

Original Research Article

Profile of sexually transmitted infections among males in a South Indian suburban tertiary care teaching hospital: a one year retrospective study

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ABSTRACT

Background: The profile of sexually transmitted infections (STIs) is variable due to changes in socio-economic, cultural, geographic & environmental factors in different parts of the country. However, baseline information about the epidemiology of STIs remains essential for designing, implementing and monitoring of successful targeted interventions. The study was conducted with the aim to study the frequency of various STIs among male patients attending the STI outpatient department (OPD) of our hospital during a period of one year.

Methods: This is a retrospective study, wherein data collected from January 2016 to December 2016 regarding male attendees to STI clinic in our hospital was used to assess the occurrence of various STIs among male patients during that period.

Results: Among the study group (266), most common STI was scabies (33.83%) followed by balanoposthitis (33.08%) and anogenital warts (10.9%). It was also noted that 71% of scabies occurrence was during Jan to April and then December, compared to other months. Early syphilis (Primary/secondary) was detected in 3 subjects. Syphilis occurrence was lower than data from some previous Indian studies.

Conclusions: There is considerable variation in the incidence of STIs among various regions of our country. There is also a change in occurrence of various STIs over last 2 decades. The reasons could include over-the-counter antibiotic use and more frequent use of antibiotics for other diseases than in the past.

Keywords: Scabies, Balanoposthitis, STI

INTRODUCTION

Sexually transmitted infections (STIs) are a major cause of disease burden, especially involving the younger age groups. The World Health Organisation estimated in 2002 that about 97,420 disability adjusted life years (DALYs) could be attributed to these infections in the world. This represented about 6.6% of the total DALYs.¹ STI studies in the past have shown that there are changes in their epidemiology in various parts of the country from 1970s to 2000.²⁻⁶ Surveillance and prompt treatment of STIs have been identified as major thrust areas by the National AIDS Control Organisation (NACO) of India, for HIV prevention. Knowledge regarding the demographic and clinical changes in the STI population

will help us to better cater our prevention strategies to the target population. Men and women may have different requirements of intervention for STI prevention.⁷ In this study, we have tried to assess the frequency of various STIs in our hospital. The study was conducted with the aim to study the frequency of occurrence of various STIs among male patients attending the STI out-patient department (OPD) of our hospital during a period of one year.

METHODS

This is a retrospective observational study of clinical data collected from male patients who attended the STI OPD of our hospital (A South Indian suburban tertiary care

teaching hospital) during a period of one year from January 2016 to December 2016 and were diagnosed as having STI.

Inclusion criteria

All male subjects who were newly diagnosed of having an STI at the STD clinic of our hospital from January to December 2016.

Exclusion criteria

Female subjects attending the STD clinic and all male subjects coming for follow up of previously diagnosed episode of STI.

Data was collected as per proforma after obtaining informed consent from the patients. A detailed history was taken and complete dermatological and venereological examination was performed. Digital photographs of skin and genital lesions were taken when consent was given by the patient.

Special investigations like were performed when clinically indicated. This included Gram’s stain, potassium hydroxide mount, saline mount, Dark field microscopy, Tzanck smear etc. Then, ELISA/rapid tests for HIV and RPR test for syphilis had been done. Relevant investigations like complete blood counts, blood urea, serum creatinine, serum electrolytes were performed when required.

All data collected using a proforma were entered in Microsoft Excel 2007 sheet and a master chart was prepared. The data was analysed using Statistical package for social studies (SPSS) software version 17.0.

RESULTS

During the study period, a total of 266 male patients were diagnosed of STI. The mean age of the attendees was 29.04 yrs. Among the patients, 116(43.6%) of them were married as given in Table 1.

Table 1: Marital status.

Marital status	Number	Percentage (%)
Married	116	43.6
Unmarried	150	56.4
Total	266	100

It was noted that among the 150 unmarried men as shown in Figure 1, history of heterosexual contact was present in 21 (14%) patients and homosexual contact in 8 patients (5.3%). Among the married men Figure 2, history of pre-marital contact (PMC) included pre-marital heterosexual contact in 7 (6.03%) patients and pre-marital homosexual contact in 3 (2.58%) patients. History of extra-marital contact (EMC) was present in 19 (16.7%) patients. It was

noted that 16 (6.01%) subjects had a history of contact with commercial sex worker (CSW).

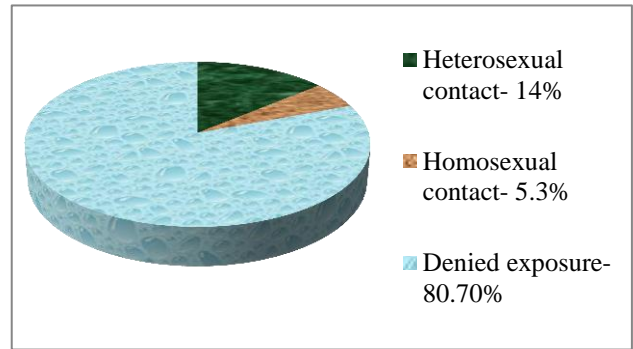


Figure 1: Sexual history-unmarried subjects.

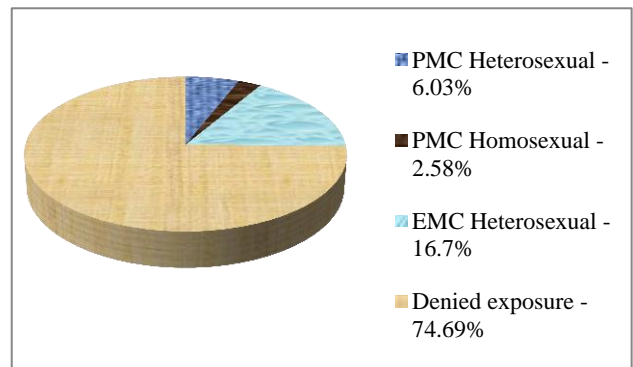


Figure 2: Sexual history-married subjects.

The most common STI diagnosed was genital scabies, which included 90 (33.83%) patients. Another observation was that 64 of the 90 patients (71.11%) came in the months of January to April and December. Though the place of study is not known for very cold winters, there have been previous reports of winter exacerbation of scabies.⁸

Second most common STI diagnosed was balanoposthitis seen in 88 patients (33.08%). All these patients were found to have candidal etiology.

Next common STI was genital wart, seen in 29 patients (10.9%) followed by molluscum contagiosum in 10 patients (3.75%). Non-gonococcal urethritis was seen in 3 patients (1.12%).

Four patients (1.50%) were diagnosed with genital herpes, of which 3 patients have had a previous episode, indicating recurrent herpes genitalis. None of these patients came with a recurrent episode again during the study period. In our study, 2 (0.75%) patients were found to be sero-positive for HIV infection and they were not found to have any other STI co-infection during the study period. Early syphilis was diagnosed in 3 patients (1.12%), of which 2 patients had primary syphilis (0.75%) and one patient (0.37%) had secondary syphilis.

Non-specific genital ulcer disease was found in 29 patients (10.9%), wherein routine clinical assessment and lab diagnostic methods could not help in identifying the etiology. Pediculosis pubis was found in 8 patients (3.01%) in our study.

Table 2: Frequency of STIs.

S.No	STIs	Number	Percentage (%)
1.	Scabies	90	33.83
2.	Balanoposthitis	88	33.08
3.	Genital wart	29	10.9
4.	Genital Molluscum contagiosum	10	3.75
5.	Herpes genitalis	4	1.5
6.	Non-gonococcal urethritis	3	1.12
7.	Pediculosis pubis	8	3.01
8.	Syphilis	3	1.12
9.	HIV	2	0.75
10.	NSGUD	29	10.9
	Total	266	100

Hence, we noted that ectoparasitic STIs (scabies in 33.83% and pediculosis pubis in 3.01%) were the most common followed by a fungal STI (Candidal Balanoposthitis in 33.08% patients). Viral STIs were seen in 16.9% and bacterial STIs were seen in only 2.24% of patients Figure 3.

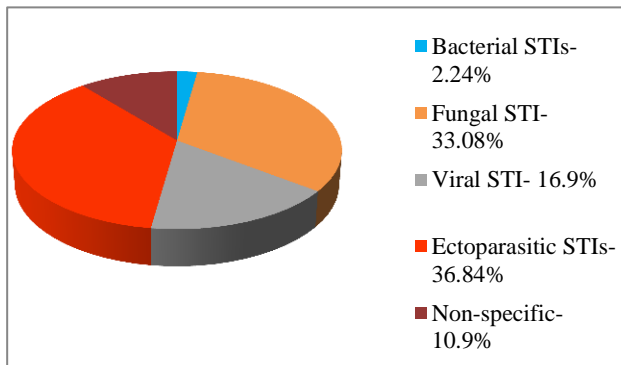


Figure 3: STI etiology.

DISCUSSION

Among the study group (266), the mean age was 29.04 years. In the epidemiological study by Setia et al, mean age was 27 years.⁷ In our study, 43.6% of the subjects were married. In a study by Nayyar et al, 45% subjects were married and in a study by Choudhry et al, 60 % subjects were married, but both these studies included male and female patients.^{9,10}

Premarital heterosexual contact was seen in 6.03% and homosexual contact in 2.58%. Extramarital contact was

seen in 16.7% of married men. History of contact with CSW was seen in 16 (6.01%) subjects. In the study by Choudry et al, 63.9% of males had contact with CSWs.¹⁰ In the study by Nayyar et al, 29.68% subjects had history of contact with CSWs and 11.7% subjects had history of homosexual contact.⁹

It was very interesting to note that the most common STI in our study was genital scabies (33.83%). Also of interest was the striking seasonal variation, with definitely higher occurrence (69.3%) during relatively cooler months. More chance of over-crowding and less frequent bathing could be significant causes for this winter preponderance.

Second most common STI was candidal balanoposthitis (33.08%) followed by genital warts (10.9%). According to study by Choudhry et al, warts were seen in 16% of subjects whereas 11% of the subjects were found to have genital warts in the study by Setia et al.^{10,7}

Genital molluscum contagiosum was seen in 3.75% subjects, comparable to study by Choudhry et al (5%). Though we could not confirm chlamydial etiology, non-gonococcal urethritis was seen in 1.03% subjects, whereas chlamydial infection was seen in 20% male subjects in study by Choudhry et al.¹⁰

Genital herpes was found in only 1.5% of our subjects, whereas Setia et al found 20% occurrence and Choudhry et al found a 19% occurrence.^{7,10} Only 2 subjects(0.75%) were found to be HIV sero-positive in our study. Nayyar et al found a HIV occurrence of 6.2% whereas Choudhry et al found that 10% of his subjects were HIV sero-positive.^{9,10}

Choudhry et al reported a 23% occurrence of syphilis compared to only 1.12% in our study.¹⁰ Nayyar et al reported a similar frequency of occurrence of syphilis (2.3%) in their study.⁹

Overall, ectoparasitic STI (scabies and pediculosis pubis) was the most common followed by fungal STI (candidal balanoposthitis). According to Setia et al, most common etiology of STIs was viral (57%) in the year 2006.⁷ In the same study, it was found that only 25% had a viral STI in 1994. In our study, 16.9% of subjects had a viral STI.

Hence, in this retrospective study, we were able to notice a remarkable change in the frequency of various STIs. As we noticed a significant reduction in classical STIs like syphilis, gonorrhoea, herpes genitalis and HIV, there was no occurrence of chancroid, lympho-granuloma venereum and donovanosis. These could be explained by extensive use of over-the-counter antibiotics and also more frequent use of antibiotics for other diseases than in the past.

Another highlight in our study was the high frequency of genital scabies and candidal balanoposthitis, which were

not even part of the data in reports of some previous studies. Though these are not always sexually transmitted, they are highly communicable through sexual contact and hence it is very difficult to rule out a sexual transmission in most cases in the reproductive age group.

Early diagnosis and prompt treatment of both these infections and their predisposing factors are pivotal in preventing their sexual transmission. Since

balanoposthitis can lead to erosions and fissures in the genitalia, it would certainly increase the risk of acquiring other STIs like HIV.

Though the use of barrier contraceptive method (condoms) would be more in the present era compared to a decade ago, barrier method of contraception may not prevent transmission of scabies or pediculosis pubis. This could be one of the causes of higher occurrence of these STIs.

Table 3: Comparison with other studies.

STI	Our study (%)	Choudhry et al (%)	Nayyar et al (%)	Setia et al(%)
Scabies	33.83	-	-	-
Balanoposthitis	33.08	-	-	-
Herpes genitalis	1.5	19	-	20
Molluscum contagiosum	3.75	5	-	-
HIV	0.75	10	6.2	-
Syphilis	1.12	20	2.3	-
NGU	1.12	20	-	-
Anogenital warts	10.9	16	-	11



Figure 4: Balanoposthitis with phimosis.



Figure 6: Primary syphilis-chancere.



Figure 5: Balanoposthitis with erosions.



Figure 7: Genital herpes.



Figure 8: Scabies–papules and burrow.



Figure 9: Genital wart.

CONCLUSION

Based on our study results, we would like to suggest that in further awareness programs regarding STIs, additional emphasis is needed towards educating the population about the clinical features and importance of early treatment of STIs like scabies and balanoposthitis, which were not part of the list of classical STIs in the past. It is also essential to further spread awareness of use of barrier methods of contraception in prevention of STI transmission. This will go a long way in reducing the disability adjusted life years (DALYs) due to STIs on a global scale. Moreover, as STIs affect the quality of life predominantly during the productive years of life (mostly third to sixth decade), the significance of their prevention can never be over-emphasized.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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