A Case Control Study of STD Patients attending STD clinic in Tartary Care Hospital, Latur, Maharashtra

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Research Article

Abstract: **Introduction:** Sexually transmitted disease (STD) remains a public health problem of major significance in most parts of the world and South East Asia is believed to be high in many countries, although precise magnitude of problem is still not clear. STD also account for massive expenditure, both in terms of cost of providing care and in terms of the economic burden due to workdays lost as a result of associated morbidity. **Materials and Methods:** Present case control study was conducted in STD clinic has been in operation since 2002 at GMC Hospital, Latur. Total 106 cases were selected. Controls were selected with 1:1 proportion. A details pretested and prestructured proforma was used. **Results:** most of the cases were male in the present study. 70.37% cases were married where as 83.33% controls were married. The proportion of current alcoholic was 41.66% among STD cases as compared to be statistically significant. It was also observed that 68.52% of STD cases had involved in premarital sexual act whereas only 12.04% of control had the same. 77.22% of STD Patients had extramarital sexual contact as compared to 8.89% in controls. Whereas 79.63% patients in cases had the sexual act with non-regular partner whereas in controls only 9.68% in control had non-regular partner. **Conclusion:** STDs are more common in young males. And Alcohol intake, premarital sexual act, extramarital sexual act and Sexual act with non-regular partner were the risk factors associated with STDs.

Keywords: Sexually transmitted disease, Human Immunodeficiency Virus.

Introduction

Every citizen has right to live his sexual life provided that he should live disease free as well as aware of social responsibility[1] Sexually transmitted disease (STD) remains a public health problem of major significance in most parts of the world and South East Asia is believed to be high in many countries, although precise magnitude of problem is still not clear. STD also account for massive expenditure, both in terms of cost of providing care and in terms of the economic burden due to workdays lost as a result of associated morbidity. The epidemic of human immunodeficiency virus (HIV) which causes AIDS has now brought the control of STD into a shaper focus, particularly because it is now well established that sexually transmitted infections especially those which cause ulcer, greatly increase the risk of HIV transmission[1] HIV/AIDS has become the most serious public health problem for India with one of the highest rates of spread in the world. Presence of infection everywhere highlights spread from urban to rural areas, from high-risk to the general population and from permissive to conservative societies[2] Migration of labour, low literacy levels, gender disparities and prevalent RTI/STI's have significantly contributed to its fast spread[30] The sexually transmitted diseases are a leading cause of morbidity and mortality worldwide in South East Asian region[1] The term sexually transmitted diseases are used for all infections that are transmitted predominantly through sexual contact during unprotected vaginal, anal or oral intercourse. Some are also transmitted from mother to child before or during birth & through unsafe blood, blood products, donated organs or tissue & contaminated needles[3] STDs have been classified as behavioural diseases, no one get it accidentally, and it results from a deliberate act. The sex act can be considered as the outcome of individual behavior pattern. If control and prevention of these diseases are to be affected, it is necessary to bring about a change in human behavior. As STD/HIV affects the productive population. STD linked morbidity is responsible for the economic loss in the community. Social factors and risk behavior plays an important role in spread of STDs[4]. One of the National Socio-Demographic goal for 2010 is to contain the spread of Acquired Immunodeficiency Syndrome (AIDS) and promote greater integration between the management of reproductive tract infections (RTI) and sexually transmitted infections (STI) and the National AIDS Control Organization[5]. HIV infection and STDs are associated with the same risk factors. According to National AIDS Control Organization, predominant mode of transmission of HIV infection is through heterosexual contact (74.7%) More than 95% newly HIV infected people are living in developing world[3]. Maharashtra State AIDS Control Society has implemented programmes to contrl HIV/AIDS in 33 districts. In this programme, 45

STI clinics have established in state. In each district voluntary counseling & testing and PPTCT (Prevention of Parents To Child Transmission) centers have been in operation[6].

STD clinic is working in Nanded since 1988 in Civil Hospital. Nearly 220 patients are visiting annually to STD clinic in Nanded. Incidence of STDs changes widely from place to place and clinical pattern of disease has been also changing worldwide. Trends in STD incidence and prevalence can be use as indicator of change in sexual behavior. Such trends are used to determine impact of control programme[3]. The prevention and control of STDs has been recognized as one of the major strategy to control the spread of HIV/AIDS. Most of the risk factors for STDs/HIV are similar. STD patients serve as early warning symptoms of HIV transmission[7]. The failure to control the spread of STD & HIV, despite the best knowledge of diagnostic and therapeutic measure is due to unfortunately ignorance of social and psychological aspect of human behaviour[8]. New behavioural studies in India suggest that, prevention efforts directed at specific population are paying dividends in some states. In India only four out of ten married women and only 18% of illiterate women have heard about AIDS[9]. Despite the rapid spread of HIV, the national response has been inadequate. It is breaking taboos about discussing sex and raising questions about human rights and health care. Most of the HIV positive individuals do not know about their HIV status. Creating a support network where people volunteer for a test and provided counseling and psychological support is a crucial responsibility. Information on HIV/AIDS improves knowledge and brings a change in attitude. This subsequently leads to behavior change[10] There is no single study, in this regard carried out at Government Medical College & SGGSM Hospital Nanded. Hence present study was designed.

Aims and Objectives

1. To study sexual behavior patterns among STD cases and compare it with controls.

Material and Methods

The STD clinic has been in operation since 2002 at GMC Hospital, Latur. All patients visiting to STD clinic with evidence of sexually transmitted disease clinically have been tested for VDRL, HIV, & other necessary investigations. Male and female medical officer each mans the STD clinic. Trained counselor does counseling of patients. The patients & their relatives have been counseled about STDs & AIDS. The Government Medical College is well equipped with voluntary counseling & testing center March 2012. The study was approved by Ethical Committee of Government Medical College, Latur. The study was carried out in skin and STD clinic of Government Medical College & Hospital, Latur during Jan 2013 to July 2013.

Study design- A case control study

Study place- STD clinic and skin OPD of Government Medical College & Hospital, Latur Selection of cases-

All new cases of STDs were defined according to guidelines given by National AIDS Control Organization as per syndromic approach.

Patients will be considered as a case of STD having at least one of the following signs-

Inclusion Criteria

i. Urethral discharge
ii. Vaginal discharge
iii. Genital ulcer
iv. Inguinal swelling
v. Lower abdominal pain
vi. Scrotal swelling
vii. Opthalmia neonatarum

Exclusion Criteria

- Injury to scrotum
- Testis rotated or retracted
- Missed /overdue period, vaginal bleeding
- Recent delivery / abortion or
- Rebound tenderness or
- Guarding
- Pelvic mass

Statistical Tests like Chi Square Test, Odds ratio, Fisher's Exact Test,

Statistical Analysis:

Chi- Square Test (χ^2 test), Odds Ratio, Fisher's Exact Test were used for the analysis.

Results

Table 1: Age and sex distribution of study subjects

Age (Years)	Cases		Controls		Total (%)
	Male (%)	Female (%)	Male (%)	Female (%)	
15-19	04 (04.82)	02 (08.00)	04 (4.82)	03 (12.00)	13 (06.02)
20-24	16 (19.28)	07 (28.00)	18 (21.69)	07 (28.00)	48 (22.22)
25-29	21 (25.30)	07 (28.00)	21 (25.30)	06 (24.00)	55 (25.46)
30-34	19(22.89)	05 (20.00)	20 (24.10)	05 (20.00)	49 (22.69)
35-39	15 (18.07)	03 (12.00)	12 (14.45)	03 (12.00)	33 (15.28)
40-44	06 (07.23)	01 (04.00)	06 (07.23)	01 (04.00)	14 (06.48)
45-49	02 (02.41)	00 (00.00)	02 (02.41)	00 (00.00)	04 (01.85)
Total	**83 (100)**	**25 (100)**	**83 (100)**	**25 (100)**	**216 (100)**

Table No.1 Shows that 75% of cases were in the age group of 15-34 years of age. Male patients were 76.85% whereas female patients were 23.15%.

Table 2: Distribution of Social factors in cases and controls

Factors		**Cases (%)**	**Controls (%)**	
Religion	Hinduism	65 (60.18)	59 (54.63)	χ^2 =3.31 d.f.3 p=0.34
	Islam	13 (12.03)	20 (18.52)	
	Buddhism	29 (26.85)	29 (26.85)	
	Others	01 (00.93)	00 (00.00)	
Occupation	Skilled	43 (39.82)	17 (15.74)	χ^2=16.24 d.f.3 p<0.01
	Semiskilled	10 (09.25)	12 (11.11)	
	Unskilled	30 (27.78)	49 (45.37)	
	Unemployed	25 (23.15)	30 (27.78)	
Literacy Status	Illiterate	29 (26.85)	15 (13.89)	OR-2.27(95% CI 1.14-4.54) p<0.05
	Literate	79 (73.15)	93 (86.11)	
Marital Status	Married	76 (70.37)	90 (83.33)	χ^2=7.46 d.f2 p<0.05
	Unmarried	22 (20.37)	16 (14.81)	
	Others	10 (09.26)	02 (01.86)	

Maximum numbers of study subjects (57.41%) were having religion Hinduism and 15.28 having Islam. Table no 2 Sows those having skilled occupation have 39.82% in cases and only 15.74% in controls. The maximum number of illiterate subjects in cases, 26.85% whereas only 13.89% in controls. The difference found was statistically significant. In marital status others include 03 separated, 03 windowed and 4 divorced in cases and 2 widowed in controls. Total 76.85% of married subjects among which 70.37% were from cases and 83.33% from controls.

Table 3: Distribution of cases and controls according to high risk behaviors:

Alcohol intake	Current Alcoholic	45 (41.66)	19 (17.59)	χ^2=18.32 d.f.2 p<0.01
	Ex-Alcoholic	08 (07.41)	04 (03.70)	
	Non-alcoholic	55 (50.93)	85 (78.71)	
Premarital sexual act	Yes	74 (68.52)	13 (12.04)	OR= 15.90, (95% CI 7.45 - 34.53) χ^2 Yates' corrected=69.29 p<0.01
	No	34 (31.48)	95 (87.96)	
Extramarital sexual act	Yes	61 (77.22)	08 (08.89)	OR=34.74 (95%CI 13.16-95.23) χ^2 with Yates' correction= 78.49 p <0.001
	No	18 (22.78)	82 (91.11)	
Sexual act with non-regular partner	Yes	86 (79.63)	09 (09.68)	χ^2 Yates' correction=95.32 p<0.01
	No	22 (20.37)	84 (90.32)	

The proportion of current alcoholic was 41.66% among STD cases as compared to be statistically significant. It was also observed that 68.52% of STD cases had involved in premarital sexual act whereas only 12.04% of control had the same. 77.22% of STD Patients had extramarital sexual contact as compared to 8.89% in controls. Whereas 79.63% patients in cases had the sexual act with non-regular partner whereas in controls only 9.68% in control had non-regular partner.

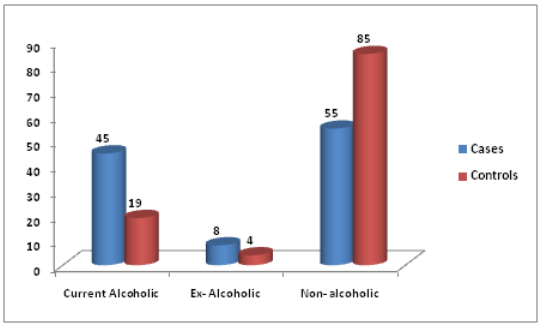

Figure 1: Alcohol consumption and study subjects

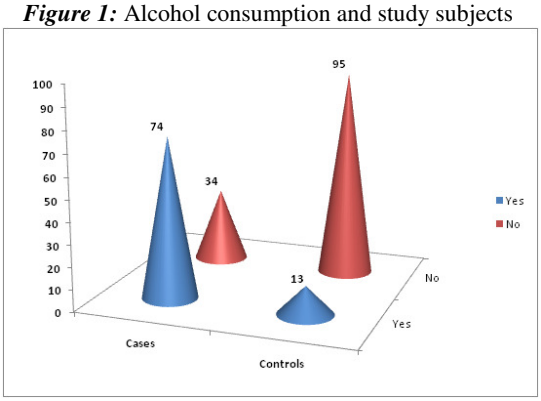

Figure 2: Premarital sexual act involvement of study subjects

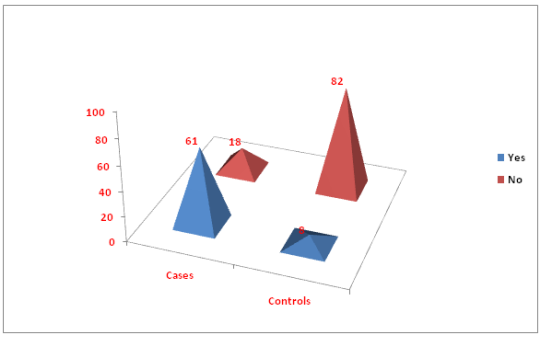

Figure 3: Extramarital sexual act involvement of study subjects

Discussion

It was observed that 75% of cases were in the age group of 15-34 years of age**.** Similar findings were observed by Raj Narayan, Deepak Mathur, Rishi Bhargava et al[11] in their study. Male patients were in the present study were 76.85% whereas female patients were 23.15%. S M Mehandale, Mary E Shepherd, A D Divekar et al[12] (1996) in their study observed that 84.4% STD patients were male and 15.0% were female. In the present study it was observed that most of the patients in case group were skilled as compare to control group. But D chaubey, A K Sharma, R K Singh[13] found that maximum STD patients (63.1%) were from unskilled and semiskilled occupation as compared to controls. A S Rathore[14] showed that maximum HIV sufferers (41.1%) were transport workers, i.e. taxi driver, truck driver. Followed by unskilled labour 31%. The students contribute 10% of cases. M Mishra, S Mishra, P C Singh et al[14] (1998) most of STD patients were working in industrial areas as labourters, rickshw pullers and industrial workers. In the present study it was seen that proportion of literacy in case group was more than control group. But D Chaubey et al[13] found that the proportion of STD patients educated up to secondary level or low, higher was lower (46.6%) as compared to controls (66%). H A Cossa, S Gloyd, R G Vaz et al[16] found that 55% of the study subjects had no any formal education. Kagoma S Mnyika, Knut-Inge Kleep Gunnar Kvale[17] et al (1994) found that 11.7% subjects had no format education 80.8% were educated up to primary level and 7.5% upto secondary or higher level. The proportion of married patients in case group was much less than control group. Thus we can say that prevalence of STD is less in married individuals and marriage decreases the high risk behavior. Similar findings were also seen by N C Bhargava, O P Singh, N Lal[18] who found that 52.3% were unmarried, 47.7% were married. Uday Khopkar, Sujata Raj, Ashish Sukthankar et al [19] showed that only 10% of STD patients were married. It was observed that addiction of alcohol in cases was 41.66% whereas 17.59% were from control group. D Chaubey, A K Sharma, R K Singh[13] observed that a significant association between alcohol consumption and STDs. Kootikuppala Surya Rao, R D Pilli, A S Rao, P S Chalam [20] found that 47% of study subjects consume alcohol daily. Nair T V et al21 found that 60% of STD patients were in the habit of taking alcohol. While studding the association of between premarital sexual act and STD, it was observed that cases shown more number of individuals involved in premarital sexual act. N C Bhargava, O P Singh, N Lal[18] shown that 52.3% patients of venereal diseases were in premarital sexual act. D Chaubey, A k Sharma, R K Singh[13] observed that premarital sexual contacts were significantly higher in STD patients (74.7%) as compared to controls (35%) In the present study it was observed that extra marital affairs were more in case as compared to control group and the difference was also significant. D Chaubey, A K Sharma, R K Singh[13] observed that extramarital sexual contacts were significantly higher in STD patients (87.5%) as compared to controls (20.5%). Raj Narayan, Deepak Mathur, Rishi Bhargava et al[11] also reported 71.5% patients had extramarital relation in their study. The proportion of Sexual act with non-regular partner partner was significantly more in control group. And similar findings were observed by M Colvin, B Sharp[22] who found that 11.6% of women and 38.0% of men had sex with non-regular partner.

Conclusion

Thus in the end we can conclude that STD wre common in young male and in unmarried individuals. Alcohol intake, premarital sexual act, extramarital sexual act and Sexual act with non-regular partner were the risk factors associated with STDs.

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