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A Study on the Current Scenario of Sexually Transmitted Disease Patients Attending Dermatology OPD in a Tertiary Care Hospital in North East India

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ABSTRACT

Sexually transmitted diseases (STD) are diseases acquired by sexual contact with an infected person and are dynamic by nature and shows variable prevalence in different parts of the country.

Aims and Objectives: (1) To study the pattern of Sexually Transmitted Diseases among patients attending Dermatology OPD. (2) To study the relation of Sexually Transmitted Diseases to age, sex and other related conditions.

Materials and methods: Hospital-based Observational Study conducted on patients with STD attending the department of Dermatology of a tertiary care hospital in Assam between June 2014 to May 2015.

Results and observations: A total of 106 cases were diagnosed as Sexually Transmitted Diseases. Incidence of STDs in the present study is 0.48%. Males outnumbered females with a ratio of 4.57: 1. Maximum number of cases were seen in patients from 21-30 years of age. Most the cases were married. Premarital sexual relation was the most common relation. Heterosexual (101, 95.28%) was the commonest type of sexuality. Vaginal act was the most common type of sexual act (104; 90.43%). Multiple partners was present in (63; 59.43%). Use of barrier method was present in 15 (14.15%) cases. Exposure to CSW was found in (29; 27.36%) cases. Ulcers (44; 47.31%) was the most common presenting complaints followed by plaque type of growth (21; 22.58%), mucopurulent discharge (14; 15.05%), itching and redness (13; 13.98%), milky white discharge (8; 8.60%), serosanginous discharges (5; 5.38%). Most common disease was genital herpes (37; 34.26%) followed by genital warts and genital candidiasis (21; 19.44%) each, gonococcal urethritis (14; 12.96%).Syphilis, chancroid and non gonococcal urethritis (NGU) was found in 5 (4.63%) cases each. HIV seropositivity was found in (6; 5.66%) cases.

Keywords: *Sexually transmitted diseases, Sexually transmitted infections, genital ulcers, genital discharges.*

INTRODUCTION

Sexually transmitted diseases (STDs) primarily affect sexually active population in the reproductive age group and are largely acquired through sexual act or close contact with genitals. (1) In STDs the agent has to be present in one partner, the other partner to be susceptible to infection with that agent and that the sex partners engage in sexual practices that can transmit the pathogen. (2) STDs differs from Sexually Transmitted Infections (STI) 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, gonorrhea, chancroid, donovanosis, nongonococcal urethritis, genital warts, herpes genitalis etc. STI, in addition, includes infections that may not cause clinical disease of genitals, but are transmitted by sexual interaction e.g., all STDs and hepatitis B, human immunodeficiency virus (HIV) etc. Nowadays, the term STI is preferred, since it covers all the diseases that can be transmitted by sexual intercourse. However, for all practical

purposes, both STI and STDs terms are used synonymously. (3) The agents causing STD are classified into viruses, bacteria, protozoa, insect and mites. STD also encompasses a number of syndromes caused by certain sexually as well non sexually transmitted pathogens. The STD pathogens and related syndromes can be conveniently divided into three categories based on their discovery and shared characteristics: First generation STDs, they include the five classical bacterial diseases: syphilis, chancroid, lymphogranuloma venereum (LGV), donovanosis and gonorrhoea. Second generations STDs include that are either caused by viruses (herpes simplex virus, human papilloma viruses) or Chlamydia. Third generations STDs include infections caused by HIV and hepatitis B virus. (1) Sexually transmitted diseases (STDs) constitute a major public health problem for both developing and developed countries (4), but their prevalence is higher in the developing countries where STD treatment is less accessible. STD ranks among the top five conditions for which adults seek health care. (1) The World Bank in 1993 estimated that for those aged 15-44 years, STD excluding HIV was the second most common cause of health life lost in women after maternal morbidity and mortality. (1) A STD takes its toll through its complication and sequelae such as pelvic inflammatory disease, infertility, tubal pregnancy, abortion, vertical transmission, pneumonitis and carcinoma of cervix. Moreover the presence of STDs facilitates HIV transmission. (1)

AIMS AND OBJECTIVES

(1) To study the pattern of Sexually Transmitted Diseases among patients attending Dermatology OPD. (2) To study the relation of Sexually Transmitted Diseases to age, sex and other related conditions.

MATERIALS AND METHOD

The study is a hospital-based Observational Study conducted on patients with STD attending the department of Dermatology of a tertiary care hospital in Assam between June 2014 to May 2015.

Inclusion criteria: All newly detected STD cases attending Dermatology OPD during the study period.
Exclusion criteria: STD diagnosed cases before the study period.

RESULTS AND OBSERVATIONS

The present study was carried out on 106 clinically diagnosed cases of Sexually Transmitted Diseases. Out of the total number of 22020 cases attending Dermatology OPD during the study period 106 cases had STDs. Thus, the overall incidence of STDs in the present study is 0.48%.

SEX DISTRIBUTION

Males constituted (87; 82.07%) and females constituted (19; 17.93%) in the present study. Males outnumbered females with a male to female ratio of 4.57: 1.

AGE DISTRIBUTION:

Most of the cases were seen in patients from 21-30 years of age (38; 35.85%), followed by 4th decade (29; 27.36%),5th decade (17; 16.04%) and less than 20 years age group (14; 13.21%). Cases older than 50 years constituted (8,7.55%). Most of the cases among males (31; 35.63%) and females (7; 36.84%) was found in the 21-30 years age group. Males outnumbered females in all age groups. Minimum age of patient was 14 years and maximum was 70 years.

OCCUPATION:

Most of the cases were skilled workers (21, 19.81%) followed by students and labour (17; 16.04%), businessman (15; 14.15%), housewives (13; 12.26%), drivers and defense personals (6; 5.66%), CSW (3; 2.83%). Only 3 (2.83%) cases were unemployed and office workers. 1 (0.94%) patient was cultivator. Among males skilled workers (21; 24.14%) were most common and among females (13; 68.42%) housewives were most common.

MARITAL STATUS:

In the present study, (63; 59.43%) were married and (42; 39.62%) were unmarried. 1 female was a divorcee. Among males (50; 57.47%) were married and (37; 42.53%) were unmarried. Among females (13; 68.42%) were married and (5; 26.32%) were unmarried.

SEXUAL RELATION:

Premarital sexual relation was the most common (43; 40.57%) followed by marital (37; 34.91%) and extramarital (26; 24.53%). Among males premarital sexual relation was the most common (38; 43.68%) followed by extramarital (25; 28.74%) and marital (24; 27.59%). Among females marital (13; 68.42%) was the most common followed by premarital (5; 26.32%). 1 (5.26%) of the females had extramarital sexual relation.

TYPE OF SEXUALITY:

Heterosexual (101, 95.28%) was the commonest type of sexuality, followed by bisexual (3; 2.83%) and homosexual (2; 1.89%). All the females were heterosexual. Among males (82; 94.25%) were heterosexual, (3; 3.45%) were bisexual and

(2; 2.30%) were homosexual.

TYPE OF SEXUAL ACT:
Overall vaginal act was the most common type of sexual act (104; 90.43%), followed by anal sex (8; 6.96%) and oral sex (3; 2.61%).

NUMBER OF PARTNERS:
Multiple partners was present in (63; 59.43%) and (43; 40.57%) had single partner. Among males (59; 67.82%) had multiple partners, and (28; 32.18%) had single partners. Among females (15; 78.95%) had single partners and (4; 21.05%) had multiple partners. Females had more single partners (78.95%) than males (32.18%).

USE OF BARRIER METHOD
Use of barrier method was present in (15; 14.15%) of the cases. Among males use of protection was present in (14; 16.09%) and in females (1; 5.26%). Most of the cases did not use protection (91; 85.85%); males (73; 83.91%), females (18; 94.74%) did not use any protection.

EXPOSURE WITH COMMERCIAL SEX WORKERS:
Positive history of exposure to CSWs was found in (29; 27.36%). Among males this constituted (29; 33.33%) with positive history.

PRESENTING COMPLAINS:
Ulcers (44; 47.31%) was the most common presenting complaints followed by plaque type of growth (21; 22.58%), mucopurulent discharge (14; 15.05%), itching and redness (13; 13.98%), milky white discharge (8; 8.60%), serosanginous discharges (5; 5.38%). Genital ulcers were the most common presenting complaints in both males (35; 47.30%) and females (9; 47.37%) followed by plaque type of lesions (16; 21.62%) in males and (5; 26.32%) in females.

PATTERN OF STD:
Among the diseases the most common disease was genital herpes (37; 34.26%) followed by genital warts and genital candidiasis (21; 19.44%) each, gonococcal urethritis (14; 12.96%).Syphilis, chancroid and non gonococcal urethritis (NGU) was found in 5 (4.63%) cases each.

PROPORTION OF HIVPOSITIVITY:
HIV seropositivity was found in (6; 5.66%) cases. Among males (4; 4.60%) were positive and among females (2; 10.53%) were positive for HIV. Most of the cases were negative (100; 94.34%) for HIV. Out of the 4 male patients, 1 was homosexual, 1 was bisexual and 2 were heterosexual. All of them had multiple partners. 2 of them gave history of anal sex and 2 of them had oral sex. Both the two females were CSWs by occupation. They constituted 66.7% of the whole CSWs in the present study.

DISCUSSION

INCIDENCE OF STDs:

AUTHOR (YEAR)	INCIDENCE (%)
Zamzachin et al (5)	3.30
Asokan et al (6)	0.63
Vora et at (7)	0.85
Present study	0.48

Our study results are in accordance with study of Asokan et al (6). Zamzachin et al (5) reported a higher occurrence in their study; probably this was because the study was conducted in RIMS, Imphal which is the only tertiary care centre of the state Manipur.

SEX DISTRIBUTION:

Author	Sex ratio (M:F)
Zamzachin et al (5)	8.4:1
Narayanan et al (4)	2.8:1
Jain et al (8)	5.17:1
Devi et al (9)	2:1
Choudhry et al (10)	2:1
Mehta (11)	4.55:1
Present study	4.57:1

All the study shows the incidence of STDs to be higher in Males than Females which is observed in our study also.

AGE AND SEX DISTRIBUTION:

Author	Most affected age group (years)
Zamzachin et al (5)	15-34 (72.5%)
Narayanan et al (4)	21-30
Jain et al (8)	21-30 (53.44%)
Saikia et al (12)	15-30 (64%)
Devi et al (9)	21-30 (39.3%)
Choudhry et al (10)	20-30 (62%)
Hassan et al (13)	21-40 (65.76%)
Present study	21-30 (35.85%)

In the present study, the maximum number of cases were seen in patients from 21-30 years of age (38; 35.85%) almost same with Devi et al (9).

OCCUPATIONAL STATUS:

In the present study, most of the cases were skilled workers (21, 19.81%) followed by students and labour (17; 16.4%), businessman (15; 14.15%), housewives (13; 12.26%), drivers and defense personals (6; 5.66%), CSW (3; 2.83%). Only 3 (2.83%) cases were unemployed and office workers. 1 (0.94%) patient was cultivator. Among males skilled workers (21; 24.14%) were most common and among females (13; 68.42%) housewives were most common. Jain et al (8) reported that agricultural workers (17.96%), students (15.57%) and laborers (13.55%) constituted the majority of the patients. Among females most of them were housewives. Hassan et al (13), also reported housewives were the most common followed by students, preschool children and toddlers, skilled and unskilled workers. Whereas Bhavsar et al(14) reported that maximum number of STD cases were labours (31.86%) and drivers (29.21%). But maximum number of female STD cases was housewives (83.33%). Nair et al (15) reported that skilled workers (13.2%) constituted the maximum no of cases followed by drivers and business people (9.91%) each. Pant et al(16) reported that maximum number of cases (41.8%) were skilled occupants. Whereas Nair et al (17) reported that casual laborers and skilled workers were the majority of the cases in their studies. Jayasree et al (18) also reported the occurrence of the disease to be maximum among the skilled workers. In the present study majority of the cases are skilled labours which are in accordance with the studies of Nair et al(17), Nair et al(15) Pant et al (16) and Jayasree et al (18).

MARITAL STATUS:

In the present study, 59.43% of the study group was married and 39.62% were unmarried. 1 was divorcee. Among males 50 (57.47%) were married and 37 (42.53%) were unmarried. Among females 13 (68.42%) were married and 5 (26.32%) were unmarried.

The result in the present study are in accordance with Narayanan (4),Saikia et al (12),Choudhry et al (10),Hassan et al (13),Jayasree et al (18).

NATURE OF SEXUAL RELATION:

The most common nature of sexual relation was found to be premarital in the studies conducted by Nair et al (17), Narayanan (4), Jain et al(8) and Jayasree et al (18) which are in accordance with the present study, where as Saikia et al (12) reported extramarital sexual relation to be the most common nature of sexual contact.

TYPE OF SEXUALITY:

In our study, heterosexual (101, 95.28%) was the commonest type of sexuality, followed by bisexual (3; 2.83%) and homosexual (2; 1.89%). All the females were heterosexual. Among males 82 (94.25%) were heterosexual, 3 (3.45%) were bisexual and 2 (2.30%) were homosexual. Heterosexual was the most common type of sexual act in studies by Narayana (4),Setia et al (19),Devi et al (9) , Vora et al (7) ,Hassan et al (13) as well as in the present study.

NUMBER OF PARTNERS:

In the present study, 63 (59.43%) cases had multiple partners and 43 (40.57%) had single partner. Among males 59 (67.82%) had multiple partners, and 28 (32.18%) had single partners. Among females 15 (78.95%) had single partners and 4 (4; 21.05%) had multiple partners. Females had more single partners (78.95%) than males (32.18%). Choudhry et al (10) reported that (65%) of males had multiple sexual partners and most of the females had single partner (83.3%), which is similar to the result of present study (67.82% in males), (78.95% in females). Pant et al (16) reported that 39% cases had multiple sex partners. Nayyar et al (20) reported that 35.2% had contact with multiple partners. Singh et al (21) reported that 48.3% of the males had multiple partners. It is evident from the above mentioned studies that having multiple partners are a risk factor for contracting STDs which is in accordance with the present study where most of the patients with STDs had multiple partners.

USE OF BARRIER METHOD:
In the present study, use of barrier method was present in 15 (14.15%) of the cases. Among males use of protection was present in 16.09% (14 cases) and in females 5.26% (1 case). Most of the cases did not use protection 91 (85.85%); males 73 (83.91%), females 18 (94.74%). Choudhry et al (10) reported that only 19% of the cases reported regular use of condoms in their study whereas in the present study regular use of condoms was found in 14.15% cases. Singh et al (21) reported that there was low level of condom use in their study. 86.7% of the males never used condoms with nonmarital contact. Nair et al(15) reported that 67.76% cases had unprotected sexual contact while 29.75% had at least one contact protected by the use of condom. Nayyar et al (20) reported that 37.5 % of the cases never used barrier method whereas Mishra et al(22) reported 38% cases used barrier method while having contact with non regular partners.

EXPOSURE TO CSW:
In the present study, 29 (27.36%) cases gave positive history of exposure to CSW. Among males this constituted 33.33% (29/87) with positive history. Choudhry et al (10) reported that 63.9% of the males in their study gave positive history of sexual contact with CSWs which is very high compared to the present study (33.33%). Devi et al (9) reported that unprotected sexual contact with CSWs was elicited from 69.7% of the patients whereas Nair et al(15) reported that in 43.80% of the cases source of contact was commercial sex workers. Singh et al(21) reported that 16.5% of the male patient had contact with CSW at some time in their study while Mishra et al (22) reported that 32.4 % cases had contact with CSWs in their study.

PRESENTING COMPLAINTS:
In the present study; ulcers (44; 47.31%) was the most common presenting complaints followed by plaque type of growth (21; 22.58%), mucopurulent discharge (14; 15.05%), itching and redness (13; 13.98%), milky white discharge (8; 8.60%), serosanginous discharges (5; 5.38%). Genital ulcers were the most common presenting complaints in both males (35; 47.30%) and females (9; 47.37%) followed by plaque type of lesions (16; 21.62%) in males and (5; 26.32%) in females. Narayanan (4) ,Setia et al (19) ,Vora et al (7) and Hassan et al (13) also had ulcers are the most common presentation similar to the present study.

PATTERN OF STDS:
In the present study, among the diseases the most common disease was genital herpes (37; 34.26%) followed by genital warts and genital candidiasis (21; 19.44%) each, gonococcal urethritis (14; 12.96%). Syphilis, chancroid and non gonococcal urethritis (NGU) was found in 5 (4.63%) cases each. Among males the most common presentation was genital herpes (30; 34.09%), followed by genital candidiasis (18; 20.45%), genital warts (16; 18.18%), gonococcal urethritis (14; 15.91%), chancroid (4; 4.55%), syphilis (3; 3.41%) and non gonococcal urethritis (3; 3.41%) Among females maximum cases were herpes genitalis (7; 35%), followed by genital warts (5; 25%), genital candidiasis (3; 15%). Syphilis and NGU was found in 2 (10%) cases each. Herpes genitalis was found to be the most common disease in Narayanan (4), Jain et al (8), Choudhry et al (10), Vora et al (7), Mehta (11), which is in accordance with most of the studies mentioned above.

PROPORTION OF HIV:
In the present study, a total of 6 (5.66%) was positive for HIV. Among males 4 (4.60%) were positive and among females 2 (10.53%) were positive for HIV. 100 (94.34%) were negative for HIV.

HIV seropositivity was found to be different in different studies and ranged from 34.7% to 1.63% in Zamzachin et al (5) (8.12%)Narayanan (4) 7.1%, Saikia et al (12) 17.2% , Devi et al (9) (34.7%), Choudhry et al (10) 10.3%, Setia et al (19) 28.8%,Vora et al (7)2.48%, Mehta (11)12% , Hassan et al (13) 1.63%.

CONCLUSION
It has been observed in the present study that the incidence of STDs is more in themales than in females and it much more common in the age group of 21-30 years which are sexually active age. The incidence of bacterial STDs is less than the viral STDs which may be becuase of over the counter antibiotic therapy. Barrier contraceptive reduces the chance of transmission of STDs.

Conflict of interest: Nil.

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