SEXUALLY TRANSMITTED DISEASE: A CLINICAL PSYCHOLOGICAL PROFILE

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Abstract

A clinical-psychological study of 400 consecutive patients with sexually transmitted disease (STD) was undertaken at 151 BH and MH Meerut during 1991-95. Majority of the STD patients were aged 34 years or less (90.25%), belonged to other ranks (68%), hailed from rural areas (90.75%), were Hindus (83.50%), were married (72.50%). Uncontrollable sexual urge was the reason for exposure in majority (69.25%) of the cases. Commonest source of STD was commercial sex workers (CSW) (72.80%). At the time of exposure 58.50% patients were at their place of work (on out-pass) and 11.75% had consumed alcohol. Commonest STDs were Chancroid (30.50%), Syphilis (19.50%) and LGV (10.80%). A delay of more than one month from the onset of symptoms to reporting for treatment was observed in 18.50% patients, while 24.25% patients had taken treatment from unauthorised sources. A past history of STD was given by 8.80% of patients. Majority (57.75%) of the STD patients had inadequate knowledge of STD and only 6.75% had used a condom during exposure. Mean scores of STD patients on Maudsley personality inventory were: Neuroticism-37.98 and extroversion-46.03. The General Health questionnaire identified 19.75% patients as probable psychiatric cases. On clinical evaluation, psychiatric disorders were present in 5.75% of patients.

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KEY WORDS: Health education; Psychiatric disorders; Sexually transmitted disease.

Introduction

Sexually Transmitted Disease (STD) though a common communicable disease, have also been classified as "behavioural disease" and regarded as totally preventable through control of sexual promiscuity. However, despite the institution of health education and other preventive measures, STD continues to be a major public health problem and the third most frequent infectious disease after malaria and tuberculosis in India [1]. In addition to its morbidity in the Armed Forces, STDs lead to considerable loss of man-hours due to in-patient treatment and follow-up of all cases. A study of the psychological variables associated with risk of STD is therefore needed to suggest preventive measures. Psychological sequelae to STD exposure are poorly understood, frequently unrecognised and inadequately managed, despite being among the most common conditions encountered in STD practice. A few studies reported that 20-40% of patients attending STD clinics are classified as psychiatric cases [2,3]. On the other hand some studies reported very low levels of less than 5% psychiatric morbidity in STD patients [4,5]. Some of these studies had important methodological shortcomings like including all patients attending the STD clinic rather

than patients diagnosed to have STDs and identifying psychiatric cases only on the basis of screening tests which tend to overestimate the prevalence of psychiatric disorders. In view of the methodological shortcomings of the earlier studies and the conflicting results, the present work was undertaken.

Material and Methods

The study was carried out at 151 BH and MH Meerut during the period Jun 91 and Sep 95. The patient sample consisted of 400 consecutive in-patients with confirmed diagnosis of STD. The diagnosis of STD was based on history, clinical examination and relevant laboratory investigations. VDRL test and ELISA for HIV antibodies were done in all cases. Dark ground illumination (DGI) test was carried out for all genital ulcers and repeated for 3 days if initially negative. Further investigations were carried out based on clinical suspicion. After their acute symptoms had abated and the initial treatment was completed, the patients underwent a semistructured interview which included, apart from enquiry covering demographic information, questions on sexual development and experiences, current sexual behaviour and practice, and knowledge about preventive measures for STD and AIDS. All subjects were administered the following psychological tests:

1. Hindi version of Eysenck's Maudsley Personality Inventory (MPI) [6]. This is a brief but standard as well as an easily administered and scored inventory designed for assessing neuroticism-stability and introversion-extroversion dimensions of personality. It is suitable for normal and abnormal individuals aged 15 years and above. Raw scores obtained by the subjects are converted to standard scores given in the booklet. A standard score of 50 is equal to

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the average. A standard score of 70 or 30 needs attention, while a standard score above 70 or below 30 indicates considerable deviation.

2. The General Health Questionnaire (GHQ). This is a standard self-rated questionnaire for identifying psychiatric cases. Each question has four possible responses. The respondent is requested to underline the response which best fits how they felt recently. The 30 item version was used on which a score of 5 discriminates most accurately between "cases" and "non cases" [7,8]. The GHQ was designed for use in community settings, primary care, and in general medical outpatients.

Patients identified as "cases" by GHQ underwent diagnostic psychiatric evaluation. Psychiatric diagnosis were made following DSM III R criteria [9].

Results

(a) Age, domicile and education: Mean age of the patients was 27.93 years (range: 18 to 50 years). Majority (over 90%) of the STD patients were 34 years or less, hailed from rural areas and educated upto class 10 or less (Table 1).

TABLE 1
Age, domicile and education level of STD patients

Characteristic	No.	Percentage
Age distribution (in years)		
15-19	13	3.25
20-24	84	21.00
25-29	183	45.75
30-34	81	20.25
35-39	26	6.25
40-44	8	2.00
45-49	4	1.00
50-54	1	0.25
Domicile		
Rural	363	90.75
Urban	37	9.25
Education		
0-5	37	9.25
6-10	327	81.75
11+	36	9.00

(b) Rank and religion-wise distribution: Majority of patients were sepoys (66.75%) and Hindus (83.5%). Similar trend was reported by Ganguly et al [10] (Table 2).

(c) Marital status (Table 2): Majority of cases (72.5%) were married which is contrary to the findings of some earlier studies [10,11] but is in agreement with one study [12].

(d) Reasons for extra-marital sex, inducement for first pre/extra-marital sex, probable source of STD and probable place of contracting STD is given in Table 2.

(e) Sexual orientation: The majority were heterosexual (388;97%), 11(2.75%) patients admitted to bisexuality while 1 (0.25%) patient admitted to bisexuality and zoophilia.

(f) Number of pre-/extra-marital sex exposures: 207 (51.75%) patients admitted to more than one pre-/extra-marital sex exposure, 158 (39.5%) admitted to only one exposure, while 35 (8.75%) patients denied such exposure.

(g) Alcohol and exposure to pre-/extra-marital sex: 47 (11.75%) had consumed alcohol before pre-/extra-marital sex compared to

TABLE 2
Characteristics of STD patients of present study and an earlier study

Characteristic	Present study		Ganguly et al ¹⁰	
	No	%	No	%
Rank distribution				
Rect	5	1.25	Nil	Nil
Sep	267	66.75	113	74.36
L/Nk	64	16.00	13	8.55
Nk	47	11.75	15	9.86
Hav	14	3.50	10	6.58
JCO	3	0.75	Nil	Nil
Offr	Nil	Nil	1	0.65
Religion				
Hindu	334	83.50	120	78.96
Sikh	24	6.00	22	14.48
Christian	24	6.00	5	3.28
Muslim	7	1.75	4	2.63
Others	11	2.75	1	0.65
Marital status				
Married	290	72.5	64	42.11
Unmarried	110	27.5	87	57.23
Widower	Nil	Nil	1	0.66
Reason for extra-marital sex				
Uncontrollable urge	247	61.75	99	63.13
Curiosity	109	27.25	43	28.28
To prove manhood	9	2.25	3	1.97
Denied	35	8.75	7	4.62
Inducement to first extramarital sex				
Self	277	69.25	114	75.00
Peer group	45	11.25	14	9.21
Sexual partner	43	10.75	17	11.18
Probable source of STD				
Professional sex worker	291	72.80	66	43.43
Amateur	74	18.50	47	30.92
Marital	17	4.30	Nil	Nil
Denies history of exposure within last 3 months	18	4.50	39	25.65
Probable place of contracting STD				
Unit location (on out pass)	234	58.50	33	21.71
During journey/temporary duty	83	20.75	43	28.28
Native place (during leave)	65	16.25	76	50.00

8.56% in an earlier study [10].

(h) Time of reporting for treatment after onset of symptoms: Maximum patients (184;46%) reported for treatment within 7 days of onset of symptoms, while 142 (35.50%) reported after a week but within a month. however, a substantial number (74;18.50%) reported for treatment more than a month after of onset of symptoms.

(i) Treatment taken from unauthorised sources: Nearly a quarter of the patients (97;24.25%) had resorted to treatment from unauthorised sources before reporting sick compared to 32.24% in an earlier study [10].

(j) Pattern of STDs: The pattern of STDs in the present study along with comparative figures from five earlier studies on army population and civilian population are shown in Table 3.

(k) Past history of STD: A surprisingly large number of patients (35;8.75%) gave a past history of STD. However, in 11

TABLE 3
Pattern of STD in some Indian studies

Study location	Study period	Chancroid	Syphilis	LGV	Gonorrhea	Veneral warts	NSU	Herpes progenitalis	Candidiasis	HIV	Other	Total
MH Pune (6)	1962	52 (52)	27 (27)	8 (8)	5 (5)	2 (2)	2 (2)	—	—	—	4 (4)	100 (100)
Armed Forces Hospitals (7)	1971-72	12074 (38.9)	6769 (21.8)	3598 (11.5)	4027 (13.2)	—	862 (2.8)	—	—	—	3632 (11.8)	30962 (100)
Armed Forces Hospitals (8)	1981-84	4692 (35.8)	2285 (17.4)	1813 (13.8)	1659 (12.6)	596 (4.5)	379 (2.9)	269 (2.1)	—	—	1426 (10.9)	13 119 (100)
BH Delhi Cantt (8)	1981-84	162 (36.3)	66 (14.8)	69 (15.5)	62 (13.9)	44 (9.9)	18 (4)	15 (3.4)	—	—	10 (2.8)	446 (100)
BH Delhi Cantt (9)	1985-90	345 (42.5)	104 (12.8)	106 (13.1)	85 (10.5)	62 (7.6)	31 (3.8)	37 (4.6)	18 (2.2)	01 (0.1)	22 (2.7)	811 (100)
MH Madras (IPKF) (10)	1988-89	45 (29.6)	19 (12.8)	11 (7.2)	25 (16.5)	19 (12.5)	7 (4.6)	7 (4.6)	5 (3.3)	—	14 (9.2)	152 (100)
151 BH and MH Meerut (Present study)	1991-94	123 (30.8)	78 (19.5)	43 (10.8)	30 (7.5)	31 (7.8)	19 (4.8)	18 (4.5)	24 (6.0)	4 (1.0)	30 (7.5)	400 (100)
MMC, Madras (16)	1973	976 (20.4)	2216 (46.3)	347 (7.2)	1070 (22.4)	—	—	—	—	—	179 (3.7)	4788 (100)
VDTC, New Delhi (16)	1973	296 (29.0)	413 (40.4)	24 (2.4)	287 (28.1)	—	—	—	—	—	2 (0.2)	1022 (100)
PGIMER Chandigarh (17)	1977-85	133 (12.2)	113 (10.4)	7 (0.6)	184 (16.9)	234 (21.4)	45 (4.1)	124 (11.4)	30 (2.7)	—	219 (20.1)	1089 (100)
RGK Medical College Calcutta (11)	1984-93	2454 (14.9)	1307 (8.0)	213 (1.3)	305 (1.9)	—	801 (4.9)	—	—	—	11360 (69.1)	16440 (100)
SKB Medical College Cuttack (12)	1993-94	61 (11.8)	84 (16.3)	3 (0.6)	20 (3.9)	31 (6.0)	73 (14.2)	113 (21.9)	—	3 (0.6)	128 (24.8)	516 (100)

Figures in parenthesis indicate percentages.

(2.75%) of these patients during the earlier episode of STD treatment had been taken from unauthorised sources (civil sources/MI Room).

(l) Knowledge of preventing STD/AIDS by use of condom: a large number of subjects (167;42.25%) were aware of the protective effects of condom. The main source of information was advertisements in the media/MI Room/Recreation room. One of the patients mentioned about health education lectures. However, only 27 (6.75%) patients had actually used a condom during exposure.

(m) Scores on MPI were as follows:- Neuroticism: mean score 37.98 (range:29-67). Extraversion: mean score 46.03 (range:31-57). By the GHQ 79 (19.75%) STD patients were identified as "psychiatric cases".

(n) Concomitant disorders in the STD patients are given in Table 4. The patient with schizophrenia was under treatment in psychiatry ward and later was found to have STD. The onset of the adjustment disorders, anxiety disorders, venerophobia and impotence were after occurrence of STD.

Discussion

STDs have been known to exist from time immemorial. Presently they form one of the major health problems throughout the world. The pattern of STDs varies from country to country, and from one region to another in the same country. Published reports of prevalence of STDs in India are usually regional and institution based for want of a comprehensive epidemiological survey. However, figures from Armed Forces personnel who hail from and serve in

TABLE 4
Concomitant disorders in STD patients

Disorder	No.	Percentage
Schizophrenia	1	0.25
Alcohol Dependence	2	0.50
Alcohol abuse	5	1.25
* Anxiety disorder	2	0.50
* Adjustment disorder	5	1.25
* Venerophobia	2	0.50
Premature ejaculation	3	0.75
* Impotence	3	0.75
Inguinal hernia	1	0.25
Low backache	1	0.25
Primary infertility	1	0.25

* Onset following STD

different regions of the country are probably more representative of the country. Review of the studies on Armed Forces personnel and civil population over the past 30 years (Table 3) show some interesting trends.

Chancroid was found to be the commonest STD in the present study as well as previous reports from Armed Forces. This is in contrast to reports from civil institutions where the incidence of chancroid is much less, ranging 5.9% to 28.4% [11,12, 16-20]. Syphilis

was the next commonest STD in our study. Its incidence in the Armed Forces after showing a declining trend has risen again (Table 3). Among syphilis cases, early syphilis (primary, secondary and early latent) constituted the bulk (79.5%) of the cases. LGV with 10.8% incidence was the third common STD. Its incidence has shown marginal change from 11.5% in 1971-72 to 15.5% in 1981-84 and 13.1% in 1985-90. The incidence of gonorrhoea on the other hand has shown a declining trend in the present study. Other STDs like condyloma acuminata, non-specific urethritis and herpes genitalis have shown an increase over the years. A similar trend is obvious in chlamydial and viral STDs. Lastly, HIV infection is gradually increasing (1% in present study) and is likely to increase further.

The findings of the present study suggest the necessity of inculcating healthy sexual behaviour and practice of self-control during uncontrollable sexual urge which was the commonest reason for pre-/extra marital sex mentioned by the patients (Table 2). In this regard the maintenance of good morale and provision of adequate social and recreational facilities have always been considered vital to reducing STD rates. The findings of present study also lay importance on right selection of friends/peer group who do not provoke towards pre/extra marital sex and on avoiding contact with CSWs who were the major source of infection (Table 2).

More than half (58.5%) the patients in the present study acquired STD at unit location while on outpass, although such permission specifically excludes visit to prohibited red-light areas which are invariably placed "out of bounds". Acquiring STD from CSWs residing in such prohibited areas indicates non-compliance with orders. There is an obvious need for more strict implementation of existing orders including surprise checks by the Military Police against their violation.

Education has always been considered an important part of STD control. The finding that 18.5% patients reported for treatment more than a month after the onset of symptoms, 24.5% patients took treatment from unauthorised sources and only 42.5% patients were aware of the protective effects of condom emphasizes the urgent need to impart health education aimed at having right attitude to sexual behaviour and STDs to our troops.

Attempts to identify the characteristics of servicemen prone to acquire STDs were carried out during World War II [21] and again during the Vietnam war [22,23]. The stereotypical picture of the military pa-

tient with an STD which emerged is that of a young, low ranking, poorly educated single male who tends to abuse alcohol and get into legal problems, and who usually has had more than one episode of STD. Though there are a few similarities with our patients (Table 1 and 2), there are many similarities between such patients and subgroups seen in civilian STD clinics [24]. However, a study of 444 Australian soldiers in Vietnam found neither a predominant personality type nor any great difference between subjects with STD and disease free subjects in a control group [25]. In agreement with the foregoing, the present study found that the vast majority of STD patients obtained scores on the MPI which were within the normal range for both neuroticism and extraversion dimension of personality. Hart [25] downplays such stereotypical characteristics of military patients with STD and believes that frequent intercourse by servicemen with a highly infected CSW population results in the high incidence of STD. In addition the environmental stresses of war and immigration produce behaviour patterns which many would not otherwise experience and result in increased prevalence of STDs [26]. It is pertinent to mention here that despite the absence of war many of our troops are actively engaged in so-called 'low intensity operations' for prolonged periods which may contribute to their promiscuity.

The psychiatric morbidity in STD patients in the present study was 5.75% which is not in agreement with some earlier studies [2-3].

The incidence of 20-44% psychiatric morbidity in STD patients in some studies was probably due to the use of only a screening device to determine psychiatric morbidity (2.27) and assessing the STD patients soon after diagnosis of STD [3]. In fact in the present study too the GHQ detected 19.75% psychiatric cases. Recent studies note that the anxiety caused by the presenting problem was probably the cause of such high figures, since less than 5% had a sufficiently abnormal level of distress to justify calling it psychopathological [4,5]. The low level of psychiatric morbidity in STD patients in the present study are in agreement with the latter studies [4,5].

At present, despite preventive measures STD continues to be a major health problem in India and the Armed Forces. Due to the availability of effective medical treatment, STDs were considered treatable and not a threatening disease. The emergence of HIV infection has totally changed the scenario and once again STDs have become a dreaded disease. Heterosexual intercourse is the major route of transmission of HIV infection in India. Various studies have suggested

that STDs, particularly those which cause genital ulceration can facilitate or are associated with the transmission of HIV infection. In the absence of any specific curative treatment for HIV infection, behavioural intervention directed towards high risk groups (promiscuous individuals) which may reduce the transmission of STDs (including HIV infection) is the only practical strategy to combat this menace. Energetic and continuing health education, adequate provision of alternative recreational outlets, combined with determined effort on the part of authorities to implement existing orders will help in bringing down the incidence of STDs.

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