

## EPIDEMIOLOGICAL, CLINICAL, SEROLOGICAL AND HISTOLOGICAL STUDIES IN CASES OF SECONDARY SYPHILIS

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### Summary

Case records of 690 patients with secondary syphilis were analysed. Epidemiological, clinical and serological aspects are discussed. Rose-Waaler test was found to be positive in 4 out of 4 cases tested. Its significance in relation to involvement of musculo-skeletal system is discussed. Histopathological examination was carried out in 27 patients and 7 of them showed features of granuloma. The importance of this finding in relation to appearance of tertiary manifestations is discussed.

In recent years no systematic work regarding various facets of secondary syphilis has been published. The present work has been therefore undertaken to evaluate the epidemiological, clinical, serological and histological aspects of this stage of syphilis.

### Material and Methods

The case histories of patients with secondary syphilis who attended the V. D. Clinic of Government General Hospital, Kurnool for a period of 11 years from 1966 to 1976 were analysed for epidemiological, clinical and serological details. Histopathological studies were carried out on 27 patients. These patients had typical features of secondary syphilis clinically and serologically and responded to antisyphilitic treatment. Rose-Waaler test was carried out on 4 patients.

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### Observations and Discussion

#### *Epidemiological :-*

Total number of patients who attended the V. D. Clinic with secondary syphilis during 11 years is 690. The total number of patients who attended V. D. clinic during this period is 1,17,012, and the new patients attending the V. D. O. P. during the same period were 24,288. Thus secondary syphilis constitutes 0.6% of the total attendance and 2.84% of new cases of V. D. Clinic.

The age distribution of these patients is given in table I. Majority of these patients belong to the age group of 21-30 years, followed by the age groups of 11-20 and 31-40. In table II the age and sex distribution of all the new cases attending the V. D. clinic of this hospital in the year 1975 is given. Comparison of the two tables shows that the majority of venereal conditions occur in the age group of 21-30 years, followed by the other two age groups. In other words secondary syphilis is common in the most sexually active age group.

TABLE I

Age Distribution of Patients Secondary Syphilis

Age group	No.
1-10	3
11-20	196
21-30	329
31-40	124
41-50	29
51 and above	9
Total	690

TABLE II

Age and Sex Distribution of V. D. Patients Attending Government General Hospital Kurnool in the Year 1975

Age group	Number		
	Males	Females	Total
1-10	nil	10	10
11-20	104	55	159
21-30	985	430	1415
31-40	139	146	285
41-50	117	36	153
51 and above	...	...	...
Total	1345	677	2022
Ratio	2	1	

The sex distribution shows Male: Female ratio of 3.8:1. This agrees approximately with the general trend of attendance in V. D. Clinic in which males predominate over females (table II). The reason for this may be a diffidence on the part of females to seek treatment in V. D. clinic and their tendency to attend the private clinics more often for amelioration of their condition.

225 patients were single and 378 married. In 87 patients no information on marital status could be obtained from case records. Thus married people definitely predominated over unmarried in this respect.

History of exposure was present in 431 patients. It was denied by 113 patients. In 146 cases no information could be obtained from case records.

154 patients gave history of having treatment before coming to hospital.

517 patients had no prior treatment. In 19 no information could be obtained from the records.

*Clinical :*

Primary syphilis was present in 147 of the patients at the time of occurrence of secondary syphilis on examination for the same. This works out to 21.3% and is slightly less than the observation of earlier authors<sup>1</sup> who have reported that 1/3 of patients will have primary syphilis at the time of secondary manifestations. The number of patients with the involvement of various systems, their percentages with respect to total number of patients of secondary syphilis and the percentages of earlier authors are given in table III.

TABLE III

The Distribution of Various Systems Involved, their Percentages and Comparison with Earlier Reports

System involved	No. of patients	Percentage	Earlier Percentages King & Nicol 1969
Skin	402	59	75
Mucous membrane	86	12.2	33
Lymphglandular enlargement	572	82	50
M. sculo-skeletal system	338	48	Less than 10%
C.N.S.	1	0.14	
Eyes	6	0.84	
Ears	1	0.14	
Other systems	1	0.14	

In the present series, as could be seen, maximum percentage of patients i.e., 82% had generalised or localised lymphadenopathy involving cervical, epitrochlear and inguinal groups.

Skin was involved in 59% of cases and mucous membrane in 12.2% of cases.

Musculo-skeletal system involvement in the form of joint pains, nocturnal pains, and bony tenderness was present in 48% of cases.

Involvement of other systems was insignificant being only 1.26%.

Percentages of this series is at variance from earlier observations<sup>1</sup>.

**Serological :**

V.D.R.L. Details regarding this is given in table IV. Maximum percentage of patients had reactivity in 64 dilutions followed by 32, 16, 4 and 8 dilutions.

TABLE IV  
Number of Patients and Percentages of VDRL Positivity

Dilutions	4	8	16	32	64
No. of patients	119	62	123	159	227
Percentage	17.25	9	17.8	23	32.5

**Rose-Waaler Test**

This was carried out in 4 patients with the involvement of musculo-skeletal system and was positive in all of them in significant dilutions. (table V). It is presumed that this is a false-positive reaction due to involvement of joints.

TABLE V  
Rose-Waaler Test

No.	Sex	Age	VDRL	Rose-Waaler	
1	M	26	1 : 32	DAT	128
2	M	20	1 : 16	DAT	64
3	F	30	1 : 8	DAT	32
4	F	20	1 : 64	DAT	128

**Histological :**

In 20 biopsy specimens common histological findings were perivascular infiltration of round cells and endothelial proliferation. Plasma cell infiltrate though present was not a very uniform feature. In one specimen apart from the above changes dense collection of polymorpho nuclear leukocytes were observed in one area. In another specimen associated periadenexal round cell infiltrate was seen.

In 7 biopsy specimens, granuloma or tendency to form granuloma consisting of epitheloid cells and giant cells was seen. This observation is in agreement with that of earlier authors<sup>2</sup>. Obviously some people are predisposed to develop granulomas. It is also likely that histological changes of gumma occur much earlier than its clinical manifestations.

REFERENCES

1. King A, Nicol C : Early acquired syphilis, Venereal diseases, second Edition, Bailliere Tindall & Cassel, London, 1969, p. 14.
2. Lever WF, Spirochetal diseases, histopathology of skin, 3rd Ed, J B Lippincott Co., Philadelphia, 1961, p. 257.

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