Pattern of Sexually Transmitted Diseases at Nepalganj

(A Clinico-Epidemiological Study)

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Summary

200 (9.2%) patients were found to suffer from Sexually Transmitted Diseases (STD) out of 2183 new patients registered in Skin Out-patients Department of Bheri Zonal Hospital, Nepalganj during the period between Ashwin-Chaitra, 2040. The STD rate was approximately 2 per 100 in ratio of general patients attending the hospital. Gonorrhoea was found to be the commonest amongst major STDs. Chancroid and syphilis were subsequently the next in the series. Among minor STDs, non-gonococcal urethritis was recorded in majority. Sterility was detected in 16% of couples, in which 7(21.9%) patients suffered from gonorrhoea, 6(18.8%) from Candidiasis and 2(6.3%) from Trichomoniasis of urogenital tract. No age, sex or race was bar for STD. Younger age groups and student population were more affected. One exposure was enough to give 3 major STDs at a time. Educated people were more active than illiterates. Prostitutes were less important.

The sexually transmitted diseases were known from the ancient times and remained mystery throughout the world in spite of advancing efforts to resolve. Till eighteenth century, gonorrhoea and syphilis were inseparable when Bell of Edinburgh (1793) recognized them to be different entities caused by two different organisms. McLoad (1882) described Donovanosis at Madras and Donovan (1905) described its causative organism. *Streptobacillus* causing soft chancre first isolated by Ducrey (1889) were then called *Haemophilus Ducreyi*. However by the end of 19th century, most of the major diseases transmitted through sexual intercourse were recognized.

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The statistical data shows that they are on the increase everywhere. The world Health Organisation places STD as third amongst disease in India next only to malaria and pulmonary tuberculosis.¹ The measures to control STD has failed throughout the world which is attributed mainly to rapid environmental, social and behavioural changes.² Among the reasons for failure or otherwise increase in new cases are multi-factorial, e.g.- increase in world population, their migration, rapid industrialization, increase in promiscuity, low socio-economic status, lack of morals, discipline and knowledge and extra freedom and modernisation. Besides the women remain the reservoir of infection and 95% of them harbour asymptomatic diseases. Further high infectivity of these diseases enhance rapid spread. Moreover the availability of sexy literatures and movies in addition to the free availability of contraceptive devices and drugs after the nationalisation of Family Planning programme have absolutely abolished the fear of pregnancy and Venereal Diseases (VD). Prophylactic use of antibiotics and their inadequate therapeutic dosage and poor follow-up, quack practices, etc. being widespread in the country has led to drug-resistant and complicated forms, thus playing an important role in the epidemiology of STD. On the other hand, social barriers in VD control still hold sound in rural sectors of the country, 'such as the V.D. is a visitation from God's sign of growing adolescence, 'a sign of maturity' or 'the result of sexual intercourse with a menstruating woman' etc.

The prostitutes are no more the source of STD transmission rather they seem to be replaced by 'good time girls' coming up in the society with the growing standard of time. W.H.O. (1977)³ reported young people of 15 to 19 years old age group to be more active in disease transmission. They were referred to be 'the most vulnerable group of society'.

Bheri Zonal Hospital at Nepalganj is the main referral centre for more than 20 years covering a wide range of patients from Bheri, Rapti, Karnali, Seti and Mahakali zones. The present study reports STD patients from certain areas of various districts, e.g. Chhinchho, Babai, Chisapani, Agaiya, Patukhola, Bagar, Lembi, Tulsipur, Salyan, Chaurjhari, Jumla, Rajapur, Mahendranagar, Dhangadhi etc. coming for treatment to Nepalganj. The occasional visitors from certain areas of Biratnagar, Janakpur, Pokhara, Bhairahwa and Kathmandu and some from foreign countries were also found to suffer from major STD borrowed from these areas. It is understood that some tribal source is active in some of these areas which is migratory from hills to terai at seasons as a part of profession resulting into the outbreaks of STDs in those area.

MATERIALS AND METHODS

The patients attending V.D. Clinic of Skin Out-patients Department of Bheri Zonal Hospital, Nepalganj were the main source of present study. 200 patients suffering from sexually transmitted diseases (Table-1) were selected for study based on clinico-microbiological examination.

The materials were obtained directly from discharge from urethra in males and cervix and urethra in females in all suspected urethritis cases. The anterior urethral massage and prostatic massage were employed for sampling in cases of chronic urethritis with scanty or no discharge. The serous discharge from raw ulcers were examined for H. Ducreyi, Donovan Bodies and T. Pallidum. Standard procedures were employed for diagnosis e.g.- Gram's Stain, Leishman's Stain, Giemsa Stain and tissue smear were used to demonstrate Neisseria Gonorrhoeae (Gonorrhoea), Haemophilus Ducreyi (Chancroid), Donovan Bodies (Granuloma Inguinale). KOH mount and wet preparation were made to detect Candida Albicans (Vaginal Candidiasis) and Trichomonas Vaginalis (Trichomoniasis).

V.D.R.L. Test was done in cases with genital ulcers. Microscopic examination of urine and Two Glass Urine Test were carried out in cases of urethritis (Gonococcal and non-specific). Patients were followed up disease-wise and test of cure established accordingly.

OBSERVATION

It was observed that age, sex, race or religion is no bar for any of the sexually transmitted diseases. Even one sexual exposure either hetero- or homosexual may follow one or more STDs at a time or subsequently one after the other and need adequate treatment. It will be more explanatory from the following datas.

Table I : Analysis of Sexually Transmitted Diseases.

STDs			No.	%
I. Major STDs :				
1. Gonorrhoea	...	...	35	17.5
2. Chancroid	...	...	27	13.5
3. Syphilis	...	...	20	10.0
4. Granuloma Inguinale (Donovanosis)	...	...	04	2.0
5. Lymphogranuloma Venereum	...	...	01	0.5
II. Minor STDs;				
1. Non-gonococcal Urethritis (Non-specific)	...	...	76	38.0
2. Balano-posthitis	...	...	20	10.0
3. Perly Penile Papules	...	...	05	2.5
4. Condyloma Accuminata	...	...	04	2.0
5. Herpes Progenitalis	...	...	03	1.5
6. Genital Scabies	...	...	03	1.5
7. Venereophobia	...	...	02	1.0
Total	...	...	200	100.0

Among the major STDs, the incidence of gonorrhoea was found to be the highest than Chancroid and Syphilis. Granuloma Inguinale and Lymphogranuloma Venereum were less common.

Table II : Agents active in STD transmission.

Agents		No.	%
1. Married women	...	69	34.5
(Married woman, Housewives)			
2. Casual contact	...	46	23.0
(virgin girls, students, officials & call-girls)			
3. Spouse	...	40	20.0
(Husband, wife)			
4. Prostitute	...	30	15.0
5. Homosexuals	...	03	1.5
6. Unknown	...	12	6.0

Married women and casual contacts played active role in STD transmission than prostitutes and is of importance in the epidemiology of the diseases. 20% of spouses were also involved. This presents social outlooks, moral and behaviour of the society.

Table III : Frequency of Exposure

Single		Multiple		Unknown	
No.	%	No.	%	No.	%
91	45.5	75	37.5	34	17.0

Majority of patients acquired infection after a single exposure than those who had repeated contacts. In unknown group, all 34 patients were females and history of sexual exposure other than husband (in case of married) could not be classified.

Table IV : Age distribution of patients

Age in years					
> 10	11-20	21-30	31-40	40-60	> 60
1	50	112	33	2	2

The highest number of patients (56%) belonged to the age between 21-30 years followed by 25% between 11-20 years. One female patient below 10 years was accidentally reported to suffer from gonococcal vulnovaginitis after an unwilling contact with a male servant. V.D. was less common above the age of 40 and below 10.

Table V : Marital status of patients

Married	Married- living single	Bachelor	Widow
94	7	95	4

Bachelor as well as married both were found to be equally active in disease transmission, 3.5% were married but living single due to some reasons and 2% of patients were widow.

Table VI : Occupation of patients

Student		Businessmen		Service Holder		Housewife		Self Sufficient		Daily Basis Workers	
No	%	No.	%	No.	%	No.	%	No.	%	No	%
65	32.5	46	32.0	45	22.5	19	14.5	9	4.5	6	3.0

The students, businessmen and service holders were found to be the most common sufferers. Housewives were also active. Self sufficient persons (Land lords) and daily-basis workers had lowest incidence of STD.

Table VII : Educational Status of Patients

Illiterate	<HS	High School	Inter	Graduate and above
50	22	59	48	21

High school and intermediate educated persons were highly affected from STD than highly qualified people and below high school standard. The illiterates were also found to be active. This shows that education has no relation with one's morals and behaviour towards sex.

Table VIII : Economic Status of patients.

Poor (<Rs. 500/- p.m.)	Medium (<Rs. 1000/- p.m.)	Rich (> Rs. 1000/- p.m.)
19	121	60

STD was found to be the disease of medium sized and richer people. Poor people had lowest incidence.

DISCUSSION

Gonorrhoea was found to be the commonest than *Chancroid* and *syphilis* which resembles to the reports of Ganguli et al. (1983)⁴. Non-gonococcal urethritis was the commonest amongst minor STDs of which *Trichomonas* sp. and *Candida* sp. were detected in some cases. others could not be specified due to lack of specific laboratory facilities. 16% of the young couples had positive history of urethral discharge which were sterile. Among sterile patients, *N. gonorrhoeas* were detected in 6 males and 1 females *Candida* sp. in 4 females and 2 males and *Trichomonas* sp. in 1 female and 1 male. In all the sterile male patients, a positive past history of repeated urethral discharge were present alongwith multiple painful genital ulcers in 3 of them.

Out of 27 patients of *Chancroid*, all were the male sufferers. 2 cases were associated with paraphimosis, 1 with syphilis, 1 with posthitis 1 with acute gonococcal urethritis and 1 had a very painful inflammatory unilateral inguinal bubo.

Out of 20 syphilitic patients, 16 were diagnosed in primary and 4 in the secondary stages, all being the males. 5 cases were associated with soft chancre, 3 with paraphimosis, 2 with balanitis and 1 with Herpes progenitalis. Out of 4 secondary syphilis, 2 had condylomata developed after sodomy. VDRL was reactive in 9 patients only including all 4 patients in secondary stage. A history of repeated abortions were present in 3 women patients who had suffered from syphilis, VDRL being reactive in one of them, 2 patients with balanitis were VDRL reactive.

Among the 4 *Donovanosis* cases, 1 was associated with acute gonococcal urethritis and 1

with multiple soft chancre. The only one case of Lymphogranuloma Venereum reported was classical.

Of the 35 gonorrhoea patients, one 7 years old young girl was found to have Gonococcal vulvo-vaginitis and got the disease unwillingly from the servant. 4 patients suffering from acute gonococcal urethritis had paraphimosis and 7 were sterile, 2 had haematuria and 3 had severe dysuria and retention of urine. The stricture was reported in 5 male patients of chronic gonorrhoea. One male patient had scrotal canning but exact etiology could not be specified except clinically with the history of urethral discharge off and on for last 8 years. One female patient was found to suffer from acute gonococcal Bartholinitis and abscess.

VDRL test was found to be reactive in 14 patients with genital ulcers of which 9 were syphilitic. Remaining 5 patients were, however, clinically and therapeutically against syphilis and were probably the false positive reactions.

Out of 20 cases of balanoposthitis, etiology was found to be due to soft chancre in 5, syphilis in 2 and candidiasis in 2; the rest were unknown. Multiple tiny acuminate papules were seen at corona (Pearly Penile Papules) were asymptomatic, although with positive sexual exposure condyloma acuminata (genital warts), Herpes progenitalis and genital scabies all had its onset after sexual contacts.

2 patients developed Venereophobia, both were literate unmarried young men and seemed to have some bookish knowledge about STD. The first patient described to have incomplete sexual experience once in his life with a virgin girl about a year back, remained asymptomatic throughout but became phobic due to occasional nocturnal emission which he hardly had before.

Second patient was a student with no sexual contact at all, except for once his male batch-mate supposed to have suffered from some VD, entered his room and used his towel and bed. Since then, this patient had onset of phobia. He had repeated VDRL and other tests, meeting doctors frequently till no antibiotics remained unused. Patient turned psychotic after phobia and belief that the disease has entered into the blood through air. Psychotherapy and placebo corrected him. Both these patients had no evidence of any venereal diseases.

Age and marital status

The highest incidence of STD was seen in younger age groups between 11 to 30 years which supports the findings of Ganguli et al. (1983)⁴ and W.H.O. (1977)³. Married females and casual contacts were found to be the more active sources in transmission of infection than the prostitutes in this study. Similar findings were reported by Willcox (1972)² and Dumble et al. (1971)⁵.

Occupation:

The student population was highly affected from S. T. D. in this study. Which correlates with the reports of Arya and Bennett (1967)⁶. Businessmen and service holders were next in the list.

Frequency:

The infectivity of organisms were such that a single exposure to an infected partner had a 20-30% even greater chance of resulting in infection (Jawetz, 1978)⁷. The present study supports this view (Table-III). The study reports that even one exposure is enough to give three major STDs at a time.

Sex Behaviour Pattern:

Heterosexual exposure was more common than homosexuals in this study which is entirely against the findings of Fluker (1966)⁸, who found the increased incidence of homosexuality in London to the extent of 15.5%.

Alcoholism:

Alcoholism was found to be of less importance in this study as most patients were non-alcoholics, unlike the findings of Ganguli et al. (1983)⁴.

Source of Acquisition of STD :

Casual acquaintance with married women and casual contacts were responsible for about 57% of infections. Schofield (1972)⁹ reported similarly in UK to be 70-72%.

Repeaters and promiscuous group :

In the study, more than 26% of patients were found to have previous episodes of STD in past years. Such group of people are more dangerous to the society and need observation and health education.

Sex Ratio

Males (165) were seen to be more commonly affected than the females (35). The ratio was female : male :: 1 : 4.7 in this study. This was probably because most females harbour STD and remain asymptomatic. The reverse was true for males.

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