

Original Research Article

Sexually transmitted infections among men who have sex with men: a retrospective study in a tertiary care hospital

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Received: 14 May 2017

Accepted: 08 June 2017

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ABSTRACT

Background: Men who have sex with Men (MSM) have a higher prevalence of HIV and other sexually transmitted infections (STI) than the heterosexual men. In India, NACP recommendations to reduce HIV prevalence among MSM include early detection of HIV and other STI by screening and treatment. We conducted a study of STIs among MSM attending our OPD. The aim of the study was to assess the prevalence of STIs in MSM attending our OPD.

Methods: 1215 MSM among 9008 patients who attended our OPD between June 2015 and May 2016 were included in the study. Detailed history was taken and clinical examination carried out. Urethral discharge and urine samples were tested for Gonococcal infection. Smears from ulcers were tested for Syphilis, Chancroid, Herpes and Donovanosis. Serum samples were tested for HIV and other STIs like Syphilis and Herpes.

Results: Among 1215 MSMs, 55 (4.5%) tested positive for VDRL and TPHA and 33 (2.7%) tested positive for HIV. 24 (2%) had urethritis (10 GU and 14 NGU), 15 (1.25%) had Balanoposthitis, 12 (1%) had genital herpes, 9 (0.75%) had genital scabies, 6 (0.5%) had Genital Wart and 2 (0.16%) had Molluscum contagiosum. Prevalence of these STIs were far higher in MSMs than in heterosexual men.

Conclusions: This study highlights the higher prevalence of STIs among MSMs and the need for early intervention and treatment in this high-risk population.

Keywords: Early intervention, Higher prevalence, Men who have sex with men, Sexually transmitted infections

INTRODUCTION

Sexually transmitted diseases are a major public health challenge in India and particularly the burden of diseases in MSM shows no signs of abating. NACO estimates that India is home to 2.5 million MSMs of which 100,000 are at a higher risk of contracting HIV due to commercial sex practices.¹

STIs are a major risk for general health and also facilitate HIV transmission. MSMs are the bridge population who transmit STIs to their partners and their innocent life partners. Although condom have been the cornerstone of STI and HIV prevention, its consistent use is lacking in MSM population. This shows the importance to study the prevalence of STIs in MSM and we had the opportunity to conduct such a study in our institute, in a tertiary care hospital in Tamil Nadu, South India.

METHODS

This was a retrospective study, using the case record of our OPD attendees during the period of June 2015 and May 2016. 1215 new MSM above 18 years of age were included in the study. Epidemiological data, clinical examination findings, smear reports, serological test reports and culture results of all the patients were collected and analysed. Information about sexual practices along with condom usage were tabulated. HIV was diagnosed by ELISA and Syphilis was diagnosed by VDRL using cardiolipin antigen and confirmed by TPHA. Genital herpes by Tzanck smear, HSV1 and 2 (IgM and IgG) antibodies by ELISA and gonorrhoea was diagnosed by culture using Thayer Martin medium from urethral swab and urine samples.

RESULTS

Among the 9008 patients who attended our Institute of Venereology in Rajiv Gandhi Government General Hospital between June 2015 to May 2016, 1215 patients were Men who have sex with Men (MSM), contributing 13.4 % of patients. Average age of MSM was 24 years. The professions of patients varied from manual laborer, salaried jobs and business. Most of the MSM patients (685) were unmarried and 85% gave a history of promiscuous behavior. Out of the 1215 MSM patients, 370 patients (30.5%) were homosexuals, whereas 845 (69.5%) were bisexuals and only 87 (7.16%) MSM patients gave history of consistent condom usage.

Among 1215 MSM patients, 161 patients were found to be positive for Various STIs like Syphilis, HIV, Herpes genitalis, Urethritis, Genital wart, Molluscum

contagiosum, Balanoposthitis and Genital scabies constituting 13.25% of STIs among all MSM patients attended our STD clinic during the study period. Total number of patient's positive for Syphilis during routine VDRL screening was 169, out of which 55 were MSM. Therefore, syphilis constitutes 0.0187% and 4.5% of all STD in heterosexual men and MSM patients respectively. Of the 55 MSM patients who tested positive for syphilis, 26 (47.3%) were diagnosed to have early syphilis and 29 (52.7%) were diagnosed to have late syphilis. HIV was the next most common STD constituting 0.0189% and 2.7% among the heterosexual men and MSMs respectively. Of the total 171 patients attended our STD clinic during study period who tested positive for HIV using strategy III, 33 were MSM patients.

54 (0.6%) out of 9008 total patients and 12 (1%) out of 1215 MSM patients were diagnosed to have Herpes genitalis by clinical examination, Tzanck smear and serological testing of HSV 1 and HSV 2. Of the 12 herpes genitalis MSM patients, 7 had primary episode and 5 had recurrence. 67 (0.74%) of the total 9008 patients and 24 (2%) MSM patients had urethritis. Out of the MSM patients who had urethritis, 10 were due to gonococci. Gonococcal urethritis was diagnosed by Gram stain and culture. 23 (0.26%) and 10 (0.8%) total and MSM patients presented with perianal wart respectively. 2 out of the 10 MSM had both penile and perianal wart.

Among the heterosexual men and MSM patients, 72 and 15 had balanoposthitis, 35 and 7 had genital scabies, 24 and 5 had molluscum contagiosum and these 3 constituted 1.45% and 2.5% of the findings respectively. Prevalence of these STIs among all the patients attended and MSM has been tabulated (Table 1).

Table 1: Prevalence of various STIs among heterosexual men and MSM who attended our institute of venereology during the study period.

	Syphilis	HIV	Herpes	Urethritis	Wart	Balanoposthitis	Scabies	MC	Total
Op attendees (9008)	169	171	54	67	23	72	35	24	615
%	1.88	1.9	0.6	0.74	0.26	0.8	0.38	0.27	6.83
MSM (1215)	55	33	12	24	10	15	7	5	161
%	4.53	2.73	1	2	0.8	1.2	0.57	0.42	13.25

Table 2: Age wise distribution of various STIs among the MSM patients.

Age	No. of patient	HIV	Syphilis	Herpes	Urethritis	Wart	Scabies	Balanoposthitis	MC
<19	34	1	2	0	0	0	0	0	0
20-29	623	13	37	9	9	4	4	7	2
30-39	410	17	14	2	10	3	2	6	2
40-49	126	2	2	1	3	2	1	1	1
>50	22	0	0	0	2	1	0	1	0
Total	1215	33	55	12	24	10	7	15	5

Among the 1215 MSM who attended the institute during the study period 1033 (85%) patients belong to the age

group of 20-39 year and the remaining constituted only 15%.

161 MSM had STIs of which 141 (87.58%) belong to the age group of 20-39 years. The age wise distribution of various STIs among MSM has been tabulated (Table 2).

DISCUSSION

Sexually transmitted diseases (STDs) are diseases that are transmitted by sexual intercourse.² The older terminology of "venereal diseases" (VDs) largely has been replaced by "sexually transmitted diseases (STDs)" and more recently by "sexually transmitted infections"(STIs).³ STIs differs from STDs in that STDs conventionally includes infections resulting in clinical diseases that may involve the genitalia and other parts of the body participating in sexual interaction e.g., syphilis, gonorrhoea, chancroid, donovanosis, nongonococcal urethritis, genital warts, herpes genitalis etc. STIs, in addition, includes infections that may not cause clinical disease of genitals, but are transmitted by sexual interaction e.g., all STD and hepatitis B, human immunodeficiency virus (HIV), HTLV-1 etc.⁴ STIs are nothing but diseases transmitted by sexual route that may or may not manifest in genitalia. Sexually transmitted infections (STIs) are more dynamic than other infections prevailing in the community.² Gay, bisexual and other men who have sex with men (MSM) are at increased risk for STDs, including emergence of antimicrobial resistance when compared to women and exclusively heterosexual men. Population level factors such as limited or overlapping social and sexual networks further increase risk of STIs including HIV among MSM. In many cases, concomitant psychosocial health concerns, such as depression, getting easy money for a pleasurable work, illiteracy and unawareness of severity of STIs may predispose MSM to increased risk taking. Miscommunication and misperceptions about HIV serostatus and the presence of STDs may enable some MSM to feel comfortable engaging in unprotected sex.⁵

Several studies suggest that the resurgence of bacterial STDs (syphilis, gonorrhoea, and chlamydia) may be partially due to the practice of oral sex by MSM, often to substitute for, or avoid anal sex.⁶ A separate survey conducted during 2007-2010 found that 33% of teenage girls and boys aged 15-17 years reported having had oral sex with a partner of the opposite sex. Studies have shown that the risk of getting HIV from having oral sex with an infected partner (either giving or getting oral sex) is much lower than the risk of getting HIV from anal with an infected partner.^{7,8} This may not be true for other STDs-in one study of gay men with syphilis, 1 out of 5 reported having only oral sex.^{9,5} Young MSM are increasingly engaging in high risk sexual behavior like unprotected anal intercourse, multiple sex partners and using the internet to recruit sex partners which leads to increased transmission of STIs.¹⁰ CDC estimates that 19 million new infections occur each year, almost half of them among young people aged 15 to 24.² This is due to increase in case reporting, screening efforts and use of more sensitive diagnostic tests, but also reflect an actual increase in infections.

The rate of primary and secondary syphilis decreased throughout the 1990s and reached historic lows in the United States in 2000.¹¹ However, over the past decade, syphilis is on the rise. In USA, between 2004-2015, the national syphilis rate increased to 11.1% from 2.7 to 3 cases per 1,00,000 population. Prior CDC research has estimated that more than half of syphilis cases in recent years have occurred among men who have sex with men. Recent CDC research statistics between 2010-2014 shows that among patients having syphilis 47.9% are MSM. 2015 statistics shows 82.9% of syphilis are in MSM.¹² In our study, out of 169 patients who had syphilis, 55 were MSM, accounting 32.54% and was the most common STI among MSM. This is in concordance to previous CDC reports and previous studies conducted by Taru Garg et al.¹ But in our study 42.7% and 52.3% had early and late syphilis respectively, which was in contrast to study by Taru Garg et al in which only 5% were late syphilis.¹

In 2008, CDC conducted an analysis of trends in diagnosis of human immunodeficiency virus / acquired immunodeficiency syndrome (HIV/AIDS) among men who have sex with men (MSM) in 33 states of USA. Out of the total HIV/AIDS diagnosis during 2001-2006, 46% were among MSM.¹³ Decreases in diagnosis were observed in all transmission categories except MSM. Men aged 25-44 years accounted for 64% of cases among MSM. In our study, out of the 171 patients who were diagnosed to be HIV positive, 33 were MSM, accounting to 19.2%. Unprotected receptive anal intercourse (URAI) has been consistently described as an independent risk factor for HIV infection among MSM.^{10,14} One recent study estimated the per-act risk of HIV infection from URAI with a partner who is HIV-positive at 0.82% (82 in 10,000) and with a partner of unknown serostatus at 0.27% (27 in 10,000).¹⁵

According to studies conducted over various parts of India over the years the incidence of Gonorrhoea ranged from 3.87% to 16.79% among patients attending STD clinics and no significant difference in the incidence was seen among MSMs.¹⁶⁻¹⁹ In our study, out of the 24 MSM patients who had urethritis, 10 were diagnosed to have gonococcal urethritis (0.82%) which was less when compared to other studies. Diagnosis of chlamydia was not made as facilities to diagnose the same was not available. Human papillomavirus is the major source of anal carcinoma among MSM, and the rates of anal carcinoma in MSM are much higher than the 2 per 100 000 rates seen in the general population, with recent reports suggesting rates as high as 35 per 100 000 and trends suggesting increasing rates, particularly among HIV-infected MSM.²⁰ The prevalence of condyloma accuminata and genital herpes is on the rising trend especially among MSMs. In a 10-year study conducted in a Medical college hospital, Kottayam the prevalence of condyloma accuminata was found to be 17.5%.²¹ But the prevalence of both condyloma accuminata (perianal wart) and genital herpes among MSM patients in our study

were 0.8% and 1% respectively which is comparatively less when compared to previous studies.²¹ According to our study, Syphilis was 2.5 times more common (1.88%- Heterosexual men and 4.53% - MSM) and HIV was 1.5 times more common in MSM (1.9%- Heterosexual men and 2.73% in MSM). Other STDs like herpes genitalis, gonococcal and nongonococcal urethritis, Balanoposthitis, genital scabies and molluscum contagiosum also had slightly higher prevalence than in heterosexual men. Perianal wart was 3 times more common MSM, especially in those, who had unprotected anal intercourse and was highly unlikely in heterosexual men. This clearly shows that the prevalence of STIs especially of Syphilis and HIV in MSM is higher than in heterosexual men and it is also on the rise when compared to previous studies.^{1,21}

Clinicians and health educators often have the unique opportunity to discuss topics of an intimate nature in a professional setting. The goal of safer-sex education may be to help someone minimize risk to him or herself; in others, it may be to help someone minimize risk to others. Current syphilis outbreaks among MSM include meeting partners in anonymous venues, requiring clinicians and health practitioners to recognize complex patterns of how MSM meet new sexual partners, and to find out ways for effective partner screening. Individuals can reduce their risk by choosing a partner who has tested negative, choosing a safer-sex act, using a condom, or some combination of these factors. For heterosexuals, choosing one risk-reduction behavior substantially reduced the absolute risk of HIV infection. However, for men who have sex with men (MSM), whose population prevalence is high, the choice of only one risk reduction behavior did not significantly lower the absolute risk of HIV infection.²² Strong evidence exists that being a receptive partner in unprotected penile-anal intercourse is associated with a high risk of HIV infection. Transmission of HIV to the receptive partner probably occurs as a result of the deposition of HIV-infected semen on traumatized rectal mucosa.²³ It is generally accepted by the medical and public health communities that when used properly, latex and polyurethane condoms can significantly reduce the risk of sexual transmission of HIV. Condoms are therefore recommended as an important HIV prevention measure. N-9 is no longer recommended for use in anal sex because the chemical has been shown to damage the rectal epithelium.^{24,25} One risk-reducing strategy to consider is a reduction in the number of sexual partners, but this in no way reduces the risk of infection by sexual contact with even a single partner who is HIV positive. Because risk of HIV infection derives only from exposure to HIV-infected partners, avoiding sexual exposure with partners known or likely to be HIV infected would be an appropriate risk-reduction strategy. Proper use of barrier methods can reduce the risk of transmission associated with many of these practices. Thus, decision making about safer sex involves choices about specific sexual practices in addition to choices about partner selection. The creative

use of social media may also enhance prevention promotion for at-risk MSM. By means of all the safe sex practices, early institution of HAART for HIV and effective treatment modalities for other STIs the risk of transmission of these diseases among MSMs and to their innocent spouses can substantially reduce. But all the above preventive measures are no match to self-discipline (avoiding premarital sex, in those who are unmarried), or having sex only with the most reliable partner (the spouse, in those who are married).

CONCLUSION

MSM is still considered a taboo in our culture. Hence, many MSM patients do not walk-in to STD clinics fearing the prejudice. On the worst, they turn out to be bisexual wanting a normal social life, thus becoming a bridge for spread of STDs and HIV. Most of them are bisexual and promiscuous which makes it all the more important to identify them, educate them and create awareness as they are at increased risk of STDs than the general population and our study just proves the same.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Prabahaar P, Ranganathan T, Vijayabhaskar C, Kalaivani S, Balamurugan L, Sivasankri P. Sexually transmitted infections among men who have sex with men: a retrospective study in a tertiary care hospital. *Int J Res Med Sci* 2017;5:3222-6.