

Current Trends of Acquired Syphilis among STD Attendees in a Tertiary Care Centre during a Period of One Year

Dr. E. Balasubramanian¹, Dr. S. Kalaivani²

Abstract: **Introduction:** Syphilis is a sexually transmitted disease caused by *Treponema pallidum*, characterized by florid manifestations on one hand and years of complete asymptomatic latency on the other hand. Clinical pattern of acquired syphilis are changing in South India with significant regional variation. **AIM:** To study the current trends of acquired syphilis among STD attendees in a tertiary care centre. **Methods & Materials:** Retrospective analysis of all STD O.P attendees diagnosed as syphilis using blood VDRL and serum TPHA from October 2015 to September 2016 was done. Epidemiological, clinical, serological data recorded were analysed, for current trends of acquired syphilis in our centre. **Observations:** During the study period, among the total 15986 cases, 9834 were males, 6129 were females and 23 were Transgender. A total of 429 patients were VDRL Reactive of which 45(10.4%) were false positive and TPHA was reactive in 384 cases. Totally 384 cases (13.4%) were diagnosed as syphilis out of 2865 STD cases. Among this 281(73.1%) were males, 99(25.7%) females and 4(1.04%) were transgender. Primary syphilis was diagnosed in 32(8.3%) cases, secondary syphilis in 45(11.7%) and latent syphilis in 307(80%). No case of neurosyphilis and cardiovascular syphilis were noted. Co infections were detected in 27(7%) patients. 32(8.3%) patients were HIV positive. **Conclusion:** Prevalence of acquired syphilis was 13.4% in our study. Latent syphilis is on the rise and is becoming more common than primary or secondary syphilis. Thus the epidemiological trends have changed over the years.

Keywords: Latent Syphilis, Blood Vdrl, Serum Tpha Test (Treponema Pallidum Haemagglutination), Current Trends, Prevalence

1. Introduction

Syphilis an infectious disease caused by *Treponema pallidum* is a systemic disease from the onset. It has diverse clinical manifestations and a *Great Imitator* of many diseases. Syphilis was reported to be commonest STD in India accounting for 10.4% to 36.1%. Prevalence ranges from 2.7% - 26.6% in serological surveys^[1]

2. Aim & Objective

To study the current trends of Acquired syphilis among STD attendees in Institute of Venereology, Madras Medical College, Chennai.

3. Materials & Methods

A Retrospective Observational Study was done among 15986 patients who attended STD O.P from October 2015-September 2016 in a tertiary care center. Among the total 15986 patients, male were 9234, females -6124 and transgender-23. Detailed history, Clinical examination, Serological investigations like Nonspecific test Blood VDRL& Specific test Serum TPHA for syphilis, HIV test (after pretest counselling) was done for all patients. For genital ulcer patients, Dark field examination, gram stain, Tzanck smear, tissue smear & biopsy was done. Cardiac evaluation, CSF Analysis & Neurological opinion was sought for latent syphilis cases.

4. Results

Among 2302 STD cases during Oct'2010 to Sep'2011, 184(8%) were Syphilis cases where as in our study it was 384 (13.4%) out of 2365 patients. 245 patients were referred from other departments of our Hospital and 139 patients came for self screening.

Among 384 patients males (281) outnumbered the Females (99) and Transgender (4). In these, symptomatic male were 14.2%, Female 3% and Trans gender (TG) 25%. 21-40 years age group accounted for 231(60%) patients. Most of the males (55%) and females (73%) were married. All transgenders were unmarried. 33% were illiterate and 32% has completed primary education. In the study group of males, manual labour (25%) followed by students (10%) were common. In female group 53% were innocent house wives. Homosexual activity was seen among 81 males and 4 TG's. Bisexual behaviour was seen in 36 males. Partner testing was done for 261(68%) patients.

Genital ulcer (30), pain in the genitalia (15), followed by cutaneous lesion were most common symptom in male patients. Itching genitalia (45) followed by vaginal discharge(25) was the main symptom in Females. Genital ulcer (1), raised genital lesion (1), (1) dysuria and nil complaints (1) was seen in TG. In 15986 cases screened for syphilis 312 males, 112 females and 5 TG were reactive for blood VDRL. Among this 281(2.85%) male, 99 (1.6%) females and 4 (17.3%) TG's were positive for serum TPHA(Fig no.1) False positive VDRL was present in 31 males, 13 females and 1 TG, Total cases were 45(0.28%)

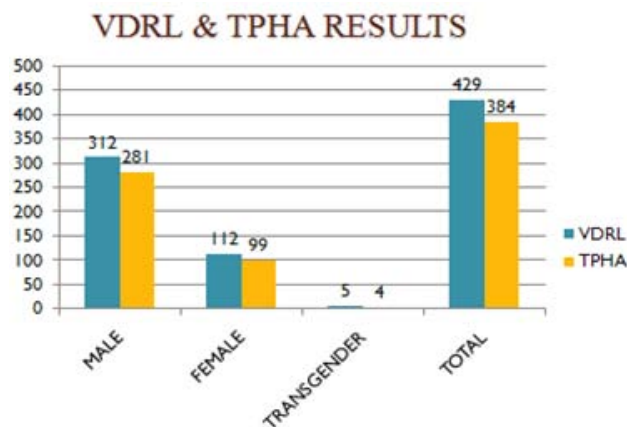


Figure 1

STAGES OF SYPHILIS DISTRIBUTION

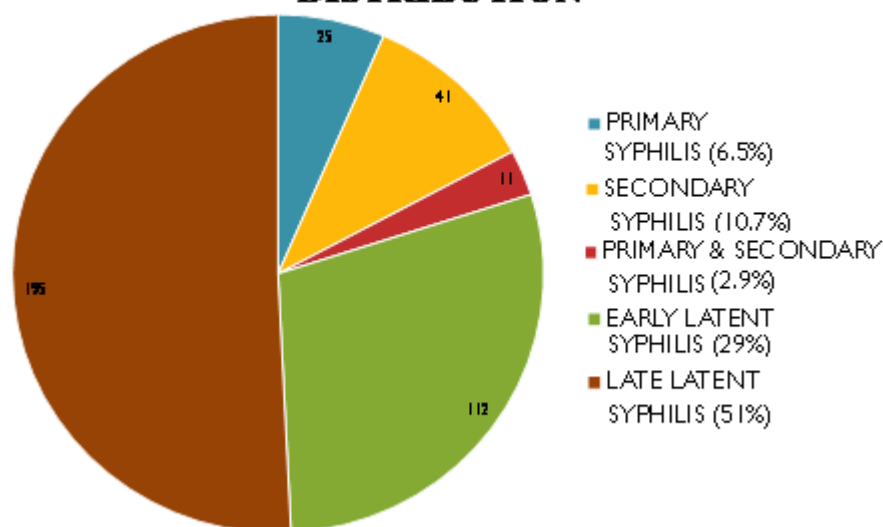


Figure 2

Chancre (15) and Asymptomatic (10) constituted primary syphilis. Asymptomatic (21), Palmoplantar rash (12), Asymptomatic rash (5) and condyloma lata(3) was the distribution pattern of secondary syphilis. Primary and Secondary Syphilis was seen in 11 patients.

In our study, Early latent syphilis was 29% and Late latent Syphilis constituted 51%. (Fig.no.2) Cardiac evaluation was done for all latent (307) syphilis cases, CSF analysis for cells, protein and CSF VDRL was done for 58 patients. No evidence of Cardiovascular and Neurosyphilis was noted. In the study group, 32 (8.3%) were HIV positive.

Apart from HIV infection Genital Herpes (10), followed by candida infection (7), Genital wart (5) were the associated STI's (Fig no.3)

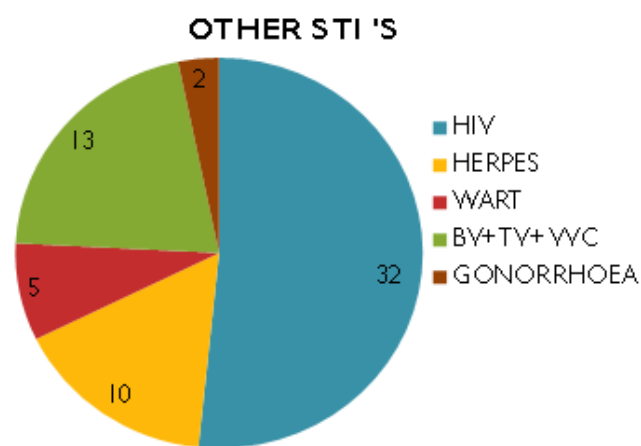


Figure 3

5. Discussion

The Prevalence of Syphilis among the study population was 13.4%, which was similar to study conducted in 2008 in West Bengal [2] & by Ray K [3]. The Annual incidence of Syphilis showed a rising trend from 8% in Oct 2010 – Sep 2011 to 13.4% in Oct 15 – Sep 2016 which was comparable to a study done by Shah et al [4]

63% of the syphilitic male patients & 50.5% of female patients belonged to 21-40 years age group and coincides with the study of Jain A, Mendiratta V, Chander R.^[5]

Most of the males (55%) and females (73%) were married. All transgenders were unmarried. In males 85.7% and in females 97% were asymptomatic. Manual laborers (25%) & students (10%) constituted the majority of male patients. Housewives (53%) were majority in female study group. Our study was comparable with study of Jain VK, Dayal S.^[6] Most of the study group were illiterate (33%) followed by persons who have completed primary school (32%) which was similar to the study by Singh and Romanowski et al.^[7]

Homosexual activity was seen among 22% in our study population which is similar to the study done by Shah et al.^[4]

Partner testing was done in (67.6%) male patients, and (71%) female patients. Genital ulcer (8%), followed by cutaneous lesions (4%) were common in males, whereas Genital itching (45%), vaginal discharge (25%) was common among females.

In Transgender, genital ulcer, raised genital lesion, & dysuria contributed 1% each.

Primary syphilis presented as classical chancre in most of the cases. Atypical presentations of chancre observed in HIV+ patients.

Asymptomatic followed by palmoplantar rash in secondary syphilis was common in our study which is similar to study by Parmil et al.^[8]

Significant proportion of secondary syphilis patients did not recollect the history of primary chancre.

Apart from HIV, Genital herpes was the most common coinfection with primary chancre and is similar with the study done by Jain A, Mendiratta V.^[5] BFP reactivity was 0.28% which is comparable with the study of Bala et al.^[9] & Hossain A. Saudi Arabia.^[10]

6. Conclusion

Epidemiological trends of syphilis have changed over the years. All cases of VDRL reactivity should undergo TPHA testing whenever possible to rule out false positives. Latent syphilis (80%) is on the rise and becoming more common than primary or secondary syphilis – indicates efficiency of screening. Awareness and health care seeking behavior have to be promoted among the public.

References

- [1] Somesh Gupta, Bhushan kumar. Infectious syphilis: Sexually transmitted disease. 1st edition: 2011; p268.
- [2] Maity, Sushmita et al. Syphilis seroprevalence among patients attending a sexually transmitted clinic in West Bengal, India Jpn J Infect Dis, 2011;64(4):506-8.
- [3] Ray K, Bala M, Gupta SM, Khunger N, Puri P, Muralidhar S, et al, Changing trends in sexually

transmitted disease in a regional STD centre in north India. Indian J Med Res 2006;124:559-68.

- [4] Bela J. Shah, Darshan R. Karia, Chirag L, Pawara. Syphilis: Is it making resurgence? Indian J Sex Trans Dis 2015;36:178-181.
- [5] Jain A, Mendiratta V, Chander R. Current status of acquired syphilis: A hospital-based 5-year study: Indian J Sex Trans Dis 2012;33:32-4.
- [6] Jain VK, Dayal S, Aggarwal K, Jain S. Changing trends of sexually transmitted diseases at Rohtak. Indian J Sex Trans Disease 2008;29:23.
- [7] Singh and Romanowski et al: Review with Emphasis on clinical, Epidemiologic and Some Biologic Features. Clin. Microbiol. Rev. Apr. 1999, Vol. 12, 2p. 187-209.
- [8] Parmil.k et al. Changing Trends in Acquired Syphilis at a Tertiary care center of North India. Indian J Sex Transm Dis 2015;36:149-152.
- [9] Bala M, Toor A, Malhotra M, Kakran M, Muralidhar S, Ramesh V. Evaluation of the usefulness of Treponema pallidum haemagglutination test in the diagnosis of syphilis in weak reactive VDRL sera. Indian J Sex Transm Dis 2012;33:102-6.
- [10] Hossain A. Serological tests for syphilis in Saudi Arabia. Genitourin Med 1986;62:293-7.