

## VENEREAL DISEASES IN INDIA \* †

BY

R. V. RAJAM

*V.D. Department, Government General Hospital, Madras*

There are no accurate statistical data on the morbidity and mortality rates of venereal diseases in India. From the limited information available on the prevalence and incidence of venereal diseases, based upon the attendance of patients in clinics and hospitals, and from limited surveys of groups of population, it would appear that next to malaria and tuberculosis, venereal diseases (particularly syphilis) are a major public health problem. There is an unjustifiable complacency among the public, the medical profession, and even medical administrations regarding the importance and urgency of these social diseases. The "dying syphilologist" and the "expiring urologist" are examples of the expressions used by some of the unthinking among the medical profession. These diseases with a community-wide distribution cannot be controlled or combated on the basis of the individual treatment of persons who voluntarily attend public clinics or consult private physicians. The following facts emphasize the seriousness of the current situation.

Treponemal diseases in the Indian Union are prevalent in three forms :

- (a) venereal syphilis,
- (b) endemic syphilis—venereal and non-venereal,
- (c) yaws.

Venereal syphilis is mostly prevalent in urban areas, cities, towns, seaports, and centres of industry or pilgrimage. Endemic syphilis is prevalent among the primitive hill folk inhabiting the vast sub-Himalayan area extending from Kashmir in the north-west to Assam in the north-east, and also to a certain extent in the slum populations of the large cities. Yaws is reported to be endemic in the valleys and hills of Assam, certain contiguous areas of the states of Andhra, Hyderabad, Madhya Pradesh, and Orissa, and in some isolated enclaves of the rural areas of the state of Madras (Rajam, 1955).

### Incidence

With the increasing urbanization consequent upon the shifting of population from the rural to the urban areas and the impending accelerated tempo of industrialization visualized in the second 5-year plan, venereal diseases pose an even more serious and urgent problem. A study of the annual clinic admissions in the teaching hospitals of Madras, Calcutta, and Bombay reveals that of the total admissions for syphilis, 60 to 70 per cent. are for early infectious syphilis. The sex ratio of early infectious syphilitic patients reporting at clinics is three or four males to one female. Hence there is a large undiscovered reservoir of infection among the population.

On analysis of 1,000 births to pregnancies sustained by 260 (pregnant) women with untreated syphilis, the results were as follows :

Healthy non-syphilitic children	30 per cent.
Syphilitic babies	40 per cent.
Stillbirths and neonatal deaths	30 per cent.

This means that seven out of ten children born to untreated syphilitic mothers are either stillborn or diseased. The stigmata of congenital syphilis among those who survive are frequently sufficiently crippling to make such children a costly non-productive burden on society in later life.

Syphilis is one of the blinding diseases both in children and adults. Routine serological screening for syphilis of patients with ocular disease attending the Government Ophthalmic Hospital, Madras, for the 3 years, 1951-53, revealed 16.1 per cent. of positive reactors to syphilis, and it is our opinion that about one-fifth of the total blindness in children and adults, in which an infectious aetiology could be established, is caused by neglected or undiscovered syphilis.

The effect of syphilis on the cardiovascular system is well known. From figures published by teaching hospitals, it would appear that syphilis

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accounts for 12 to 15 per cent. of the total cases of organic disease of the heart and blood vessels. Although the late parenchymatous lesions of the nervous system caused by syphilis are not so common in India as in Western countries, meningeal and meningovascular syphilis, particularly affecting the spinal cord, occur in 3 to 5 per cent. of the syphilis cases admitted to hospital (Rajam, 1955).

These data gathered mainly from the hospitals in the city of Madras apply equally to the other large cities like Bombay and Calcutta. Although the figures based upon diseased population groups seeking admission and treatment in hospitals do not give an accurate picture of the prevalence of syphilis in the population as a whole, yet they should be sufficiently disturbing to our complacency.

Studies of the prevalence of syphilis among pregnant women offer a relatively reliable and convenient index of the extent of syphilis infection in the community as a whole (Leiby, 1950). Routine serological screening of 11,736 expectant mothers, who attended the antenatal clinics of the Women and Children's Hospital, Madras, during 1953, revealed 6.3 per cent. of positive reactors to syphilis. Among 13,609 pregnant women who attended the antenatal clinics of the Municipal Corporation of Madras in 1952-53, the percentage of positive reactors to syphilis was 7.2. Curiously enough, when we recently tested the blood of 159 non-pregnant women from a Women's Welfare Home in Madras consisting of deserted wives and widows we found almost the same percentage (7.8) of positive reactors. Earlier studies at a Simla Hospital, hospitals in Calcutta, and the Singur Health unit had shown from 4 to 7.5 per cent. of positive reactors among pregnant women routinely tested for syphilis (Jungalwalla, 1952). It may reasonably be claimed that the prevalence of syphilis among apparently normal pregnant women is a measure of its prevalence among the general population; in other words, a 5 per cent. prevalence rate for the whole of India may be a conservative estimate of the incidence of syphilis.

Confirmation of the reliability of the syphilis rate in the general population based upon the percentage rating of positive reactors to syphilis among pregnant women is available from another apparently normal group—the voluntary blood donors. During the year ending July 31, 1954, 5,952 voluntary blood donors attending the Blood Bank of the Government General Hospital, Madras, were serologically tested at the laboratory of the VD department; the percentage of positive reactors to syphilis was 5.3 (Rajam, 1955). The same prevalence rate was reported from Calcutta hospitals.

The WHO demonstration team under the leadership of Dr. J. C. Cutler carried out extensive surveys of groups of hill populations at Himachal Pradesh, in north-western India, which revealed a high prevalence rate of syphilis varying from 5 to 50 per cent.; the ratio of cases of primary and secondary syphilis to the total sero-positivity in this population was 110 to 1,000 (Cutler, Kvittingen, Rose, McCullough, Tampi, Sen, Parmar, and Lal, 1952). It is presumed that such a prevalence rate exists from Kashmir to Assam.

Non-venereal syphilis acquired in childhood has been recently discovered in the slums of the city of Madras and its environs. During the 7-year period 1948-54, 385 children between the ages of 7 months and 10 years were examined and treated for early acquired syphilis (Rajam, Rangiah, and Sowmini, 1955). What is true of the Madras slums is presumed to be true of slums in other large Indian cities.

Yaws, the second type of non-venereal treponematosis, is not a major public health problem at present.

The magnitude of the problem of venereal diseases may be gathered from the figures presented in the Table, which lists the annual admissions of cases of various categories of venereal diseases examined and treated at the VD department of the Government General Hospital, Madras, during the 3-year period 1952-54, in a population of 1.6 millions.

TABLE  
ANNUAL VENEREAL DISEASE ADMISSIONS TO THE  
GOVERNMENT GENERAL HOSPITAL, MADRAS, 1952-54

Category of Diseases	Years		
	1952	1953	1954
Primary and secondary syphilis ..	4,394	3,911	3,296
Prenatal and acquired syphilis in children .. .. .	391	202	183
Latent syphilis .. .. .	1,661	1,219	1,067
Late syphilis .. .. .	421	310	281
Gonorrhoea .. .. .	1,498	2,283	1,584
Lymphogranuloma venereum .. .. .	595	799	624
Donovaniasis .. .. .	126	136	158
Chancroids .. .. .	1,715	2,137	1,937
Non-specific urethritis .. .. .	0	318	386

Figures of admissions of cases of venereal diseases to other large venereal disease centres in India are not available, but it is presumed that similar high rates may be expected in the other districts.

### Therapy

Facilities for the diagnosis and treatment of venereal diseases exist in the teaching and larger hospitals of the cities and in some of the major municipalities, but these are grossly inadequate both in quality and quantity. There is an almost complete lack of epidemiological investigation,

patient education, and case-finding activities in most of the clinics.

The problem of venereal diseases in rural areas is not defined.

In 1949, at the request of the Government of India, the WHO sent a VD demonstration team to establish a centre for the survey and mass treatment of syphilis among the Paharis of Himachal Pradesh and also to train teams of doctors, social workers, technicians, nurses, etc., in modern methods of venereal diseases control. Fourteen teams from different states were trained during the period of the project, and at the end of this period of training they were supplied with laboratory equipment and penicillin by UNICEF to establish venereal disease control activities in their respective states. The central government has recently arranged for the manufacture of penicillin with the technical help of WHO and financial aid from UNICEF. Steps have also been taken for the preparation of cardiolipin antigen at the central serological laboratory in Calcutta.

The VD department of the Government General Hospital, Madras, was appointed in 1952 to serve as a central institution for the training of personnel for advanced research in the various aspects of venereal diseases, and to be a model unit for demonstrating the clinical, laboratory, social, and preventive aspects of venereal disease control.

A campaign against yaws sponsored by WHO-UNICEF has been operating for the past 2 years in the rural areas of the contiguous states of Madhya Pradesh, Hyderabad, Orissa, and Andhra where endemic yaws is prevalent.

With regard to the social aspects of venereal disease control, the central government will shortly put before the legislature a comprehensive measure for the suppression of immoral traffic in India as a whole.

As part of the central health schemes of the second Five-Year Plan the Union Ministry of Health in collaboration with the Health Panel of the Planning Commission, have proposed a comprehensive "National Plan" for the control of venereal diseases, including :

- (1) Formation of central and state venereal disease control organizations ;
- (2) Setting up of a venereal disease advisory council ;
- (3) Establishment of four training centres at Delhi, Calcutta, Madras, and Bombay with attached reference laboratories ;
- (4) Training of personnel recruited by each state at the training centres ;
- (5) Preparation of educational propaganda material by central and state education boards ;
- (6) Establishment of venereal disease clinics with laboratory facilities in district headquarters hospitals at the rate of fifty clinics every year ;
- (7) Routine serological screening and treatment of pregnant women attending the antenatal clinics of the District and Taluk headquarters with laboratory facilities for blood testing ;
- (8) A central organization for the supply of penicillin and laboratory reagents to the state venereal disease clinics ;
- (9) Establishment of four field survey and treatment units based upon the four venereal disease training centres in Delhi, Calcutta, Madras, and Bombay.

It is expected that the Planning Commission of the Government of India will give a high priority to the proposed scheme.

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