%	78%	40.20
August, 1981	25.9	31.2	73%	81%	43.4
September, 1981	25.8	33.9	59%	79%	00.00
October, 1981	21.0	35.1	41%	71%	00.00
November, 1981	15.6	30.4	46%	72%	00.00
December, 1981	11.5	28.3	40%	67%	00.00
January, 1982	10.0	25.5	—	35%	00.00
February, 1982	12.0	26.0	70%	74%	02.10
March, 1982	16.5	31.8	69%	73%	24.9
April, 1982	22.1	34.1	75%	82%	00.00
May, 1982	25.4	36.3	68%	78%	00.00
June, 1982	28.1	35.5	77%	80%	00.00
July, 1982	27.6	34.5	78%	84%	27.7

1324 cases of various types of dermatomycoses were diagnosed clinically and confirmed by isolation and identification of the etiologic agents⁵.

RESULTS AND DISCUSSION

The present work suggests that the incidence of dermatomycoses has significant relationship with climatic conditions and seasonal variations.

According to data (Table II)

TABLE - 1
Average Climatic Conditions of Karachi during
November, 1979 to July, 1982.

Month and Year	Temperature in °C		Humidity in %		Rainfall in m.m.
	Mini-mum	Maxi-mum	Mini-mum	Maxi-mum	
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May, 1982	25.4	36.3	68%	78%	00.00
June, 1982	28.1	35.5	77%	80%	00.00
July, 1982	27.6	34.5	78%	84%	27.7

the incidence of dermatomycoses increases with the increase in temperature and humidity in Karachi. From January to April the incidence of different types of dermatomycoses was 31.5% in 1980 and 19.25% in 1981 and 32.25% in 1982. Similarly the occurrence of dermatomycoses during September to December in 1980 was 31.75% and in 1981 31.75%. However, during the period May to August in all the years, the incidence of infections almost doubled. During these months the average incidence was 62.75% in 1980, 60% in 1981 and 71.66% in 1982 (Figure)

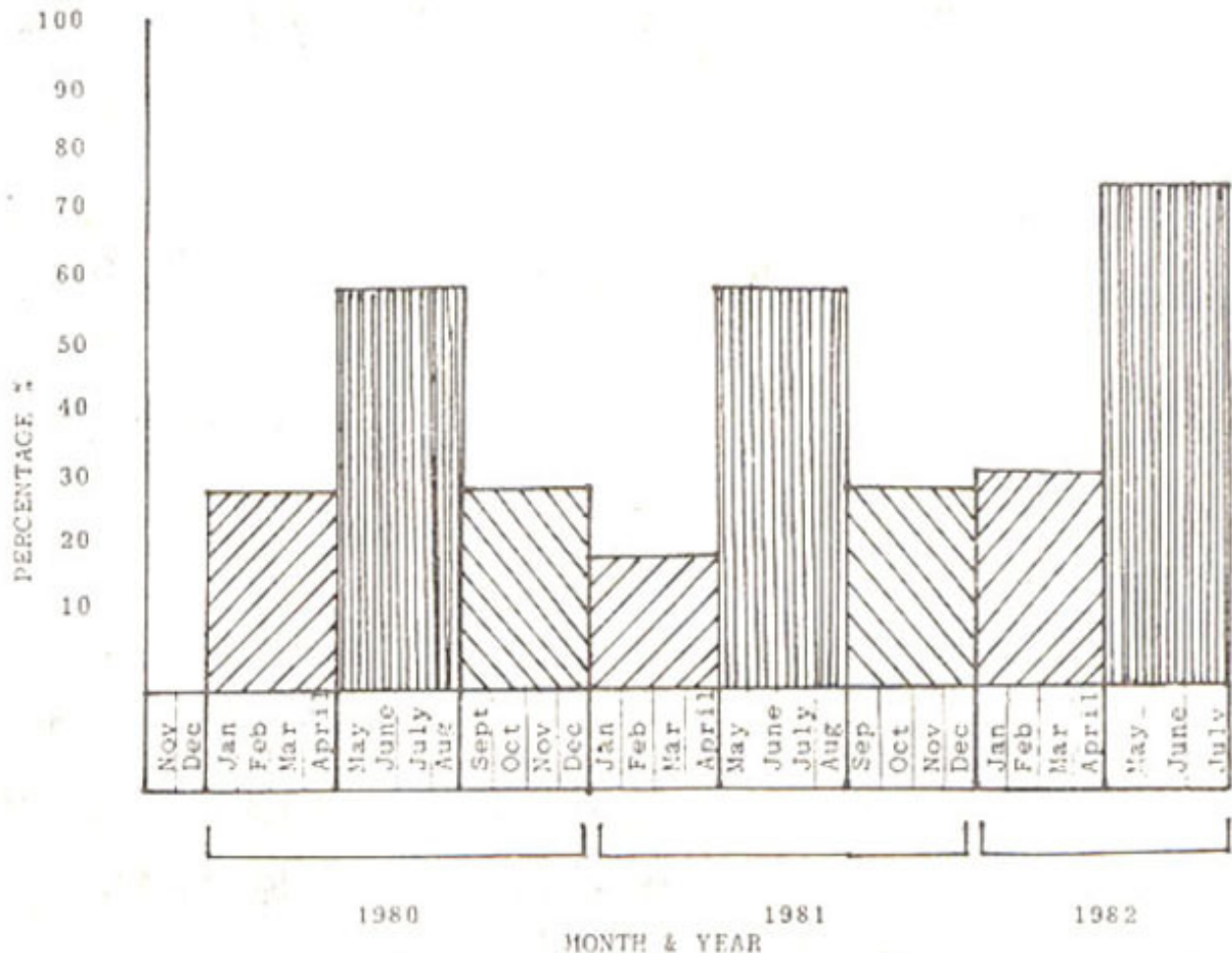


Figure. Average % of incidence during 4 months period.

obviously attributable to the rise in temperature and humidity. Rainfall during this period also adds to the increase in infection due to further increase in humidity (Table 1). Similar observations have been reported by Ajeilo.⁴

REFERENCES

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