SHORT REPORT

Characteristics of gonorrhoea in Kermanshah, Iran

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Objective: To describe the characteristics of gonorrhoea and prostitution in Kermanshah, Iran.
Method: From 1997 through 2000, 100 male gonorrhoea patients were followed for a mean of 18 months (range 8–42 months). Diagnosis and follow up were made by a combination of history, physical examination, and the Gram stained smear.
Results: 4% of patients became infected by girlfriends, 24% by temporary (sigheh) wives, and 64% by street prostitutes; the remaining 8% denied coitus with sex workers. Of 38 married cases, 31 reported unprotected intercourse with permanent wives while infected, and only four of 38 gave prescribed drugs to their wives. 89% of contacts with prostitutes were unprotected. Most of the prostitutes and professional sigheh wives were practising survival sex. Fear of stigmatisation and presumed severe penalties prevented prostitutes from seeking medical care, and 26% of patrons reported self medication. An average 84% of prescriptions of standard therapies failed. 31% of the cases remained refractory to all available therapies.
Conclusions: The majority of the prostitutes and sigheh wives in Iran exchange sex for survival. Being uneducated survival sex workers, they accept risky sex behaviours easily. Sigheh wives are an important source of infection. The very high rate of persistent infection despite standard treatments is disturbing. Our ideal is a world in which nobody is obliged to enter commercial sex work. In the meantime, however, there is an urgent need to offer medical care and education to sex workers as needy patients in a safe and unprejudiced environment. Denying the presence of such realities as prostitution and sexually transmitted diseases (STDs) because of their disagreement with cant claims and official propaganda, does not eradicate the facts but results in catastrophic public health problems.

In some countries, presence of prostitution and sexually transmitted diseases (STDs) is being systematically denied because their existence contradicts some official claims of their eradication. In these settings, demolishing the brothels and killing prostitutes is a "great achievement," that "proves" legitimacy and moral superiority. There is no study on the prevalence of prostitution in Iran, and the reported figures of 300 000 prostitutes, including 45 000 in Tehran, were not affirmed by authorities. One official announced the presence of 2000 prostitutes in Tehran, however.[1] Iranian sex workers (prostitutes and sigheh wives) are suffering from unavailability of medical services and knowledge about STDs. Here, we describe our experience with gonorrhoea in Kermanshah, Iran.

METHODS

During a 36 month period (March 1997–March 2000) 162 cases of male urethritis were seen in a university affiliated centre. The majority self referred for primary care; their mean age was 26.6 (SD 9.2) years (median 27); 62% were single and 86% urban. Patients were followed for a mean of 18 months (8–42 months). Patients also had access to private practices. Of 162 cases, 35 were non-STD related, 18 non-gonococcal, and 109 gonococcal. Of gonococcal cases, seven refused to participate in the study and two were lost to follow up. Informed consent was obtained from all. At the first visit, after a history/physical examination, a Gram stained smear was ordered. It was considered positive if Gram negative diplococci of typical morphology were observed in association with neutrophils, negative if no such organisms were seen, and equivocal if typical morphotypes not associated with neutrophils or cell associated, but morphologically atypical organisms were seen.[2] Upon receiving the smear result, one of three standard regimens[2] were administered (table 1). Co-treatment was prescribed for index cases to be given to partners, and abstinence from unprotected intercourse was advised until a cure was achieved.

The patients returned a week after completion of treatment for history/examination/smear. If the smear was negative and the patients became asymptomatic, they were followed by phone on a monthly basis. If they became symptomatic again, they were visited for history/examination/smear. Patients with positive smears and persistent symptoms despite standard treatments, were given alternative regimens (table 1). In the monthly follow up of cases of persistent infection, we obtained history/examination/smear without prescribing treatment. In selected patients with persistent gonorrhoea, urethrocystoscopy was performed to rule out urological pathologies.

All data were collected into our UNESCO CDS/ISIS computer database.

RESULTS

In all, 41% of cases initially denied coitus and admitted to having sex only after being confronted with smear results. According to patients, embarrassment and fear of being betrayed to authorities were the reasons for concealment; 89% "forgot" to take their smear records and left them in the clinic. To hide their real identity, 47% had their smears taken and gave false names. Once we obtained their confidence, they revealed their real names. No prostitutes presented to us. According to the patrons, the reasons were fear of identification, stigmatisation, and severe penalties. The same reasons were presented by patients to justify their presentation delay. Twenty six per cent reported self medication for an average of 2 weeks. Many patients presented with false complaints. Patients reported their likely source of infection as girlfriends (4%), temporary (sigheh) wives (24%), and street prostitutes (64%). The remaining 8% of patients denied extramarital sex. In cases of contact with sex workers, 45 of 88 (51.1%) were infected upon first coitus; 89% of intercourse was unprotected. HIV testing, performed in 41%, was negative in all. Frequently, sex workers sold sex for food. Thirty one of 38 married men reported unprotected intercourse with their permanent wives in the presence of urethral discharge. Seven of 100 patients accepted co-treatment for partners. Reasons for low acceptance of co-treatment were fear of disclosure of extramarital sex, unavailability of prostitutes, and/or lack of commitment

Table 1 Failure rates of standard and alternative treatment regimens 1 week after completion of treatment

Treatment regimen	Failure rate (%)
Standard regimens	
Ceftriaxone 125 mg intramuscularly + doxycycline 100 mg orally twice daily for 7 days	69
Ciprofloxacin 500 mg + doxycycline 100 mg twice daily for 7 days	93
Ofloxacin 400 mg + doxycycline 100 mg twice daily for 7 days	90
Alternative regimens	
1 g ceftriaxone for 5–10 days + doxycycline 100 mg twice daily for 10 days	48
500 mg ciprofloxacin twice daily for 7–14 days + doxycycline 100 mg twice daily for 10 days	64
800 mg ofloxacin alone	74
Ceftizoxime 1–3 g 3 times daily + amikacin 500–1000 mg twice daily, + doxycycline 100 mg twice daily all for 7–10 days, ± metronidazole 500 mg 3 times daily for 7 days ± erythromycin 400 mg four times daily for 14 days	18

to them. After visiting us, 60 patients claimed they adhered to our instructions to abstain from unprotected coitus. An average 84% of the prescriptions for standard agents showed documented failure (table 1): 53% of cases finally were cured of infection either by alternative regimens (49%) or spontaneously (4%); 31% remained refractory to all available treatments and continued to be transmitters until end of this study. Urethrocystoscopy in 13 cases showed no specific pathology.

DISCUSSION

Gonorrhoea is the most common STD among non-prisoners in Kermanshah. For symptomatic urethritis in men, the Gram stain is sufficiently sensitive (95–100%) and specific (95–100%) to make culture confirmation optional.[2] We used Gram stain because of high specificity and sensitivity and because there was no gonorrhoea specific culture media in Kermanshah. Thirty one per cent of our cases were treatment failures. It has been said that most patients with gonorrhoea which persists after treatment have been reinfected.[2] However, in our study 60 treated patients had positive smears despite claims of abstinence from unprotected coitus. Considering the fact that some of these patients already used false names and symptoms, and in the absence of corroborative data from partners, their statements seems doubtful. However, at least a minority of them seemed honest enough to suggest treatment failure rather than reinfection. Our observations suggest that in some patients, even in absence of new exposure, resistant gonorrhoea can persist for a long time without spontaneous resolution.

Characteristics of patients and prostitutes with gonorrhoea in Kermanshah are: (1) absolute failure of sex workers to present for treatment, (2) high rate of unprotected intercourse with sex workers and with permanent wives even when they had urethral discharge, (3) very high rate of persistent infection despite standard antibiotics, (4) high rate of presentation with false complaints, (5) high rate of self treatment, (6) resistance by patients to giving the prescribed drugs to wives, (7) low rate of positive HIV testing in gonorrhoea cases, and (8) sigheh wives being an important source of infection.

Fear of stigmatisation, biases of pseudoscientific propaganda, and lack of neutrality of the authorities has created an insecure environment for prostitutes and they fear even the physicians. Reluctance of the patrons to seek care and treatment, high rate of self treatment, and obscuring the specific symptoms were results of fearing stigmatisation and persecution. We feel that the 89% rate of leaving the smear records in clinic, and presenting to laboratories with false names are reflections of the patients' desire to hide any documentation of their STD. Our average 84% rate of persistent infection is much higher than the 12–25% resistance rate in Zirak-Zadah *et al*'s study in 1977 of prostitutes of Shahre-Now, whose infection and resistance rate were similar to their American counterparts of that era.[3] In those years, prostitution had been officially banned but tolerated and prostitutes had been under health coverage. Unavailability of safe sex education is reflected in the very low rate of condom use. Easy availability of cheap sex workers suggests that the great majority of the sex workers in Kermanshah exchange sex for survival and risky sexual behaviours are probably not a concern for them. The limitations of our study were that we had no cultures, and no prostitutes presented.

In conclusion, the very high rate of resistance to standard treatments is alarming. There is urgent need to offer medical care and education to sex workers. Radical changes should be made about how the authorities view prostitution and STDs. The existence of prostitution should be admitted and prostitutes should be regarded as patients. Adhering to some unfounded propaganda to the point of denial of the social realities propagates the social ills with catastrophic public health consequences.

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