

Original Research Article

Pattern of Sexually Transmitted Infections: A Retrospective Profile from a Sexually Transmitted Infections Clinic of a Secondary Care Hospital in Lagos, Nigeria

ABSTRACT

Background: Sexually transmitted infections (STIs) constitute major health problems and can have serious reproductive health consequences. Understanding the patterns of STI and their associated risk factors in a particular region is necessary for proper planning and implementation of targeted interventions.

Aims: To determine the pattern of STI and their associated risk factors in a secondary health facility in Lagos, Nigeria.

Materials and Methods: A hospital based, retrospective study of data collected from the clinical records of 31 patients that attended STI clinic of the general hospital, Lagos over a period of 12 months. The diagnosis was made based on history, clinical examination and microbiological investigations. Data analysis was done by SPSS version 23.

Result: Gonococcal urethritis 8(25.8%) was the commonest STI followed by 7(22.6%) trichomoniasis, 7(19.4%) genital warts, 7(19.4%) herpes genitalis 3(9.7%) non-gonococcal urethritis and only one person had chancroid and was HIV positive. Majority of the patients had 26 (83.9%) multiple sex partners, 18(58.9%) never used condom and 17(54.8) had previous history of STI. Occasional use of condom ($X^2 = 6.482$, $df = 1$, P -value = 0.039) and previous history of STI ($X^2 = 4.644$, $df = 1$, P -value = 0.031) were statistically associated with Gonococcal urethritis. Dyspareunia ($X^2 = 15.708$, $df = 1$, P -value = 0.000) was also statistically associated with Trichomoniasis.

Conclusion: Bacterial STI still constitute a major burden of STI in our clinic which is contrary to the recent trends of viral STI constituting a major burden of STI in some parts of the world. Poor condom usage observed from this study might be partly responsible for it. Bearing in mind by Clinicians that bacterial STI is still rampant and Condom use promotion will go a long way to reduce the burden of STI in our community.

Keywords: STI, NGU, Trichomoniasis

30 INTRODUCTION

31 Sexually transmitted infections (STIs) constitute major health and socio-economic problems
32 worldwide leading to morbidity, mortality and stigmatization [1,2]. World health
33 Organization estimates that there are more than 1 million STIs acquired every day [3]. Each
34 year, there are estimated 357 million new infections with one of the four curable STIs and
35 more than 500 million people are living with genital HSV (herpes) infection [3]. A high rate
36 of STI has also been reported in developing countries where STI treatment is less accessible
37 and stigmatization is high [4,5,6].

38 Information regarding the profile of STI in developing countries is based mainly on
39 syndromic management because of inadequate laboratory facilities. Though the syndromic
40 approach has many limitations, WHO has placed emphasis on it in high-prevalence areas
41 with inadequate laboratory facilities and trained staff [7,8].

42 STI increases the rate of HIV transmission and can have serious reproductive health
43 consequences beyond the immediate impact of the infection itself [3,7,9-11].

44 Various risk factors identified with STI includes sex preferences, inconsistent use of condom,
45 lifetime sex partners, present sex partners, previous history of STI and socio-economic
46 factors [12-14].

47 The incidence and prevalence of a particular STI varies in different geographical areas based
48 on available health facility, socio-economic and cultural factors [1,6,15]. Therefore there is a
49 need to understand the patterns of STI and their associated risk factors in the regions of a
50 country for proper planning and implementation of targeted interventions.

51 The aim of this study is to study and document the pattern of STI and their associated risk
52 factors in a secondary health facility in Lagos, Nigeria over a period of one year.

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55 MATERIALS AND METHODS

56 Clinical case notes of all the 31 patients that attended the sexually transmitted clinic of
57 General Hospital, Lagos over a period of one-year January till December, 2017 were

retrospectively studied. Ethical approval was received from the General hospital Lagos ethical approval committee.

Detailed history, demographic data, Clinical examination and microbiologic investigation were recorded from all the patients. All patients were tested for HIV using parallel methods and ELISA. *Neisseria gonorrhea* was detected by Gram staining and culture on Chocolate agar followed by identification tests. *Trichomonas vaginalis* was detected by Microscopy using wet preparation methods. Genital warts were diagnosed clinically. Candida species were isolated on sabaraund agar from some of the female patients that presented with vaginal discharge. Patients that presented with genital ulcer were tested for VDRL and also herpes simplex virus with vircell diagnostic kit. Data analysis was done by SPSS version 23 and Chi square was done as test of significance

RESULT

Out of 31 patients, 20(64.5%) were males and 16(51.6%) were females. Majority of the patients were single 21(67.7%) and 10(32.3%) were married. The age of the patients ranged from 15 to 57 years, the mean age was 29.39years. Business/ Trade were their main 18(58.1%) source of income, 16(51.6) had Secondary Education while 15(48.4%) had Tertiary Education and 23(74.2) were from Yoruba tribe. Table 1

Majority of them 13(41.9) had their last coitus within the last month of presentation, 18(58.1%) never used condom, 26(83.9%) had history of multiple sex partners and 17(54.8%) had history of previous STI. Table 2

Out of the total patients, 7(22.6%) had trichomoniasis, 6(19.4%) had genital warts, 1(3.2%) had Chancroid, 6(19.4%) had herpes genitalis, 8(25.8%) had vaginal candidiasis, 2(6.5%) were VDRL reactive with no clinical features of syphilis and 1(3.2%) was HIV positive. Out of the patients that had genital warts, 4(66.7%) were males and 2(33.3%) were females. Out of the patients with herpes genitalis, 5(83.3%) were males while 1(16.7%) were females

Urethral discharge was the presentation in 11(35.5%) of them. Out of these, 11(72.7%) had gonococcal urethritis while 3(27.3%) had non- gonococcal urethritis. Some of the patients had mixed infections. The overall commonest STI was gonococcal urethritis. Table 3.

Occasional use of condom ($X^2 = 6.482$, $df = 1$, **P- value** = 0.039) and previous history of STI ($X^2 = 4.644$, $df = 1$, **P- value** = 0.031) were statistically significant with Gonococcal urethritis.

88 Dyspareunia ($X^2 = 15.708$, $df = 1$, $P\text{-value} = 0.000$) was also statistically significant inpatient
89 that had trichomoniasis.

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91 **DISCUSSION**

92 STI is responsible for a lot of health problems such as infertility, abortion, ectopic pregnancy,
93 chronic pain and menstrual irregularities. Apart from health problems, the social stigma
94 associated with STI is quite enormous especially in developing countries.

95 In our study, the mean age was 29.39 years ranging from 15 to 57 years. Most of the patients
96 (51.6%) were sexually active. The mean age and age predominance of patients were similar
97 to that found in other studies [16,17].

98 Males constituted 64.5% and females 35.5% of the patients with female to male ratio of
99 1:1.82. The male predominance is similar to what was documented from other studies [2,16].
100 This male predominance pattern might be as a result of social and cultural stigma associated
101 with female's attendance of public STI clinic and also asymptomatic nature of the infection
102 among females.

103 The overall commonest STI was gonococcal urethritis (25.8%). This is contrary to other
104 studies in which viral STI were the overall commonest [1,2,16,17] but the prevalence is
105 similar to that of a previous study in a developing country [18]. This finding suggests that the
106 prevalence of bacterial STI might still be high in some developing countries compared to the
107 changing trends of viral STI becoming the overall commonest in developed countries.

108 Our study showed a relatively higher incidence of gonococcal urethritis than non- gonococcal
109 urethritis among patients that presented with Urethral discharge. This is similar to what has
110 been documented in other literatures [19,20].

111 The second commonest STI from this study was trichomoniasis followed by herpes genitalis
112 and genital warts with the same prevalence (19.4%) then HIV (3.2%) and Chancroid (3.3%).
113 Chancroid seems to be on the downward trend as evident from previous studies [2,17]. The
114 low prevalence of HIV has also been reported in previous studies [16,21].

115 VDRL reactivity was seen in only two asymptomatic patients and this finding is similar to
116 that of previous studies [2,17,22] and this suggest a decline of syphilis in recent times.

Vaginal candidiasis was the commonest cause of vaginal discharge from this study and is similar to what was found in a previous study [16,23] although some other studies found bacterial vaginosis to be the commonest [16,24].

Condom promotion is not adequate in this study, 38.7% of the patient used condom occasionally while 58.1% never used condom even though majority of them (83.9%) had history of multiple sex partners. This suggest that Education on the use of condom as one of the ways to prevent STI is not adequate.

The significant statistical association between Gonococcal urethritis and occasional use of condom and also previous history of STI further confirms that factors that relate with sexual behaviours are associated with several STI's.

The limitation of this study is the low attendance of patients in our STI clinic even though we have a well equipped laboratory for aetiological diagnosis of STI but this is likely due to the stigma associated with STI in our Country

In conclusion, bacterial STI still constitute the major burden of our STI clinic and this is contrary to the recent trends of viral STI constituting the major burden in other parts of the world. The inadequate condom promotion as evident from this study might be responsible for this. Awareness of condom use as one of the ways to prevent STI should be increased and physician should not be on the look out for viral STI but bacterial STI as well

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Table 1: Socio-demographic characteristics of the respondents (N=31)

Variables	Frequency	Percentage
Age groups (in years)		
≤ 25	15	48.4
>25	16	51.6
Sex		
Male	20	64.5
Female	11	35.5
Occupation		
Student	9	29.0
Professionals	2	6.5
Civil servant	2	6.5
Business/Trade	18	58.1
Education		
Secondary	16	51.6
Tertiary	15	48.4
Marital status		
Single	21	67.7
Married	10	32.3
Religion		
Christianity	16	51.6
Islam	15	48.4
Tribe		
Yoruba	23	74.2
Others	8	25.8

209 **Table 2: Sexual behaviours of Respondents (N =31)**

Variables	Frequency	Percentage
Last coitus		
A week	9	29.0
A month	13	41.9
>a month	9	29.0
Condom use		
Always	1	3.2
Occasionally	12	38.7
No/Never	18	58.1
Type of sex		
Vaginal	30	96.8
Vaginal and anal	1	3.2
Sex partner		
Single	5	16.1
Multiple	26	83.9
Number of present sex partners		
1	16	51.6
>1	15	48.4
Alcohol		
Yes	8	25.8
No	23	74.2
Previous STI		
Yes	17	54.8
No	14	45.2

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217 **Table 3: Type of STI among the respondents (N=31)**

Variables	frequency	percentage
HIV Status		
Positive	1	96.8
Negative	30	3.2
VDRL reactive		
Yes	2	6.5
No	29	93.5
Gonococcal urethritis		
Yes	8	25.8
No	23	74.2
Trichomoniasis		
Yes	7	22.6
No	24	77.4
Genital warts		
Yes	6	19.4
No	25	80.6
Herpes genitalis		
		19.4
Yes	6	80.6
No	25	
Non- gonococcal urethritis		
Yes	3	9.7
No	28	90.3
Vaginal candidiasis		
Yes	8	25.8
No	23	74.2
Chancroid		
Yes	1	3.2
No	30	96.8