A Study on Sexually Transmitted Diseases in Kirkuk City

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Abstract:

Objective: The study was planned to show the prevalence of sexually transmitted disease (STD) among women and neonates attending some private clinics in Kirkuk City.

Patients and methods: A cross sectional study was performed on 425 women and neonates attended private clinics in Kirkuk city. The period of study was from 1 st of January 2004 to 31 st of December 2004.

Results: It was found that the highest rate of symptoms was vaginal discharges followed by lower abdominal pain, genital ulcers, ophthalmia neonatorum and inguinal bubo respectively. Patients with more than one symptom were also detected.

Among patients with discharge, *Candida albicans* (53.42%) and *Trichomonas vaginalis* (80.82%) were observed.

In addition to symptoms, several genital problems were seen, such as *Molluscum contagiosum*, warts, Herpes simplex and *Tenia cruris*. The VDRL positive cases were detected among patients enrolled the study.

Conclusion: The prevalence of STD symptoms is common among patients attending the private clinics. The highest rate of symptoms was vaginal discharge followed by lower abdominal pain and genital ulcers.

More than one symptoms was detected among patients in the studied groups. Several genital problems were found in association with STD symptoms.

Key words: STD, Opthalmia neonatorum, Kirkuk.

Introduction:

Sexually transmitted diseases (STD) are a group of infectious diseases which are principally transmitted through sexual intercourse, through some of these diseases may be transmitted through non-sexual means, like transfusion of infected blood, use of contaminated syringes and needles and from infected mother to her baby. [1]

Sexually transmitted diseases is of major public health problem and medical significance. Their prevalence is high throughout the world with the advent of the pandemic of infection with the human immunodeficieney virus (HIV), their importance has been greatly heightened as HIV infection is yet another STD [2, 3]. It is very common with an estimated 65 million living with an STD and about 15 million annual cases in USA. Most new cases affect teenagers and young adults under 25 [4, 5].

In Iraq, it has been reported in study carried on in Al-Yarmouk teaching hospital on 800 females attended family planning units, that 10% had asymptomatic gonococcal infection, 25% had trichomoniasis, 1% had both gonorrhea and venereal warts. [6]

In other study carried in Baghdad , on 300 pregnant and non-pregnant women, *Candida albicans* was isolated from 40% of non-pregnant patients and 57.1% of pregnant , as the incidence of *T._vaginalis* was 25.2% and gonorrhea 20% in non-pregnant , while in pregnant it was 5.7% and 1.4% respectively [7]

It is difficult to assess the true prevalence of (STD) as both men and women suffer from asymptomatic (STD), but women more so than men, and those persons are not aware of their infection and hence do not seek care.

The spread of STD is mainly through sexual intercourse, which may be vaginal, anal or oral with an infected partner. HIV test is important in patients with STD. [8]

Some people presents with symptoms which can be identified easily like ulcers, discharge, pain or itching [9]. It is believed that the presence of ano-genital warts in women warrants screening for other STD [10].

The study was carried out to show the prevalence of STD among women attending private clinics in Kirkuk city.

Patients and Methods:

A cross sectional study was carried on 417 women who attended private clinics in Kirkuk for the period from beginning of January 2004 to end of December 2004. Their age were ranging from 20-40 years and above, in addition to 8 neonates with neonatal conjunctivitis.

A full history and clinical examination was performed for each patient, throughing light specially on STD. symptoms, including (genital ulcers, vaginal discharge, lower abdominal pain in women, pelvic inflammatory disease, (PID), inguinal bubo, ophthalmia neonatorum.

Vaginal swab was taken from each women complaining of abnormal vaginal discharge, examined by direct smear method for *Trichomonas vaginalis* and Candida.

The Venereal Disease Research Laboratory (VDRL) test was carried on for each patient with genital ulcer. For VDRL positive patient, Enzyme Linked Immunosorbent Assay (ELISA) test for Human Immune Deficiency Virus (HIV) was performed.

Results:

The distribution of patients according to age is indicated in Table (1). Among 425 patients included in this study, 8 were neonates with opthalmia neonatorum (3 males and 5 females) with age ranging from 3-7 days; 141 were from 20-29 years, 196 from 30-39 and 80 from 40 and over.

Regarding the distribution of STD symptoms among studied patients, it is shown in table (2), the highest rate of symptoms was vaginal discharge (35.1%), followed by lower abdominal pain (32.61%), genital ulcers (16.06%), ophthalmia neonatorum (1.9%), inguinal bubo (0.2%).

In vaginal discharge patients, 78 (53.42%) cases of *Candida albicans* and 118 (80.82%) *T. vaginalis* infections were detected. The VDRL test was carried on patients with genital ulcer, the results showed that the rate of positive (4.55%) as shown in table (2).

The distribution of patients with more than one problem is indicated in Table (3). The highest rate of patients had vaginal discharge and warts (2.15%), followed by vaginal discharge and ulcer (1.91%), vaginal discharge and lower abdominal pain (0.95%).

Several genital problems were detected among patients with STD apart from symptoms, such as Molluscum contagiosum 15 in females (3.5%); warts 30 (7.1%); *Herpes simplex* 4 (0.95%). as indicated in table (4). No positive HIV cases were detected among examined group for VDRL positive cases.

Table (1): Distribution of patients according to age.

Age	No.	Percentage
Neonate (3-7) days	8	1.8%
20-29 years	141	33.2%
30-39 years	196	46.2%
40-over	80	18.8%
Total	425	100%

Table (2): Distribution of sexually transmitted disease symptoms among studied group.

Vaginal discharge		Lower abdominal pain(P.I.D)	Genital ulcer	VDRL (+ve)	Ophthalmia neonatorum	Inguinal bubo
146 (35.01%) Causes of vaginal discharge		136 (32.6%)	67 (16.06%)	19 (4.5%)	8 (1.9%)	1 (0.2%)
C. albicans	T. Vaginalis					
78 (53.42%)	118 (80.82%)					

PID=Pelvic Inflammatory Disease.

VDRL=Venereal Disease Research Laboratory.

Table (3): Distribution of patients with more than one problem.

V.D.+ Warts	V.D.+ Ulcers	V.D.+ L.A.P.	V.D.+ M.C.	L.A.P.+ Warts	L.A.P.+ Ulcers
9 (2.1%)	8 (1.9%)	4 (0.9%)	1 (0.2%)	2 (0.4%)	1 (0.2%)

V.D. =Vaginal discharge

L.A.P. =Lower abdominal pain

M.C. =Molluscum contagiosum

Table (4): Genital problems aparts from symptoms

Warts	Molluscum contagiosum	Herpes Simplex	Tenia cruris
30 (7.1%)	15 (3.5%)	4 (0.9%)	0 (0)

Discussion:

In the present study 8 cases (1.8%) have ophthalmia neonaturum, 3 were males and 5 females. This reflects that their mothers might be STD cases. Vaz *et al.* [11] reported that *Chlamydia trachomatis* infection is acquired by the newborn infant during the delivery, 25-50 % of them may develop conjunctivitis while 10-20 % may get pneumonia.

The highest rate of other STD was among 30-39 years, followed by 20-29 years and as expected the lowest rate was among 40 years and above. This indicates that the disease was common among sexually active ages almost identical to the report of UNAIDS [12] indicating that the highest rate of STD was among 15-44 years. In our study no cases were detected below 20 years which might be related to social habit and cultures as it is known that young women are especially at risk in cultures where they become sexually active during their early teenage years [8]. Henquet *et al* [13] showed that 2730 (32 per 10.000of the population) with the cases of STD. Infection with *C. trachomatis* was the most frequent sexually transmitted disease (46%), followed by Condylomata acum (28%), genital herpes (17%) and gonorrhoea (8%). Of the diseases 84% occurred in persons younger than 35 years of age and 66% in women.

The highest rate of our patients in this study (35.1%) were suffering from vaginal discharge, among them 118 cases (80.82%) were positive for *Trichomonas vaginalis*, while 78 cases (53.42%) were positive for *Candida albicans*. *Trichomonas vaginalis* among patients with vaginal discharge is also reported by Al-Najar [14] who showed the rate of infection being (13.6%)

Among 509 suspected females of having genital tract infection in Baghdad.

The next important symptoms which was detected among females in this study was pelvic inflammatory disease (PID), its cause might be due to *Neisseria gonorrhea*, *Chlamydia trachomatis*, *Candida albicans*, *Gardnerella vaginalis* [2]. Unfortunatly, due to lack of facilities in private clinics not all tests were done for all organisms mentioned above (these cases were diagnosed after exclusion of emergency surgical problems). In addition to that, because men are likely to have an asymptomatic chlamydial infection, screening of men for Chlamydia should be worthwhile [15].

In Basra, a survey study carried on women with abnormal vaginal discharge attended obstetrics and gynecology clinic, showed that the rate of microorganisms isolated among women not using contraceptives was: Candida spp. 14.0%, *T. vaginalis* 20.o% and *Neisseria gonorrhoeae* 12.8% [16]. In a case control study in Basra among women with habitual abortion, it was found that 50.6% of women with habitual abortion had sexually transmitted diseases, and normal pregnant women 53.6% had sexually transmitted diseases [17]. Regarding the genital ulcer, it was detected among

(16.06%) of cases. This reflects that genital ulcers are common in STD patients in our studied group. It is well known that genital ulcer is widely distributed all over the world, as 12 millions of curable STD patients with chancre and 7 millions with chancroid were detected, according to the report of UNAIDS in 1995 [12]. In retrospective study carried on in an urban public sexually transmitted disease clinic in Ibadan Nigeria, 211 cases of genital ulcer disease were seen between 1993-1997, formed (7.6%) of all sexually transmitted diseases [18].

The other symptoms observed was inguinal bubo in one case of a female patient, which might be caused by *Haemophilus ducreyi*, *Chlamydia trachomatis* or other pyrogenic organisms.

In addition to these cases, many patients presented with more than one genital problems, such as vaginal discharges was associated with warts, ulcers, lower abdominal pain, *Herpes simplex* and *Molluscum contagiosum*. Lower abdominal pain was in association with warts and ulcers. Warts were associated with ulcers and H. simplex and finally *Molluscum contagiosum* with associated ulcer.

The genital problems, apart from syndromes were associated as follows: *Molluscum contagiosum* (3.5%), warts (7.1%). The rate of warts in females in the present study was higher than that reported in Saddam General Hospital in Tikrit [10], who found the rate of (0.18%). This might be due to that they carried on their study on patients attended gynaecology clinics in hospital, while our study based on data collected from private sectors of gynecology and dermatology, in addition to different sites of study.

Herpes simplex (HSV) type 2 was found in 4 (0.9%) patients, while *Tenia cruris* was seen in 1 female patient only. The low rate of HSV-2 in this study may be due to the virus circulation is restricted to certain risk groups. This is in agreement with study done in Spain on general population [19].

Although data on STD in Islamic and Arab countries are limited, but several official reports are published about distribution of sexually transmitted diseases. In Saudi Arabia, a total of 39049 STDs were reported to the Ministry of Health during the period from January 1995 through December 1999. Reported STDs included nongonococcal urethritis 37.3%, trichomoniasis 28.1%, gonococcal urethritis 14.2%, syphilis 8.7%, human immunodeficiency virus 7.5%, genital warts 3.5%, genital herpes 0.6% and chancroid 0.2% [20].

In Kuwait, a study carried out on 1096 STD patients (1068 male, 28 female). The STD were acquired from commercial sex workers in 844 patients (77%), heterosexual 99.3% was the most common mode of acquiring STDS. Urethral discharge was noted in 54.1% of patients, followed by genital ulcers 17.8%, papules/growths 16.4% and urethral/pubic pain without associated discharge/ulcers 5.9%. It was revealed

gonorrhea in 31.5% of patients, nongonococcal urethritis in 23.6%, Chlamydia non-gonococcal in 4.1%, nonspecific urethritis in 19.5%, concomitant gonorrhea and Chlamydia urethritis in 2.7%, genital warts in 13.7%, chancroid in 13.0%, genital herpes in 4.8%, *Molluscum contagiosum* in 2.7% and lymphogranuloma venereum in 1.4% [(21)].

From the results of this study, it is concluded that, the STD symptoms are common among patients attending the private clinics. The highest rate of symptoms was vaginal discharge followed by lower abdominal pain, genital ulcer and the lowest was inguinal bubo.

More than one symptoms was found among the patients in this study. The STD symptoms were also associated with different genital problems as *Molluscum contagiosum*, warts, *Herpes simplex*.

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