
Prevalence of sexually transmitted Diseases (STDs) in Iraq for the years (1999–2001) based on syndromic approach.

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Abstract:

Objectives: To create a baseline data for the estimation of Sexually Transmitted Diseases (STDs) among population based on syndromic presentation and to assess the commonest clinical presentation syndromes by age and gender.

Patients & Methods: Prevalence estimates for STDs, according to the syndromic case presentation reports were conducted in the AIDS/ STD center- ministry of health, for the years (99- 2001) based on the data collected in each health care facility. The information is collected on tally sheet and is collected locally, then sent to AIDS/ STD center on monthly basis.

Results: A total of (53776) cases were reported in 1999, there were (48266) cases in 2000 while a total of (62139) cases were reported in 2001. Among those reported cases on syndromic approach, vaginal discharge (40.5% - 46%) is the commonest presentation followed by lower abdominal pain (for woman) (35.7% - 41.2%), urethral discharge (for male) (5.8%-7.4%), genital ulcers (4.5%-4.6%) and neonatal conjunctivitis (4.5%). The vast majority of these cases were among (15 – 49) years of age group. The sex distribution is more prevalent among female individual, where female to male ratio is (8:1).

Conclusion: STDs are among the most common causes of morbidity in Iraq. Their health and social wellbeing impacts are mostly affecting those in reproductive and economically productive age groups and their offspring. Estimates of the prevalence of these infections are limited by quantity and quality of data available from different health care facilities necessitating an improvement of reporting system which requires more well designed epidemiological studies on the incidence, prevalence and duration of infection, this may be achieved by offering professional training.

Key words: Prevalence, STDs and syndromic approach.

Introduction:

STDs are common and serious problem in Iraq, there are more than (20) kinds of organisms which can spread through sex^[1].

However Sexually Transmitted Infections including HIV continue to spread rapidly throughout the world especially in developing countries^[2].

Among (450) million new cases of curable STDs are estimated by (WHO) to have occurred throughout the world in (1995) in men and women aged (15–49) years in developing countries, STD and their complications rank in the top (five disease categories) for which adults seek health care. In women of childbearing age, STDs even excluding HIV are second only maternal factors as causes of disease, death and healthy life lost. The importance of STDs lies in the fact that STDs often exist without symptoms, particularly in women more than (70%) of gonococcal and chlamydial infections were asymptomatic. Both symptomatic and asymptomatic infections lead to development of serious complication in women and new born babies (cervical cancer, pelvic inflammatory disease (salpingitis), chronic pelvic pain, fetal wastage, ectopic pregnancy, infertility and related maternal mortality). In adult males, infection spreads from urethra to epididymis and can result in urethral stricture and infertility.^[3]

The interrelationship between (HIV) infection and other STDs are many, HIV infection yet another Sexually Transmitted Infections, it is acquired, transmitted and prevented in the same way as all other Sexually Transmitted Infections. Most important is the fact that other Sexually

Transmitted Infections facilitate the transmission and acquisition of (HIV) infection. The high prevalence of STDs could explain the rapid spread of HIV among heterosexuals in Africa^[4]. STDs are seen more as disease syndromes. A number of different Sexually Transmitted Infection pathogens produce a common set of symptoms and signs constant pattern of symptoms and signs is known as a syndrome^[5]. The Traditional method of diagnosing STDs is by laboratory tests, however such tests are very often unavailable or too expensive, for this reason syndromic management of Sexually Transmitted Infections has been recommended by (WHO) since (1990) for use in patients presenting with symptoms of Sexually Transmitted Infections. The syndromic approach permits Sexually Transmitted Infections treatment without costly laboratory tests, it offers accessibility and immediate treatment and is effective and efficient particularly in the management of men with symptomatic urethral discharge and in the management of men and women with genital ulcer disease. A disadvantages of syndromic case management is (over treatment) in some patients and it is not known whether some pathogens are still sensitive to the drugs being used for the treatment^[3]

Usually people seek care when they have symptoms; such care should relieve the patients' symptoms as quickly as possible and should render the patient noninfectious. People with Sexually Transmitted Infections will attend health facilities if they find that the service provided is acceptable and

accessible. This may be achieved through syndromic case management ^[6]

Materials & Methods

An extensive review of the published reports received by AIDS/STD center was carried out retrospectively for data on the prevalence of STDs diagnosed according to the syndromic presentations. A universal system of reporting is one in which all health care facilities routinely and regularly report the number of patients seen and treated there through the country. This applies to facilities in both public and private sectors. The system of reporting is through the use of tally sheets, which are filled out by each health workers as they see patients. At the end of each month, the figures are collated and monthly totals are calculated. Consolidated figures are recorded and sent to the AIDS/ STD center where the data is collated on a national basis and reports are sent out each quarter^[5]. The recording of STD cases should be based on syndromic diagnosis and the tally sheet should include the following STD syndromes (vaginal discharge, urethral discharge, Genital ulcers, lower abdominal pain in women, Inguinal bubo, acute scrotal swelling and neonatal conjunctivitis). The tally sheet has a number of rows and columns. In the columns headed by syndromic diagnosis, a list of the common STD syndromes, then there are two broad columns, one headed male and the other headed female. Within these large columns are number of narrow columns each headed by age group. Spaces for time and name of healthy facility are present at the top of tally sheet.

Once a diagnosis of the STD syndrome is made, the patient's gender and age should be recorded at appropriate row and column. The STDs cases

should all be recorded when the patient presents to the facility for the first time, if he/ she returns for follow up then that patient should not be recorded. But if he/ she come at another time with a new episode of STD, he/ she should be recorded again, so that there is no duplication of reporting.

Results

The estimated prevalence of (STDs) in Iraq population in (1999) is recorded in **table (1)**.

A total of (53776) cases of STDs according to syndromic diagnosis were reported.

Among these reported cases, vaginal discharge (46%) was the commonest syndrome followed by lower abdominal pain (35.7%), urethral discharge (7%), genital ulcers (4.5%) neonatal conjunctivitis (3.7%), scrotal swelling (1.6%) and inguinal bubo (1%). Further (48266) cases of STDs based on syndromic diagnosis were reported in (2000) as shown by **table (2)**. Among these reported cases, vaginal discharge (40.6%) was the commonest syndromic presentation followed by lower abdominal pain (37.8%), urethral discharge (7.4%), neonatal conjunctivitis (4.6%), genital ulcers (4.5%), inguinal bubo (2.3%) and scrotal swelling (2.2%).

Table (3) demonstrates the estimated cases of STDs based on syndromic approach in (2001), a total of (62139) cases were reported reflecting the commonest presentation by lower abdominal pain (41.2%) and vaginal discharge (40.5%) followed by urethral discharge (5.8%) genital ulcers (4.6%), neonatal conjunctivitis (4.3%), scrotal swelling (2.1%) and Inguinal bubo (1.2%). Sex distribution is more predominant among female cases; female to male ratio is (8:1). Most patients were in the age group (15- 49) years significantly female individuals.

Table 1: Syndromic Diagnosis of STDs cases in Iraq by age & gender for the year 1999

Syndrome	<15 years		(15-49) years		>50 years		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Vaginal discharge	X	830	X	21460	X	2537	X	24817
Urethral discharge	183	X	2920	X	704	X	3807	X
Genital ulcers	25	26	200	1826	66	131	291	2165
Lower abdominal pain (PID)	X	1363	X	14491	X	3381	X	19235
Inguinal bubo	31	44	161	192	51	83	243	319
Scrotal swelling	235	X	436	X	219	X	890	X
Neonatal conjunctivitis	1036	973	-	-	-	-	1036	973
Total	1510	3226	4717	37969	1040	6314	6267	47509

Iraqi population for (1999) = 20217484

Number of cases = 53776

Prevalence (10000) = 26.8, (male prev = 3.1, female prev = 23.7)

Percentage of (15 – 49) age group = 79.3%

Table 2: Syndromic Diagnosis of STDs cases in Iraq by age & gender for the year 2000

Syndrome	<15 years		(15-49) years		50 years>		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Vaginal discharge	X	934	X	16234	X	2466	X	19634
Urethral discharge	242	X	2685	X	669	X	3578	X
Genital ulcers	13	50	309	1476	145	217	467	1753
Lower abdominal pain (PID)	X	1746	X	13430	X	3113	X	18289
Inguinal bubo	74	116	244	438	135	133	453	687
Scrotal swelling	279	X	585	X	207	X	1071	X
Neonatal conjunctivitis	1084	1150	-	-	-	-	1084	1150
Total	1674	4006	3823	31578	1156	5929	6654	41613

Iraqi population for (2000) = 20622437

Number of cases = 48266

Prevalence (10000) = 23.4, (male prev = 3.3, female prev = 20.1)

Percentage of (15 – 49) age group = 73.3%

Table 3: Syndromic Diagnosis of ST/ cases in Iraq by age & gender for the year 2001

Syndrome	<15 years		(15-49) years		50 years >		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Vaginal discharge	X	1467	X	20488	X	3220	X	25175
Urethral discharge	166	X	2694	X	798	X	3658	X
Genital ulcers	23	73	290	1776	170	530	483	2379
Lower abdominal pain (PID)	X	3170	X	18765	X	3668	X	25603
Inguinal bubo	50	98	218	253	86	100	354	451
Scrotal swelling	198	X	735	X	375	X	1308	X
Neonatal conjunctivitis	1336	1392	-	-	-	-	1336	1392
Total	1773	6200	3937	41282	1429	7518	7139	55000

Iraqi population for (2001) = 21255977

Number of cases = 62139

Prevalence (10000) = 29.2, (male prev = 3.4, female prev = 25.8)

Percentage of (15 – 49) age group = 72.7%

Discussion:

Data on the prevalence and incidence of STDs and their complications are limited and substantially underestimate the burden of these diseases^[7]. STDs are often asymptomatic and are technically difficult and often expensive to diagnose. This is particularly true in countries with limited access to health facilities for the diagnosis and treatment of STDs and where there is a social stigma attached to STDs may result in people seeking care from alternative providers. In some countries pharmacist are accredited and prescribe antibiotics for people with STDs. As a result report based STD system tend to underestimate substantially the total number of new cases^[8].

The magnitude of STDs in the Eastern Mediterranean region is not exactly known. Efforts have been initiated in the region to establish and improve the reporting system^[9]. This paper describes the method used by (WHO) to estimate the prevalence of STD based on syndromic presentation by the years (1999, 2000 and 2001). The estimated figures were assumed to depend upon diagnostic methods and interpretation of syndromic presentations, type of pathogen, average duration of infection for each disease, the health disease seeking behavior of the population and access to health care^[10]. The estimates presented in

this paper highlight the public health importance of STDs. It was estimated that in the years (99, 2000 and 2001), there were common presentation of vaginal discharge (46%, 40.5%, 40.6% respectively). Vaginal discharge means cervicitis (caused by gonorrhea and / or chlamydia) and vaginitis (caused by trichomoniasis or candidiasis). All of these diseases are in turn associated with serious complications and sequelae in the infected individuals and can be transmitted from an infected mother to her child either in utero or during childbirth, and have also been identified as facilitating the transmission of (HIV)^[11]. In addition it was estimated that there were a high prevalence of lower abdominal pain presentation in the years (99, 2000 and 2001) (35.7%, 37.8% and 41.2% respectively), one cause of lower abdominal pain in women is pelvic inflammatory disease (PID), which is caused by (gonorrhea, chlamydia and some of anaerobic bacteria). PID is a serious consequence of STD and it is a significant cause of morbidity and even mortality in woman^[12]. The rate of lower abdominal pain presentation has increased (35.7% in 1999 to 41.2% in 2001).

Trends in reported cases, however need to be interpreted with some caution, they may reflect changes in factors such as quality of reporting system or access to the health care, rather than an

underlying change in the number of new cases or chronicity and long term complications of STDs.

Information on urethral discharge rates in reported cases in the years (1999, 2000 and 2001) are (7%, 7.4% and 5.8% respectively) as illustrated in table (1, 2, 3) while the results of genital ulcers rates in each year remain the same (4.5%). The estimates regarding neonatal conjunctivitis rates (3.7%, to 4.6%) may illustrate how little we know about these infections, asymptomatic mothers and inadequate and substandard treatment for symptomatic individuals or even re-infection. The figures in this paper are significantly less than the previous STD prevalence study conducted in the Eastern Mediterranean region based on STD syndromes.

A total of (315000) cases of STD according to syndromic diagnosis were reported in 1997. Among these reported cases vaginal discharge (69%) was the commonest syndrome followed by urethral discharge (16%), genital ulcers (6%) and others (8%)^[9]. STD rates are high among adults and young adults (15–49) years of age (73.3%) particularly female patient (female to male ratio is 8:1), because of lack of easy access to STD services and condoms and of frequent and multiple sexual partners, in addition, a large number of STD cases particularly women are asymptomatic leading to difficulty in recognition resulting in complications and long term sequelae^[12]. The present findings indicate the need for taking appropriate control measures such as frequent screening, contact tracing and better treatment follow up. Training of health workers concerning variable syndromic presentation among STDs individuals to avoid misinterpretation as well as perfect way of patient's examination and proper treatment. Further studies required to elucidate the magnitude of STDs in Iraq and to determine whether the interventions for the control of STDs are actually working, since the trend in the size of STD epidemic is an important indicator of the success of intervention^[14].

References:

1-Communicable Diseases control center, Communicable control Guideline, Republic of Iraq MOH, Baghdad, 1999, May, p: 50.

2-WHO, Department of family and community health. Exploring common ground of STIs and family planning activities, 1991, P: 16.

3-WHO, The public health approach to STD control, UNAIDS Technical update, 1998, May, P:3.

4-London School of Hygiene and tropical medicine, AIDS and STDs in Developing countries program 1991, P:9.

5-WHO, Making A syndromic Diagnosis and STD syndromes, E.M\ STD, 1998,14.

6-WHO, A Practical guide to case management of STDs, Regional office for the Eastern Mediterranean – Alexandria. Egypt 1998.

7-Rowley J, Berkley S. Health dimensions of sex and reproduction, the global burden of STDs, HIV maternal conditions, prenatal disorders and congenital anomalies. Cambridge, Harvard University, STDs in Murray CJL, 1998.

8-Gerbace AC, Rowley JT, Heymann. DH, Berkley SF, Piot P. Global prevalence and incidence estimates of selected curable STDs, Sex Transm infect, 74, suppl. 1: 12- 6.

9-WHO, Eastern Mediterranean regional office (EMRO), STD Prevalence study, 1998.

10- National Institute and Public health, Msis report, Norway, 1993.

11- Wasserheit IN. Epidemiological Synergy, Interrelationships between HIV. & Other STDs, Sex Transm Dis, 1992, 19: 61 – 77.

12- Schultz KF, Schulte IM, Berman SM. Maternal health & child survival, opportunities to protect both women & children from the adverse consequences of reproductive tract infections, Reproductive tract infections, New York, 1992, 145: 82.

13- Westrom L, Joesoef R, Reynolds G. Pelvic inflammatory diseases and fertility, A Cohort study of (1844) women with laproscopically verified disease & 657 control women with normal laproscopy, sex Transm Dis, 1992, 19: 85 – 92.

14-WHO, World Health Organization Feature, Geneva, 1990 December No. 152.

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