Prevalence and Awareness of Sexually Transmitted Infections among Inmates of a Drug Rehabilitation Center in Saudi Arabia: A Cross-Sectional Study

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Abstract

Background: Drug addicts constitute a high-risk group for the transmission of HIV and other Sexually Transmitted Infections (STIs). The aim of the study was to screen inmates at a drug rehabilitation center for the presence of commonly occurring STIs. We also aimed to correlate the prevalence of STIs with injecting and non-injecting drug use and awareness about the prevention of STIs.

Methods: This cross-sectional study was conducted on a convenience sample of 115 inpatients at Al Amal Hospital for the Treatment of Addiction and Rehabilitation between September 1, 2011 and November 1, 2012. Demographic data, use of intravenous and other addictive drugs, and awareness about condom use for protection against STIs were documented. Blood samples were collected, and serum and DNA were extracted to test for HIV and Hepatitis B Virus (HBV) using enzyme-linked immunosorbent assay and for syphilis using polymerase chain reaction. The data were analyzed using the Statistical Package for the Social Sciences.

Results: Of the total participants, 18 had one or more STIs, including syphilis (n=11), HIV (n=5), HBV (n=5) and

are believed to acquire HIV each year, and they account for 8% of new HIV infections and 16% of people currently living with HIV (CDC Report, 2012) [9]. Increasing the number of HIV-infected IDUs who undergo diagnosis, increasing their access to care and prevention services, and increasing their adherence to a therapeutic regimen are the current challenges in tackling the HIV epidemic in this population. To overcome these obstacles, clinicians must have both the technical knowledge and skill required for assisting patients [10]. The timeliness of HIV diagnosis and the initiation of antiretroviral treatment are major determinants of survival for HIV-infected people. IDUs are less likely than non-users in other transmission categories to seek early HIV counselling, testing and treatment. To improve the survival of IDUs, HIV prevention efforts must ensure early access to HIV testing and care, as well as encourage adherence to antiretroviral treatment to slow disease progression [11].

Syphilis data from the CDC in the United States showed a 12.4% increase in the number of cases of early latent-phase syphilis (up to 9,186 cases) and a 11.8% increase in the number of cases of primary and secondary syphilis in the year 2006 compared with 2005 [12]. In addition, a relatively higher rate of HIV co-infection is reported in

Alcohol	1 (5.5)	21 (21.6)
Amphetamine	1 (5.5)	4 (4.1)
Noshog (chewing tobacco)	0 (0.0)	1 (1.0)
Cocaine	4 (22.2)	0 (0.0)
Morphine	0 (0.0)	1 (1.0)
Gheraa	0 (0.0)	2 (2.1)

Variables	STI-negative (n=97)	STI-positive (n=18)	Total	P-value
Do you know how to protect yourself from STIs?				
No answer	1 (33.3)	2 (66.7)	3 (100.0)	0.048
Yes	78 (85.7)	13 (14.3)	91 (100.0)	
No	18 (85.7)	3 (14.3)	21 (100.0)	
Do you think condoms will completely protect you against STIs?				
No answer	0 (0.0)	2 (100.0)	2 (100.0)	<0.001
Yes	75 (91.5)	7 (8.5)	82 (100.0)	
No	22 (71.0)	9 (29.0)	31 (100.0)	

Table 4: Comparison of awareness between patients who tested positive and those who tested negative for sexually transmitted infections[a], [a]Data are presented as frequency (percent) unless otherwise specified. Abbreviation: STI, sexually transmitted infection.

Discussion

In this study, we found that the prevalence of STIs was high among drug users at Al Amal Hospital. Moreover, substance users with STIs generally had lower education levels, came from a middle class background, and were generally unemployed and single. These factors therefore could increase the chances of acquiring an STI.

In this study, participants were screened for infections that can spread via needles and through an intravenous route, including HIV, HBV, and syphilis. Of the total participants, 15.7% were positive for one or more STIs. This rate is higher than that reported by a study conducted in Texas [16], which showed that among 407 drug abusers, 62% had markers for at least one STI. Moreover, in our study, the use of injectable drugs was more common in the group with positive results for STIs: 55.5% of the members of this group were IDUs, while 32.9% of the participants in the non-STI group were IDUs. This has also been reported by another study, which showed that IDUs have a high risk of acquiring STIs [17]. However, non-IDUs also carry a significant risk [18]. All these findings indicate that STIs and drug abuse are inter-related and that the treatment of one should be

Encouraged by these preliminary findings, we plan to extend the study to other high-risk groups and ultimately formulate a comprehensive screening program that could provide insights into the spread of these STIs in Saudi Arabia.

Some limitations of this study warrant consideration. First, the number of participants is limited, and there is a need to validate these findings in a bigger population of drug users. Second, because our sample was a convenience sample, the results cannot be extrapolated to the population of illicit drug users in Jeddah, Saudi Arabia. Third, as mentioned before, we could not communicate with the HIV-positive patients for further testing to confirm the diagnosis and provide appropriate counseling and treatment. Nonetheless, this study adds considerable new information, as it is the first to report the prevalence of HIV, syphilis, and HBV among addicts in Saudi Arabia.

Conclusion

Male drug users in Saudi Arabia have lower education and come from a lower socio-economic class. The prevalence of STIs is high in this group, and it is especially high among IDUs than non-IDUs. Furthermore, their awareness about condom use for protection against STIs is low, so it is important for health care providers to implement measures to enhance awareness and improve the use of preventive measures in this high-risk population.

Competing Interests

The authors declare that they have no competing interests.

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