

Changing trend in sexually transmitted infections among males in a tertiary care centre from Eastern India

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Abstract

Objective To evaluate sexually transmitted infections (STI) with reference to its pattern and any change in the trend of STI.

Methods The present work was designed as a tertiary urban hospital based observational, cross-sectional, clinico-demographic study during the period from Feb 2013 to Sep 2014. Patients were examined clinically and relevant investigations were done.

Results Out of total 178 STI patients, the commonest STI was balanoposthitis (n=65, 36.5%) followed by genital scabies (n=31, 17.4%), genital herpes (n=19, 10.7%), venereal warts (n=15, 8.4%), nongonococcal urethritis (n=14, 7.9%) and chancroid (n=12, 6.7%). Majority of the patients (n=46, 25.8%) were in the age group 25-29 years and the younger patients (ages 15-24 years) constituted a bulk of 58 (32.6%). HIV seropositivity was seen in 7 (3.9%) of total STI cases. Among HIV seropositive patients herpes genitalis (n=4, 57.1%) were most common STI. Commercial sex workers (n=78, 43.8%) were the main source of infection responsible for STIs.

Conclusion The present study showed the changing trend of STIs. The current scenario has changed with balanoposthitis being the most common STI. A decline in the number of younger patients between the age group of 15 to 24 years suggested a shifting pattern from adolescent to adult age group.

Key words

Sexually transmitted infection (STI), HIV sero-positivity, balanoposthitis.

Introduction

Sexually transmitted infections have been recognised as a major public health problem. The true incidence of sexually transmitted infection (STI) is not known because of inadequate reporting and secrecy. The enormous variation in the incidence, prevalence, transmissibility, severity of the morbidity, association with sexual behaviour

and associated veil of secrecy are the difficulties in the epidemiological study. The knowledge of STIs is necessary to establish early diagnosis and better treatment. Hence a thorough study of pattern of STIs is of great importance from the public health point of view.

A review of the epidemiological studies conducted on STIs and HIV/AIDS highlights that the data on STI prevalence in men are lacking, and the majority of health facilities and community based studies have focused on the STI rates in women.¹ With the above background in the mind the present work was conducted for the purpose of evaluating STI in

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males with reference to its pattern and any change in the trend of STI.

Methods

After getting institutional ethical committee's approval, male STI patients aged between 15 years to 49 years were selected to execute the proposed study from those who attended the outpatient department of Skin and Venereal Disease. The present work was designed as a tertiary urban hospital-based, observational, cross-sectional, clinico-demographic study during the period from February 2013 to September 2014. Selection of male patients, clinically diagnosed as STI was done after obtaining consent. In case of any confusion help of laboratory investigation was taken. ELISA for HIV 1 and 2 and rapid plasma reagin (RPR) test were done in all cases. To determine the representative sample size for

this study, the Taro Yamani's formula was used with the level of precision at 95%.

Results

Out of total 178 STI patients, the commonest STI were balanoposthitis (36.5%, n= 65) followed by genital scabies (17.4%, n=31), genital herpes (10.7%, n= 19), venereal warts (8.4%, n= 15), nongonococcal urethritis (7.9%, n= 14) and chancroid (6.7%, n= 12). Syphilis, gonorrhoea and genital molluscum constituted 6 (3.4%) patients each, respectively. Mixed cases (more than one STI in a single patient) were 3 (1.7%) and 1 (0.6%) case of lymphogranuloma venereum (LGV) was reported. No cases of granuloma inguinale, pediculosis pubis and hepatitis were seen (Table 1).

Table 1 Pattern of different sexually transmitted infections.

Diseases	N (%)	HIV seopositivity	RPR positive
Syphilis	6 (3.4%)	0	6
Gonorrhoea	6 (3.37%)	0	0
Nongonococcal urethritis	14 (7.86%)	0	0
Chancroid	12 (6.74%)	0	0
Lymphogranuoma venereum	01 (0.56%)	0	0
Balanoposthitis	65 (36.51%)	0	0
Genital scabies	31 (17.41%)	0	0
Herpes genitalis	19 (10.67%)	4	0
Venereal warts	15 (8.42%)	2	0
Genital molluscum	06 (3.37%)	1	0
Mixed infection	03 (1.68%)	0	1
Total	178 (100%)	7	7

Table 2 Age-wise distribution of sexually transmitted infection patients.

Disease	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years
Syphilis	0	1	1	3	0	1	0
Gonorrhoea	0	2	2	0	1	1	0
NGU	2	2	3	3	3	0	1
Chancroid	0	6	0	3	0	2	1
LGV	0	0	0	1	0	0	0
Balanoposthitis	5	12	22	10	9	4	3
Genital scabies	5	6	9	3	4	1	3
Herpes genitalis	0	6	4	3	4	2	0
Venereal warts	2	4	4	2	3	0	0
Genital molluscum	2	2	1	0	1	0	0
Mixed infection	0	1	0	0	1	1	0
Total	16	42	46	28	26	12	8

Majority of the patients i.e. 46 (25.8%) were in the age group 25-29 years and the younger patients (ages 15-24 years) constituted a bulk of 58 (32.6%), **Table 2**. Most of STI cases were married (n=94, 52.2%). Regarding occupation, majority (n=99, 55.6%) of STI cases were seen in labourers (manual 52 [29.2%] and skilled 47 [26.4%]).

HIV seropositivity was seen in 7 (3.9%) STI cases. Among HIV seropositive patients, herpes genitalis (n=4, 57.1%) was the most common STI. RPR reactivity was seen in 7 (3.9%) STI cases (**Table 1**). Commercial sex workers (n=78, 43.8%) were the main source of infection responsible for STIs.

Discussion

In the present study balanoposthitis (36.5) was the commonest STI. This corroborates the finding of Arakkal *et al.*² who also observed that the most common STI in males was balanoposthitis (candidial). Patel *et al.*³ concluded that the current scenario has changed with fungal infections (54%) being the most common STI.³ Upward trend of fungal infection was also recorded by Zamzachin G *et al.*⁴

A relatively higher number of genital scabies (17.4%) patients was seen in comparison to the earlier studies.^{5,6} A study in Ahmedabad has reported increasing trend of parasitic infection, from 6% in 2003 to 10% in 2012.³

Among the viral STIs, the commonest was herpes genitalis (10.7%) consistent with most other studies.⁶⁻⁸ Present study showed lower number of bacterial STIs, which were similar with the studies from other centres in India.⁶⁻¹¹ Declining level of bacterial infections may be due to the increasing sexual health awareness, indiscriminate use of antibiotics and syndromic management of the infections by the physicians.

Majority (25.8%) of the patients were in the age group of 25-29 years. Younger patients between 15 to 24 years were much less (32.6%) in the present study as compared to United States CDC estimates. In United States CDC estimates that nearly 20 million new infections occur each year, and almost half of them among young people aged 15 to 24.¹² There is a trend of decreasing younger patients below 25 as reported by Mishra *et al.* 22.07%, and Singh *et al.* 14.41%.^{13,14}

HIV seropositivity among STI patients was 3.9%. But there was a wide variation in seropositivity for HIV in STI patients, as reported by Zamzachin *et al.*⁴ 8.21%, 9.62% in Jaiswal *et al.*¹⁵ and 2.48% in Vora *et al.*¹⁶ The commonest STI in HIV patients was genital herpes which was similar to other studies.^{8,17}

History of exposure to the commercial sex workers (42.4%) were the main source of infection in the males similar to the finding of Kavina *et al.*¹⁷ This may be attributed to the regional variation on account of higher number of people belonging to high risk sexual behaviour in the area, like students, migrant workers, taxi drivers and truck drivers.

Conclusion

The present study showed the changing trend of STIs. The current scenario has changed with balanoposthitis being the most common STI. A decline in the number of younger patients between the age group of 15 to 24 years suggested a shifting pattern from adolescent to adult age group. Declining level of bacterial infections may be due to the increasing sexual health awareness, indiscriminate use of antibiotics and syndromic management of the infections.

This study might prove to be a potential guide for multidisciplinary analysis, policy making and appropriate intervention strategies to determine the steps for the universal goal of sustainable healthcare. Commercial sex

workers, being a common source of the infection, should be rehabilitated vocationally and there should be more emphasis on contact tracing.

References

1. Hawkes S, Santhya KG, Diverse realities: Sexually transmitted infections and HIV in India. *Sex Trans Infect.* 2002;**78**:131-9.
2. Arakkal GK, Damarla SV, Kasetty HK, Chintagunta SR. Changing trends in sexually transmitted infection (STI) clinic attendees – Current scenario. *Int J Med Sci Public Health.* 2014;**3**:1215-8.
3. Patel N, Pitroda H, Rathod Y, Suthar H. Clinical and demographic trends in a sexually transmitted infection clinic in Ahmedabad (2003-2012): An epidemiologic analysis. *Int J Med Sci Public Health.* 2013;**2**:1077-80.
4. Zamzachin G, Singh NB, Devi TB. STD trends in regional institute of medical sciences, Manipur. *Indian J Dermatol Venereol Leprol.* 2003;**69**:151-3.
5. Saikia L, Nath R, Deuori T, Mahanta J. Sexually transmitted diseases in Assam: An experience in a tertiary care referral hospital. *Indian J Dermatol Venereol Leprol.* 2009;**75**:329.
6. Ray K, Bala M, Gupta SM, Khunger N, Puri P, Muralidhar S, et al. Changing trends in sexually transmitted infections at a Regional STD Centre in north India. *Indian J Med Res.* 2006;**124**:559-68.
7. Jain VK, Dayal S, Aggarwal K, Jain S. Changing trends of sexually transmitted diseases at Rohtak. *Indian J Sex Transm Dis.* 2008;**29**:23-5.
8. Devi SA, Vetrichevvel TP, Pise GA, Thappa DM. Pattern of sexually transmitted infections in a tertiary care centre at Puducherry. *Indian J Dermatol.* 2009;**54**:347-9.
9. Risbud A, Chan-Tack K, Gadkari D, Gangakhedkar RR, Shepherd ME, Ollinger R, et al. The etiology of genital ulcer disease by multiplex polymerase chain reaction and relationship to HIV infection among patients attending sexually transmitted disease clinics in Pune, India. *Sex Transm Dis.* 1999;**26**:55-62.
10. Thappa DM, Kaimal S. Sexually transmitted infections in India: Current Status (Except Human Immunodeficiency Virus/ Acquired Immunodeficiency syndrome). *Indian J Dermatol.* 2007;**52**:78-82.
11. Choudhry S, Ramachandran VG, Das S, Bhattacharya SN, Mogha NS, et al. Pattern of sexually transmitted infections and performance of syndromic management against etiological diagnosis in patients attending the sexually transmitted infection clinic of a tertiary care hospital. *Indian J Sex Transm Dis.* 2010;**31**:104-8.
12. www.cdc.gov/std/stats/sti-estimates-fact-sheet-feb-2013.pdf.
13. Mishra A, Verma P, Marathe N, Srivastava D. Study of the profile of patients with STDs attending an STD clinic in J.A.H., Gwalior. *Indian J Community Med.* 2008;**33**:263-4.
14. Singh S, Badaya S, Agrawal D. Current socioclinical trend of sexually transmitted diseases and relevance of STD clinic: A comparative study from referral tertiary care center of Gwalior, India. *Drug Dev Ther.* 2014;**5**:134-8.
15. Jaiswal AK, Banerjee S, Matety AR, Grover S. Changing trends in sexually transmitted diseases in North Eastern India. *Indian J Dermatol Venereol Leprol.* 2002;**68**:65-6.
16. Vora R, Anjaneyan G, Chirag D, Gupta R. Clinic-epidemiological study of sexually transmitted infections in males at a rural based tertiary care center. *Indian J Sex Transm Dis.* 2011;**32**:86-9.
17. Kavina BK, Bilimoria FE, Rao MV. The pattern of STDs and HIV seropositivity in young adults attending STD clinic of civil hospital, Ahmedabad. *Indian J Sex Transm Dis.* 2005;**26**:60-4.