Journal of Cardiovascular Disease Research

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

Co-infection of Syphilis and Gonorrhoea in clinically suspected cases of Urethritis and cervicitis

Dr. Abha Gupta[1] (Senior Resident), Dr. Amit Gupta[2] (Demonstrator), Dr. Seema Sharma[3] (Senior Resident), Dr. Ashish Saraswat[4] (Junior Resident), Dr. Anita Mutha[5] (Professor & HOD)

[1,4]Department of Microbiology, Govt. Medical College, Datia
[2]Department of Pathology, Govt. Medical College, Datia
[3]Department of Obstetrics &Gynecology, M.L.B. Medical College, Jhansi
[5]Department of Microbiology, MGM Medical College & M.Y. Hospital, Indore

First Author: Dr. Abha Gupta
Corresponding Author: Dr. Ashish Saraswat

ABSTRACT

INTRODUCTION- Sexually Transmitted Disease also called as Veneral disease have emerged as the third most common illness. Failure to diagnosed and treat traditional infections, such as gonorrhoea, Syphilis can cause health, social and economic consequences. STIs are passed from person to person primarily by sexual contact and are classified into varied groups.

AIMS & OBJECTIVES- To find out the RPR reactivity suggestive to syphilis in confirmed cases of gonorrhoea.

Material and Method- A prospective study design was used to study to find out the coinfection of syphilis in confiremed case of gonorrhoea This study was condected at tertiary care hospital M.G.M. Indore included STD & Skin VD clinic and ICTC Center.

Study duration -2018-2020

CONCLUSION- The occurance of coinfection might be due to the fact that these bacteria share mode of transmission, and the presence of one infection could facilitate the acquisition of another. My study is a preliminary survey, provided information on the prevalence of gonorrhoea & syphilis coinfection in patients

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

attending MGM Medical College STD OPD. Health education promoting regular condom use should be continued to prevent risk of gonorrhoea infection in population with high risk behavior.

Key word: Transmission, Gonorrhoea, Syphilis.

1. INTRODUCTION-

The world health organization says that 340 million new cases of curable sexually Transmitted infection occur globally every year, of which 150 million are from South & Southeast Asia including

50 million from India alone(1). Sexually Transmitted Disease alsocalled as Veneral disease have emerged as the third most common illness. Failure to diagnosed and treat traditional infections, such as gonorrhoea, Syphilis can cause health, social and economic consequences. STIs are passed from person to person primarily by sexual contact and are classified into varied groups. In India gonorrhoea has prevalence of

3.9%(1) and Syphilis has prevalence 0 to 3.9 % Gonorrhoea is an easily curable STI, but if remained undetected, untreated infections and co-infections can lead to complications like pelvic inflammatory disease, ectopic pregnancy, tubal factor infertility, adverse pregnancy outcomes in females, and testicular and prostate infections and infertility in males.

Aims and Objective- To find out the RPR reactivity suggestive to syphilis in confirmed cases of gonorrhoea .

Material and Method- A prospective study design was used to study to find out the coinfection of syphilis in confiremed case of gonorrhoea This study was condected at tertiary care hospital

M.G.M. Indore included STD & Skin VD clinic and ICTC Center.

Duration of study- 2018-2020

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

Inclusion criteria- Reproductive age group women having complain of lower abdominal pain, white discharge and any signand symptoms of urethritis and cervicitis and all male having urethritis.

Exclusion criteria- pregnant women, menstruating women, maleand female on antibiotic and who those not given consent for sample collection.

2 swab cervical/urethral collected from patients and make a smear on glass slide from one swab and 2^{nd} swab use for culture on selective media GC agar on bed side . Blood samples also collected from these patients for RPR Testing. These are taken tolaboratory. Culture plates are put under microaerophillic conditionin candle zar at 36℃ for 24 hrs. slides are treated with Gram's stain and seen under microscope. Neisseria gonorrhoeae is seen in direct microscopy coffee bean shaped intracellular or extracellar Gram negative diplococci. After 24 hr colony are seen on culture plate and identify by colony character, Gram's staining and biochemical test.

Blood sample is used to separate the serum and serum is used to test the RPR for diagnosis of Syphilis.

Titration was also done for reactive samples.

Result- 500 patients of suspected urethritis and cervicitis are included in study. Information on demographic data , litracy , typeof samples(curdy, mucus, purulent, mucopurulent, serous), personal history(heterosexual/homosexual) , direct microscopy, culture and titre of RPR was extracted.

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

Table 1.showing age wise distribution-

Age(years)	Number	%
15-24	141	28
25-45	359	72
Total	500	100

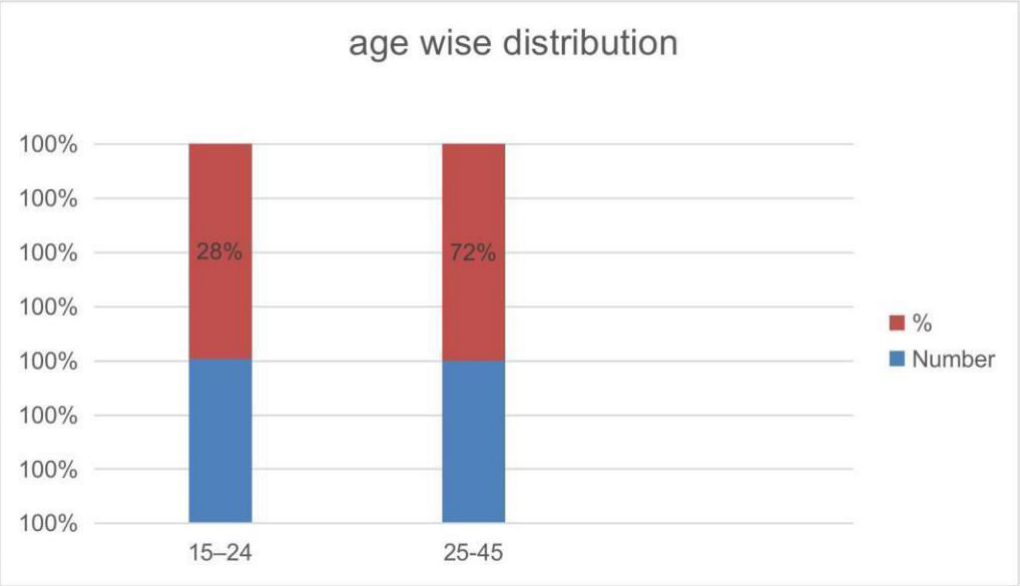


Table.2 sex wise distribution

Gender	No. (15-24 yrs)	%	No.(25-45 years)	%	Total
Male	4	23.5 %	13	76.5 %	17
Female	138	28.5 %	345	71.4 %	483
Total	142		358		500

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

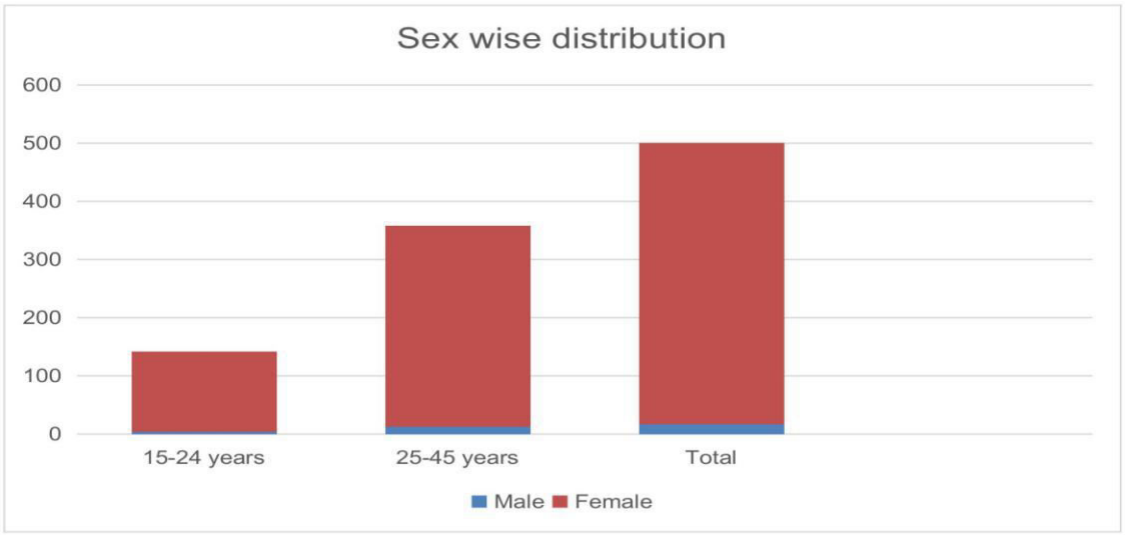
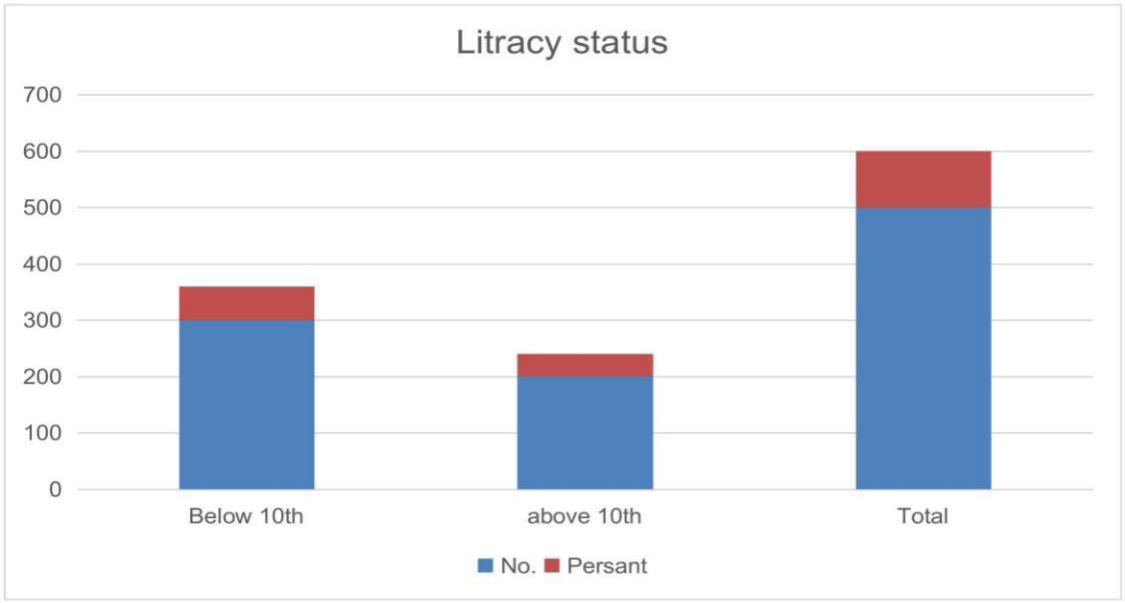


Table 3.showing Litracy status

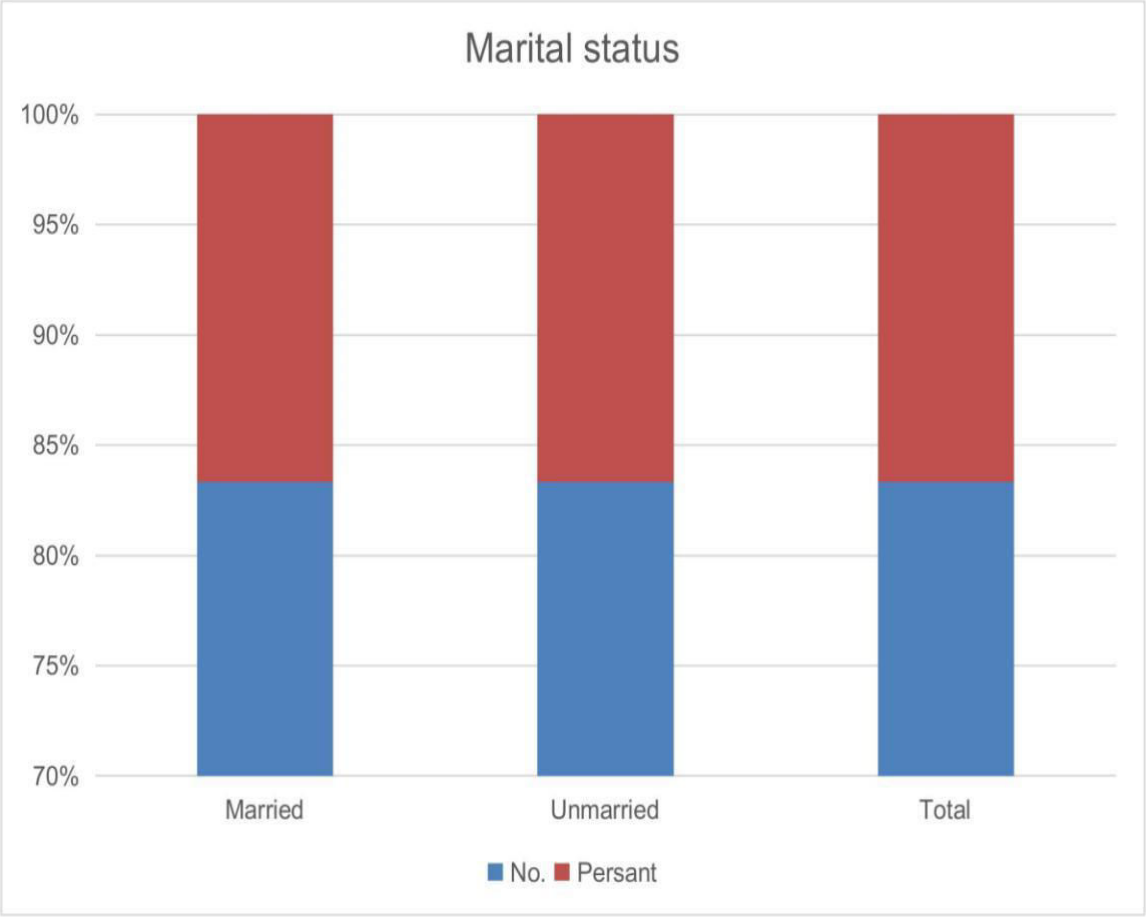
Litracy status	Number	%
Below 10th standard	300	60%
Above 10th standard	200	40%
Total	500	100%



ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

Table 4. showing Marital status

Marital status	Number	%
Married	470	94%
Unmarried	30	6%
Total	500	100%



ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

Table 5. showing RPR test result

RPR test result	Number (n==500)	%
Nonreactive	436	87.2%
Reactive	64	12.8%
Undiluted	18	28.12%
1:2	24	37.5%
1:4	15	23.4%
1:8	0	0
1:16	6	9.37%
1:32	1	1.5%

Table 6. showing Demographic details

Demographic data	number	%
U	259	51.8%
U-S	108	21.6%
R	133	26.6%
Total	500	100%

Table7. showing Coinfection of Syphilis and Gonorrhoea

Serial no.	Microscopy confirmed Gonorrhoea	RPR status	RPR Titre
1	+	Reactive	1:16
2	+	Nonreactive	-

2. DISCUSSION

In our study we found prevalence of gonorrhoea 0.4% (only 2 cases out of 500 was microscopy confirmed)which is almost similar from the studies by Rao et al(2) who showed 0% prevalence. the prevalence reported in Farzaneh Ghassabi (MSc) 1 Yalda Malekzadegan etal study is (2.6%) (3) capital of India (9%) (4), and Arizona state of the USA (4.5%) (5), whereas California state of USA (2%), and Brazil (0%) (6).Self-medication or

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

antibiotic therapy for treating irrelevant diseases may be one of the main causes of such observations. In our study only 1 patient which is microscopically suggestive gonococcal infection had syphilis co-infection. Bala etal (7) study showed 7% correlation with gonorrhoea among male patients and showed the highest rate of coinfection among gonorrhoea positive cases with syphilis 6.3% Similarly, Bozicevic etal

(8) found it to be 9% in symptomatic heterosexual men. which could originate from diagnostic or lifestyle differences in these regions disparities in prevalence maybe related to difference in composition of the studied population, distribution of risk factors, and effectiveness of STIs intervention programs.. The occurrence of co-infection might be due to the factthat these bacteria share mode of transmission, and the presenceof one infection could facilitate the acquisition of another. Public health strategies for STIs control include promotion of safer sexual behavior and provision of condoms (primary prevention),

as well as early and efficacious management of patients with STIs,using either syndromic or etiological management approaches

3. CONCLUSION-

The occurance of coinfection might be due to the fact that these bacteria share mode of transmission, and the presence of one infection could facilitate the acquisition of another. Prevalence of N. gonorrhoeae in my study is very low the most common site of gonorrhoea infection was male genital organ & the independent risk factors for male genital gonorrhoea were history of diagnosed STDs

& having multiple sexual partners. My study is a preliminary survey, provided information on the prevalence of gonorrhoea & syphilis coinfection in patients attending MGM Medical College STD OPD. Health education promoting regular condom use should be continued to prevent risk of gonorrhoea infection in population with high risk behaviour. In May 2016, the World Health assembly adopted the Global health sector strategy on sexually transmitted infections, 2016-2021[10]. This strategy includes rapid scaleup of evidence- based interventions & services to end STI as public health concerns by 2030.

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

4. REFERENCES

[1] Rizwan S, Abdulkader RS, Kant S, Rai SK, Goswami K, Mishra P. Prevalence and determinants of sexually transmitted infections (STIs) among male migrant factory workers inHaryana, North India. Indian journal of public health. January-March 2015;59:30-6.

[2] Rao PS, Devi S, Shriyan A, Rajaram M Jagdishchandra k. Comparision of clinial algorithm,smear scoring & culture by semiquantitative technique. Indian J med Microbiol. 2004;47-50

[3] Gonorrhea and syphilis co-infection and related risk factors in HIV patients from Shiraz, South of Iran. Farzaneh Ghassabi (MSc) 1 Yalda Malekzadegan (PhD) 1 Hadi Sedigh Ebrahim-Saraie (PhD) 1 Hamid Heidari (PhD) 1 Mozhgan Sabet (MD) 2 Abdollatif Bagheri (MSc) 2 Narges Bagheri3 Hadi Raeisi Shahraki (PhD) 4 Alireza Hasanabadi (MD) 2 Mohammad Motamedifar (PhD) 1, 2

[4] Flemming TJ, Wallsmith DE, Rosenthal RS. Arthropathic properties of gonococcal peptidoglycan fragments: implication for the pathogenesis of disemminated gonococcal disease.1986;600-608. 20.Tramont EC. Gonococcal vaccines. Clin Microbiol Rev 1989;S74-S75

[5] Travassos AG, Brites C, Netto EM, et al. Prevalence of sexually transmitted infectionsamong HIV-infected women in Brazil. Braz J Infect Dis 2012; 16: 581-5.

[6] Jain S, Win HN, Chalam V, Yee L. Disseminated gonococcal infection presenting asvasculitis. A case report. J Clin Pathol 2007; 60:90-1

[7] Bala M, Mullick JB, Muralidhar S, Kumar J and Ramesh V. Gonorrhoea & its coinfection withother ulcerative non ulcerative sexually transmitted & HIV infection in a regional STD center. Indian J. Med Res. 2011;133(3):346-349.

[8] Bozicevic I, Fenton KA, Martin IM et al epidemiological correlates of asymptomatic gonorrhoea. Sex Transm Dis. 2006;33(5):289-95.

[9]Organisation WH, Prevalence & Incidence of selected sexually transmitted infections; Chlamydia tracomatis, Nessieria gonorrhoeae, syphilis & trichomonas vaginalis methods and results used by WHO to generate 2005 estimates.2011.

[10] Global health sector strategy on sexually transmitted infections 2016- 2021. Towards endingSTIs Report no; WHO/RHR/16.09.Geneva; World Health Organization; 2016, Available from; https//wwww.who.int/reproductivehealth/publications/ 74

[11] Laga MA, Manoka A, Kivuvum M, Maleae B, Tuliza M, Nzila N et al. Non ulcerative sexually transmitted diseases as risk factors for HIV-I transmission in women: results from a cohort study.1993

[12] Badie, Yavari Z, Esmaeeli S et al. Prevalence survey of infection with treponema pallidumamong

[13] HIV–positive patients in Tehran. Asian Pac J trop Biomed 2013.

[14] Nayyar C, Chander R, Gupta P, Sherwal BL. Co-infection of human immunodeficiency virusand sexually transmitted infections in circumcised and uncircumcised cases in India. Indian J Sex Transm Dis AIDS. 2014;35(2):114-117.

[15] Travassos AG, Brites C, Netto EM, et al. Prevalence of sexually transmitted infectionsamong HIV-infected women in Brazil. Braz J Infect Dis 2012; 16: 581-5.

ISSN:0975-3583,0976-2833 VOL12,ISSUE07,2021

[16] Kar PK, Sexual behaviour and HIV prevalence in patients with sexually transmitted disease attending an STD clinic in north eastern state of India. Indian J Dermatol Venereol Leprol 1999;65:182-5.