

VDRL POSITIVITY IN LABOUR COLONIES OF BHILAI STEEL PLANT, BHILAI, MADHYA PRADESH (INDIA)—1982

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VDRL (Venereal Disease Research Laboratory) test was done in the patients in the age group of 16 years and above in both sexes attending the two health centres of Bhilai Steel Plant, Bhilai, in Madhya Pradesh. The localities are inhabited mostly by people of a low socio-economic status. Of a total of 327 serum samples collected, 23 (7.03%) were positive in any dilution and 9 (2.75%) were positive in a titre of 1 : 8 and above.

[Key words : VDRL positivity, Survey.]

To assess the rate of VDRL positivity in the population, VDRL test was conducted in the labour colonies of Bhilai Steel plant by a team from National Institute of Communicable Diseases (NICD), Delhi in co-operation with plant health authorities. The observations are presented in this communication.

Study area

Bhilai is an industrial town located in Durg district of Madhya Pradesh of India. The township and the surrounding areas have a population of 3.2 lakh and is divided into different sectors. Labour camp I and Khurshipara health centres are located in the labour colony. The dispensaries of these two health centres cater to all types of general patients.

Workers and labourers generally belong to a low socio-economic group and come from different states of India.

Materials and Methods

Blood was collected from adult patients above 16 years age of both sexes attending the two health centre dispensaries of the labour camp areas. Quite a number of persons refused to give blood. Thus, a total of 327 blood samples only could be collected.

The antigen for the VDRL test was obtained from the Serological Laboratory, Calcutta.

Results

Twenty three (7.03%) sera out of 327 samples were reactive.

Table I. Percent positivity of VDRL in different age groups of both sexes.

Age group in years	Males			Females		
	Number of sera			Number of sera		
	Tested	Positive	Percent positivity	Tested	Positive	Percent positivity
16—25	58	1	1.7	49	2	4.1
26—35	42	2	4.8	76	7	9.2
36—45	49	4	8.2	20	2	10.0
46—55	23	4	17.4	5	0	0.0
56 or more	4	1	25.0	1	0	0.0
Total	176	12	6.8	151	11	7.3

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The positivity rate was almost equal in both sexes, although sera of the females above the age of 45 were negative whereas it was not so in the males. The sera from the females of Khurshipara showed more (12.24%) reactivity than the females of Labour camp I area (4.90%). Out of 327 sera, 50 were from unmarried persons and two were widows. Only one male aged 20 years amongst the unmarried was reactive in 1:4 dilution and both the widows were non-reactive.

Of the 327 sera, 9 (2.75%) were positive in a titre 1:8 and above, and 10 (3.06%) were positive in a titre of 1:4 and above. Of the nine sera which were positive in a titre of 1:8 and above, all were married, five were males (aged 30, 40, 40, 44, and 60 years) and four were females (aged 28, 29, 30 and 32 years).

Out of the nine sera which were positive in the diagnostic titre of 1:8 and above, four were positive in the dilution of 1:8, two in 1:16, another two in 1:32 and one in 1:64.

Comments

Collection of blood from non-sick persons for laboratory examination has been found to

be indeed difficult. This has been the experience of all field workers. To bleed children is even more difficult when they are not sick and the parents become a stumbling block.

The present study shows that out of 327 serum samples, 23 (7.03 per cent) showed VDRL reactivity and only nine (2.75%) (five males and four females) were reactive at dilution of 1:8 and above, that is the diagnostic titre dilution. It has been suggested that diagnosis of syphilis could be confidently made when the serum is reactive in a dilution of 1:8 or above^{1,2}.

The positivity rate in a dilution of 1:4 and above was 3.06% compared to the study at Sikkim, where it was 3.5%.⁸

Sero-survey for VDRL carried out by different workers from time to time in various parts of the country is shown in table II. The study population, however, greatly varied in sampling procedure and selective criterion. The diagnostic titre also varied widely. However, these studies do provide some idea about the prevalence. The sero-positivity showed a wide range.

Table II. Serological status of different populations.

Authors	Percent reactivity	Region
1. Rajam ³	3-5	South India (Urban population)
2. Tampi ⁴	30-40	Himachal Pradesh (Rural area)
3. Patel et al ⁵	14.1	Gujrat (Dang area)
4. DGHS annual report ⁶	15-20	Manipur
5. Kapoor and Prasad ⁷	3.5	Lucknow (Railway colony)
6. Mitra ⁸	3.5	Sikkim
7. Sehgal et al ⁹	11.1	Panaji (Goa Med. College Dermatology out-patients)
8. Gokhale and Gokhale ¹⁰	4.5	Pune
9. Chakraborty et al ¹¹	4.4	Sagar Hospital, Madhya Pradesh.
	0.5	Rural community, Sagar, Madhya Pradesh.
10. Ghosh et al (Present study)	7.03 (in any dilution) 2.75 (in titre 1:8 and above).	Bhilai, Madhya Pradesh (Ruro-urban area of an industrial town).

In the light of sero-reactivity reported from other places, the relative status of the population surveyed in Bhilai township does not seem to be high. However, a regular surveillance system either by institution of the VDRL test at the Health Centres/hospitals or by periodic surveys, will provide a better data.

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