

Study of urethritis among subjects regardless to religious rites

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ABSTRACT

Objectives: Sexually transmitted diseases (STD) in young population of Iran and the frequency of sexual behaviors is a major public health problem in the country. The aim of this study was to study urethritis (the most common STD in Khuzestan) among subjects regardless of religious (Islamic) rites.

Methodology: In this prospective study conducted from 2005 to 2007 in Amirkabir Hospital in Ahvaz, 1199 adult men with symptomatic urethritis were studied. One thousand and forty six subjects declared that they respect religious rites (Group-I) and 153 subjects declared that they were not much concerned about religious rites and they were included in Group-II. Urethritis was diagnosed based on clinical and laboratory examinations. Subjects were placed in two groups and compared. Extracted data from questionnaires were analyzed in SPSS 13 software using chi-square and exact Fisher tests.

Results: Of total 1199 subjects, 44 patients were diagnosed having urethritis, among them gonococcal urethritis was detected in 16(36.5%) and Chlamydia in 28(63.7%). Mean age of the patients was 28.2±9.4 years with the range of 18-47 years. Incidence of urethritis in Group-I was 2% (21/1046) and in Group-II 15.03% (23/153). Frequency of Men having sex with men (MSM), extramarital contact, HIV seropositivity, Injecting drug use (IDU), and imprisonment among Group-I and Group-II was [1.2%, 1.4%, 0.8%, 0.6%, 0.8%] and [8.2%, 8.2%, 4.6%, 3.6%, 12.4%] respectively.

Conclusion: Subjects who are not concerned about religious rites have high frequency of unsafe sexual contact like homosexuality, extramarital contact. HIV infection and IDU as compared to those who respects religious rites

KEY WORDS: Sexually transmitted disease, Risk factors, Urethritis, Sexual behavior, Religious rites.

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INTRODUCTION

Sexually transmitted disease (STD) in young sexually active population in developing countries such as Iran is a major public health problem.¹ Urethritis as the most common STD is acquired by unsafe sexual contact between men and women and homosexuals.² The most common etiologic bacteria of urethritis are *Neisseria gonorrhoea* which results in gonococcal urethritis (GU) and *Chlamydia trachomatis*. It has been widely assumed that I) because sexually transmitted diseases (STDs) are normally acquired during sexual intercourse the risk of infection is related to sexually promiscuous behav-

ior, and II) sexual promiscuity is in turn linked through different way with other socioeconomic and psychological factors.³⁻⁶ Islam is the official religion in Iran and more than 99% of Iranian population are Muslims. There is a known fact that religious rite is a strong preventive barrier of wrong and harmful behaviors. There is a hypothesis that Islam is a strong preventive measure against STD. There is no or little data about urethritis and related risk factors in our region.

The purpose of the study was to determine prevalence of each common etiologic bacteria (*N. gonorrhoea* and *C. trachomatis*), major risk factors for urethritis among men and their religious believes. In order to assess the relationship between diagnoses of urethritis, sexual behavior, and religious rites were studied in a cohort of adult men who were referred to our infectious disease clinic during a two year period. All patients aged 18 years or more were evaluated.

METHODOLOGY

The study population included 1304 men who attended our infectious disease clinic from 2005 to 2007 in Ahvaz a city located in southwest Iran. All subjects were seen initially by a general physician who recorded details of subject's self declaration of obligation to religious rites, age, martial status, sexual intercourse with men or women, drug abuse, alcohol consumption, previous HIV infection and imprisonment. Subjects were included in Group-I if they declared that they respect religious rites such as praying and abstain from drinking alcohol, otherwise they were included in Group-II.

Clinical histories were taken and physical examinations performed by an infectious disease specialist. Diagnoses were based on a thorough clinical assessment combined with laboratory investigation. Urethral gonorrhoea was diagnosed by stained slides and culture; Chlamydia by serological tests. Inclusion criteria were: age over 18 years and written consent. Exclusion criteria were: urethritis caused by agent other than NG and CT, receiving antibiotic before examination, presence of other infectious

disease and refusal of interview. Of total 1304 cases, 49 were excluded because of receiving antibiotic prior to laboratory examination (10 Case), other causes of urethritis (39 cases) and 56 because of refusal to participate in the study. The data of Group-II (n=153) and Group-I (n=1046) were analyzed in SPSS 13 using chi square and Fisher's exact test. Differences with P value less than 0.05 were considered significant.

RESULTS

Of total 1199 studied population, 44 patients had urethritis, among them GU was detected in 16(36.5%) and CU in 28(63.7%). Mean age of the cases was 28.2 ± 9.4 years (range of 18-47 years). Prevalence of urethritis in Group-I was 21(2%) whereas in Group-II was 23(15.03%). There was a significant differences (P=0.0001) between two groups (Table-I). The risk of urethritis in Group-II was 8.6 times of Group-I (OR=8.64, 95% CI 4.65 -16.04).

Thirteen patients (29.5%) were married and had history of sexual contact with women other than his wife. Of thirty one unmarried patients, 20 had heterosexual contact and 11 were Homosexual. Cigarette smoking, drug addiction and imprisonment was observed in 20(45.4%), 10(22.7%), 8(18.2%) and 6(13.6%) respectively. Five patients (11.4%) were known case of HIV/AIDS. Risk factors and other related factors of urethritis in both the groups are shown in Table-II.

DISCUSSION

The present study shows that religious (Islamic) rite obligation is a strong preventive measure against urethritis in sexually active adult men in Ahvaz. To our knowledge there is no similar study describing the preventive effect of religious rites, so it is impossible to compare this finding with other studies. We believe that Islamic orders put the Muslims at the safe sexual status not to be at the risk of STD. According to Islamic rules, Muslims are forbidden of alcohol consumption, Zena (having sexual contact with illegal partner) and Levat (MSM).

Table-I: Comparison of urethritis in Group-I and Group-II.

Variables		Group-I N (%)	Group-II N (%)	P value, Odds ratio 95% CI
Urethritis	Present	21(2)	23(15.03)	0.0001, OR:8.64, 4.65-16.04
	Absent	1025 (98)	130(84.97)	
Total		1046(100)	153(100)	
Group-I: Religious people		Group-II: Not concerned about Religion		

Table-II: Risk factors for urethritis in studied population

Factors		Group-I (n=1046)N(%)	Group-II(n=153)N(%)	P value
Sexual contact	MSOW *	14(1.4)	8(8.2)	0.003
	MSM*	12(1.2)	8(8.2)	0.001
	MSW	25(2.4)	7(10.9)	0.10
Addiction	IDU*	6(0.6)	14(3.6)	0.0001
Smoker		540(51.6)	67(44.1)	0.08
HIV/AIDS*		8(0.8)	7(4.6)	0.001
Imprisonment*		9(0.8)	19(12.4)	0.0001

* Significant difference $p < 0.05$, MSOW: men having sex with women other than his wife, MSM: men having sex with men, MSW: men having sex with women, IDU: injecting drug user. HIV/AIDS: human immunodeficiency virus/acquired immunodeficiency syndrome

Chlamydia urethritis is more prevalent than gonococcal urethritis (63.7% vs. 36.3%). Previous studies showed controversial results; in some studies CT was prevalent whereas in others GU was predominant.⁷⁻¹³ The reason for this situation is not clear. Although we found no association between studied variables and CT or GU infection, but we believe that many factors may be responsible for this variation, such as different countries with various communities, prevalent pathogen in the community, antimicrobial resistance, sexual behaviours, laboratory facilities and alcohol or drug addiction.

Unsafe sexual contact, homosexual and condom misuse are the main known risk factors in STD.^{9-11,14,15-20} In this study we found that these risk factors in Group-I individuals were significantly lower than peoples in Group-II ($P < 0.05$).

In this study, injection drug usage, HIV infection and imprisonment among Group-II subjects are associated with higher frequency of urethritis. Association of addiction and HIV infection is reported in some investigations.^{16,19,20} In contrast with other reports^{8,9,18} we could not find a significant association between cigarette smokings with urethritis.

We believe that for various reasons such as ethical and religious views some of the patients might have refused correct answer about their believes, praying, sexual contacts, alcohol use or imprisonment, so, the readers may take our results with caution. In contrast to high prevalence of STD in Western developed countries, South East Asian countries and India, low prevalence rate of STD in Iran as well as Arabian Islamic countries¹ confirms our finding and the above mentioned confounding factors can not influence our results.

CONCLUSION

No regard for religious rites resulted in high frequency of unsafe sexual contact and put the subject at a high exposure to genital pathogens which lead to STD. Homosexuality, MSOW, HIV infection, IDU and imprisonment were the main risk factors for urethritis.

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