



PREVALENCE OF SYPHILIS IN VENEREOLOGY OPD PATIENTS – A PROSPECTIVE OBSERVATIONAL STUDY IN A TERTIARY CARE HOSPITAL

Dermatology

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ABSTRACT

Syphilis is an age old venereal disease known since the prehistoric era. There is an old saying that if you know syphilis, you would know medicine. Over a period of time, its incidence had shown a decline especially in the post antibiotic era. A disease caused by *Treponema pallidum*, a spirochete, it presents initially with a painless genital ulcer which often goes unnoticed or unattended. More than two-thirds of secondary syphilis patients present with skin rashes which include the palmar and plantar syphilides

Methods: This study was done after prior ethical committee approval in a tertiary care hospital. We documented the details of 100 patients attending the venereology OPD along with their presenting complaints after complete physical examination. Necessary investigations were done pertaining to the individual patient. VDRL was used for screening and TPHA for confirmation

Results: Among the total study group (100), 14 turned out to be confirmed cases of syphilis. Among those positive, 9(64.28%) were males, 4(28.57%) females and one transgender(7.14%). 50%(7 patients) presented as palmo plantar syphilid, 4 patients (28.57%) presented as Pityriasis rosea like skin rash, one(7.14%) with condyloma lata and two(14.28%) who were asymptomatic were detected on screening.

Conclusion: 50% of the confirmed syphilis patients presented with palmoplantarsyphilids which mimic palmoplantar psoriasis. 21.4% (3 patients) of the syphilitics were homosexuals. This study emphasises the need for robust screening of high risk patients for syphilis in view of the rise in homosexual practices and promiscuity.

KEYWORDS

Venereology, syphilis, VDRL

Syphilis is an age old venereal disease known since the prehistoric era. Skulls displaying syphilitic features of ancient humans stand as a strong evidence to this prehistoric existence. There is an old saying that if you know syphilis, you would know medicine. Over a period of time, its incidence had shown a decline especially in the post antibiotic era. Discovery of penicillin came as a boon to syphilitics who until then were treated with mercury, arsenic or fever therapy. Penicillin still remains as a promising and trustworthy respite for syphilitics.

A disease caused by *Treponema pallidum*, a spirochete spares no part of the body and mimics every single disease known to mankind. It presents initially with a painless genital ulcer which often goes unnoticed or unattended. With the increasing trend of homosexuality the initial chancre tends to occur as a painful oral ulcer or a digital chancre which can easily be mistaken for an oral aphthae or herpetic whitlow respectively.

More than two-thirds of secondary syphilis patients present with skin rashes which include the palmoplantar syphilides and more so roseola syphilide. condyloma lata presentation is not very commonly seen in OPD. Considerable proportion of patients pass on to the latent phase where they are identified in case of travel screening or general health checks.

METHODS

This prospective observational study was conducted in Sree Balaji Medical College hospital between June 2018 to December 2018.

INCLUSION CRITERIA:

100 patients were selected by simple random sampling from patients attending venereology OPD in the above given period including those with genital ulcer, vaginal discharge, urethral discharge, Dhat syndrome, balanoposthitis, genital wart or molluscum and those referred for screening in account of vague presentations or travel reasons.

EXCLUSION CRITERIA:

Patients less than 15 years and more than 70 years were excluded. Those who refused to have their clinical details and serostatus included in the study were genuinely excluded.

Complete history taking and thorough physical examination was done in all patients. History included their presenting complaint, sexual orientation, sexual preferences, previous venereological presentations and treatments. Physical examination included genital examination

and dermatological screening. Written informed consent was obtained. Routine RPR screening and HIV screening with Rapid assay were performed. For patients with vaginal discharge a KOH smear, wet mount and gram staining were done. For urethral discharge wet mount and grams staining were done. Tzanck smear was executed default for all genital ulcer and erosions.

RESULTS:

Among the total 100 patients 7 patients were HIV reactive and 14 patients were TPHA positive. Of the total study group 65 were male, 23 were females and 12 were transgenders. Homosexual preference were noted in 21 people of which 11 were transgenders and 10 were males. 4 of the study group were bisexual.

Of the total study group, 4 fell into < 20 years age group, 38 in 21-30 age group, 28 in 31-40 age group, 15 in 41-50 age group, 11 in 51-60 age group and 4 in above 60 age group. (Table 1)

Among the total study group (100), 14 turned out to be confirmed cases of syphilis. So, the great imitator contributed to 14% of high risk group namely the venereology out patient attendees.

Among the 65 males in the study group 9 had syphilis, 4 had balanoposthitis, 2 had Dhat syndrome, 1 genital Molluscum, scabies, perianal wart and gonococcal urethritis and dermatophytosis each, 3 genital ulcers (herpetic) and non gonococcal urethritis each, 2 had genital wart and rest with nil diagnosis. 3 men had HIV of which 2 of them had other co STIs and one with HIV alone.(Table 2)

Of the 23 females, 4 had syphilis, 5 with bacterial vaginosis and vulvovaginal candidiasis each, 2 the cases with genital wart, one each with trichomonas and molluscum and rest had nil diagnosis. Among the 12 transgenders, 8 had nil diagnosis with one case each of syphilis, genital ulcer, genital wart and molluscum. 2 of these 23 females had HIV coinfection. (Table 3,4)

Among the 12 Transgenders, 8 came for routine screening(sex workers) and 4 with specific genital complaints and 2 turned out to be HIV reactive out of which one was coinfecting with genital wart.

Among those confirmed 14 syphilis patients, 9(64.28%) were males, 4(28.57%) females and one transgender(7.14%).

There were 4 (28.57%) confirmed syphilitics in 21-30 age group, 5(35.71%) in 31-40 age group and 3 (21.42%) in 41-50 age group and

2 (14.28%) in 50 to 60 age group. No syphilitic cases were identified in <20 years and above 60 years in our study.

50%(7 patients) presented as palmo plantar syphilides (Figure 1), 4 patients (28.57%) presented as Pityriasis rosea like skin rash (Figure 2), one(7.14%) with condyloma lata and two(14.28%) who were asymptomatic were detected on screening. Of the syphilitics, low titres were noted in 2 patients who dropped in for screening. Highest titre was noted in a case with pityriasis rosea like presentation. None of the cases presented with primary chancre. (Table 5)

None of our study group patients who were confirmed syphilis was HIV reactive nor had any other Sexually transmitted infections.

DISCUSSION:

Venereology OPD is approached for venereological diseases, non venereological dermatoses and as a result of venerophobia. Sexually transmitted diseases are categorised into three based on their order of discovery and similarity in clinical presentations. First category includes chancre, chancroid, donovanosis, lymphogranuloma venereum and gonorrhoea. Second category includes HPV, HSV 2 and chlamydial infections. The last category includes the latest additions like HIV and Hepatitis B.

History states herpes and gonorrhoea to be the early ones to affect humans, but prehistoric skulls demonstrate syphilitic bone changes. After the baptism of syphilis by Girolamo Fracastoro in 1530, the major landmark demonstration of the spirochaete by Hoffman and Schaudin happened in 1905. In the year 1928, Alexander Fleming discovered penicillin from *Penicillium notatum* which saved the syphilitics from the side effects of mercury and arsenic and from the torment of fever therapy.

After the 9-90 days incubation period the first to appear is a hard sore which is painless and self resolving. A chancre in a female is more easily missed than a penile chancre. We see patients in the secondary stage as bilateral symmetrical asymptomatic skin rashes, palmoplantar lesions with Biette's collarette, pityriasisroseae like eruptions, condyloma lata or with mucosal patches. Travel screening exposes cases in latent phase.

In this era of multitude of antibiotics the incidence of syphilis was assumed to have had a steep fall. But with increasing high risk behaviours like multiple partners, premarital sex, homosexuality, coexistent vices like alcohol and drug addictions, the incidence of sexually transmitted infections especially the forgotten big pox has taken an upsurge.

In this study, the dominant gender group were males which contrasts the observation by Alahi et al¹. In that Bangladeshi study, 51.5% of the study group were females.

The low prevalence of STIs(50%) excluding HIV even in the venereology OPD does not mirror the actual prevalence as patients with venereological issues tend to go to small setups especially private. This fact observed is well reflected by Parthasarathi et al².

On analysing the people with STI, 44.61% of male attendees(29 patients), 78.26% of female attendees(18 patients) and 25% of transgenders (3 patients) had STIs. In our study, of the 29 males with STIs, 9 had syphilis(31.03%)and four had Balanoposthitis(13.79%) and 3 with herpetic genital ulcer (10.34%). Of the females with STIs, 5 had Bacterial vaginosis and 5 had vulvovaginal candidiasis. This contrasts the observations by Kumarasamy et al³ where herpetic ulcer was the commonest STI in both gender.

Of the 100 study population, 14 were syphilitics. This 14% is comparable with the observations of Shah et al⁴ where 110 people out of 1010 were syphilitics. It was an Indian study conducted in Gujarat in 2015 raising the question of resurgence of syphilis. The gender distribution in syphilitics in our study also shows a near match with 28.57% females and 64.28% males.

64.28% of the syphilitics belonged to 21-40 age group showing that the sexually active age group is the most vulnerable either due to multiple partners or unprotected sexual exposure. The above mentioned observations have also been documented by Devi et al⁵

The source of female cases were their husbands and majority of the cases were detected as secondary syphilis. This fact well coincides with the retrospective data analysis by Sasidharan et al⁶ where they have also documented a near similar finding.

85.71% of the syphilitics presented as secondary syphilis and the rest 14.28% were asymptomatic picked up by travel screening. This contradicts the observations made by Sasidharan et al⁶ where majority of their patients were detected by travel screening and were asymptomatic. But a replica of our findings were perceived by Narayanan et al⁷ where it was noted that majority of the syphilitic presentation were in their secondary stage and the rest 8.3% were in their tertiary/latent stage.

Amongst the different presentations of syphilis, our study showed a predominant palmo plantar syphilid pattern with Biette's collarette⁸. This presentation of syphilis needs a clinical acumen to pick up early and to differentiate it from other syphilid like conditions like eczema, psoriasis and pityriasisrubrapilaris.

The next common presentation after Biette'scollarette is the cutaneous rash⁹. A bilateral symmetrical non itchy rash all over body mimicking Pityriasisrosea is not to be missed especially in a sexually active male with high risk behaviour. Based on the fact that RPR is 60-90% sensitive 2 weeks post chancre and 98-100% sensitive in secondary syphilis¹⁰ our cases also were picked up by RPR and were confirmed by TPHA. Titres were significantly increased owing to the fact that most of our cases were in secondary stage and the two cases which had low titres corresponded with latent stage where patient gave history of single shot penicillin earlier.

CONCLUSION:

After the cessation of venereology as an individual speciality, the awareness, knowledge and interest in this field has seen a considerable decline. So did syphilis in past few decades. But with the increasing trend of premarital sex, homosexual preference, alcohol and drug abuse along with free usage of OCPS to avoid pregnancy has led to a surge in venereology cases especially syphilis. Most of the palmoplantar syphilides had a previous prescription having been treated as either psoriasis or eczema. History taking, examination, counselling and treatment of syphilis needs knowledge, empathy and an unjudgemental attitude. This study emphasises the need to instil knowledge about sexually transmitted diseases especially syphilis the great imitator and their varied presentations.

TABLE 1

Age group	Male	Female	Transgender	Total
<20	2	0	2	4
21-30	23	10	5	38
31-40	16	8	4	28
41-50	13	1	1	15
51-60	8	3	0	11
>60	3	1	0	4
Total	65	23	12	100

TABLE 2

STIs	Male	Percentage
Syphilis	9	13.84
Balanoposthitis	3	4.61
Balanoposthitis / HIV	1	1.53
Genital wart	2	3.07
Perianal wart	1	1.53
Genital molluscum	1	1.53
Genital ulcer	3	4.61
Gonooccal urethritis	1	1.53
Dhat syndrome	1	1.53
Dhat / HIV	1	1.53
Scabies	1	1.53
Dermatophytosis	1	1.53
HIV	1	1.53
Non gonococcal urethritis	3	4.61
Nil	36	55.38
Total	65	100

TABLE 3

STIs	Female	Percentage
Syphilis	4	17.39

Bacterial vaginosis	4	17.39
Bacterial vaginosis/HIV	1	4.34
Trichomonas vaginalis	1	4.34
Vulvovaginal candidiasis	5	21.73
Genital wart	1	4.34
Genital wart/ HIV	1	4.34
Genital Molluscum	1	4.34
Nil	5	21.73
Total	23	100

Table 4

STIs	Transgender	Percentage
Syphilis	1	8.33
Genital wart/HIV	1	8.33
Genital molluscum	1	8.33
Genital ulcer	1	8.33
HIV	1	8.33
Nil	7	58.33
Total	12	100

TABLE 5

S.no	Age	Sex	Sexual preference	Presenting complaint	Titre
1	46	TG	Homo	Palmoplantarsyphilid	1:256
2	44	M	Hetero	Screening	1:4
3	33	F	Hetero	P.rosea like	1:512
4	28	M	Hetero	Palmoplantarsyphilid	1:256
5	37	M	hetero	C. Lata	1:1024
6	23	M	Homo	P.rosea like	1:2048
7	32	M	Hetero	Palmoplantarsyphilid	1:256
8	27	F	Hetero	P.rosea like	1:256
9	51	F	Hetero	Palmoplantarsyphilid	1:512
10	33	M	Hetero	Palmoplantarsyphilid	1:128
11	55	M	Hetero	Screening	1:16
12	41	M	Homo	P.rosea like	1:512
13	22	M	hetero	Palmoplantarsyphilid	1:1024
14	36	F	Hetero	Palmoplantarsyphilid	1:64



Figure 1: Palmoplantarsyphilide with Biette's collarette



Figure 2: Bilateral symmetrical rash in trunk.

Legends

- Table 1: Age group and sex wise distribution of the study group.
- Table 2: Prevalance of Sexually transmitted infections among the study group Males.
- Table 3: Prevalance of Sexually transmitted infections among the study group Females.
- Table 4: Prevalance of Sexually transmitted infections among the study group Transgenders.
- Table 5: Age, gender and clinical presentation in the proven syphilis patients in the study group.

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