Vol 4 | Issue 2 | Pages 151-155

Research and Reviews of Infectious Diseases

ISSN: 2643-6051

Research Article

DOI: 10.36959/719/583

Clinical and Epidemiological Characteristics of Sexually Transmitted Infections among the Population of the District of St. Petersburg

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Abstract

It is shown that in the conditions of the metropolis young age, early sexual life, the presence of premarital sexual experience, as well as a low level of awareness of the risk of possible infection - are factors contributing to risky sexual behavior, which is characterized by a large number of both sexual partners and unprotected sexual contacts. A separate risk group consists of persons who use alcohol, psychotropic drugs and drugs, as well as persons engaged in commercial sex.

There were 79 cases of STI registration among women of all age groups who applied to a venereologist, which is 70% of the incidence of STI, of which 22.8% of the incidence among those who applied for prophylactic purposes.

In men, 62.5% were casual sexual intercourse; 32.1% filed complaints in the presence of a regular sexual partner; 37.5% of the applied after casual sex regular sexual partner; and 35.4% were sent to specialists in other medical institutions; 47.1% - with the purpose of the screening.

The proposed creation of offices for the prevention of STIs free of charge, at clinics, with the aim of instilling in the citizens the sexual literacy and awareness in the dissemination of STIs.

Keywords

Sexually transmitted infections, Prevalence, Population of St. Petersburg district

Introduction

Approximately 250 million patients with sexually transmitted infections (STIs) are registered on the planet annually [1,2], which is an important problem of modern society. This figure does not include diseases such as genital papillomavirus infection, herpes and chancroid, the incidence of which was previously estimated by WHO at 30, 20 and 7 million new cases per year, respectively.

Today, STIs are a distinct problem of modern society, which is very sensitive to social distress in society. Epidemiological studies of recent years show a clear increase in these infections. The urgency of STI problem is associated with a high risk of influence on the reproductive health of the population. In women, STIs can adversely affect the course of pregnancy and the health of newborns (miscarriages, premature births, congenital and neonatal infections, blindness) [3]. A distinctive feature of STIs is that the gradual disappearance of symptoms leads to the transition of the disease into a latent form, so the sooner a diagnosis is made and treatment starts, the more probability of convalescence and less complications will occur [4-7].

The high incidence of STIs in the Russian Federation at the end of the last century was the result of economic depression in society, the degradation of the family institution, the criminalization of society, the growth of homeless children numbers, and the spread of drug addiction among the population [8]. However, in recent years there has been a tendency to change the social composition of patients [9]. In 2019, more than 50% of the adult population (in Russia?) are considered carriers of a particular sexual infection [10]. Changes in sexual behavior and insufficient knowledge about

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Accepted: December 23, 2021

Published online: December 27, 2021

Citation: Shevnina E, Fedchenko P, Rumyantsev Y, et al. (2021) Clinical and Epidemiological Characteristics of Sexually Transmitted Infections among the Population of the District of St. Petersburg. Res Rev Infect Dis 4(2):151-155

the prevention of diseases among population (especially young people) are considrerd to be the cause of such high STI prevalence [11].

Thus, young age, early onset of sexual activity, the presence of premarital sexual experience, and a low level of awareness of the risk of possible infection are factors contributing to risky sexual behavior, which is characterized by a large number of both sexual partners and unprotected sex. A separate risk group consists of persons who use alcohol, psychotropic drugs and drugs, as well as persons engaged in commercial sex [12-15].

Materials and Methods

Using the example of the Krasnogvardeysky District of St. Petersburg, the incidence of STIs was studied and analyzed using the primary data of medical documentation: Form No. 065-y “Medical Card of the Patient with STI”; No. 025-U "Outpatient Medical Card". Source of clinical data was the Dermatovenerologic Dispensary No. 8, from patients who applied for medical assistance for examinations for STIs, during preliminary and periodic medical examinations, as well as when visiting other specialties (gynecologists, urologists etc.) when contacting the district outpatient medical institutions. The results of calculations of intensive and extensive morbidity indicators in the region were compared with the corresponding indicators for the city of St. Petersburg and the Russian Federation as a whole. In analyzing the incidence, the age, gender and social characteristics of the studied population and the possibility of infection of others were taken into account.

The cases of diseases included in the analysis were: A 56.0 - chlamydial infections of the lower urinary tract (cervicitis, cystitis, urethritis, vulvovaginitis). And 59.0 is urogenital trichomoniasis (leucorrhea, prostatitis). A 60.0 is a herpetic infection of the genital and urinary tract; And 63.0 - anogenital (venereal) warts; A 63.8 - other specified diseases that are transmitted primarily through sexual contact; And 37.3 - vulvar and vaginal candidiasis; And 37.4 candidiasis of other urogenital localizations of the International Statistical Classification of Diseases and Related Health Problems of the 10th revision (ICD-10).

A survey was conducted of patients who applied to the venereology department of Dermatovenerologic Dispensary No. 8. The questionnaire, developed by the author for patients with STIs, included questions regarding the medical and social characteristics of the applicants, their life style, social status, sexual behavior, level of awareness of sexually transmitted diseases, marital status, sexual activity. The questionnaire was filled in at the time of applying for the medical care of patients of the venereology department of Dermatovenerologic Dispensary No. 8, the data were supplemented with the results of laboratory studies. 215 questionnaires were randomized, taking into account age and gender.

The sample set was formed using multistage, nest, conjugate and targeted selection by random sampling from the total number of applicants. A comparative analysis of the socio-hygienic characteristics, lifestyle, sexual behavior, health literacy and medical activity of those who applied to the venereology department of St. Petersburg Medical University No. 8 was presented.

Research Results and Discussion

Thus, the cause of the treatment of men in 62.5% was the casual sexual relationship; 32.1% made a complaint having a regular sexual partner; 37.5% applied after the occasional sexual relationship of a regular sexual partner; 35.4% were sent by specialists from other medical institutions; 47.1% of men applied for the purpose of preventive examination, of which 6.9% before planning a pregnancy with regular sexual partner, including in vitro fertilization (Table 1). Among the men surveyed, persons with secondary specialized and general secondary education prevailed - 59.7%; 31.5% had a higher or incomplete higher education, had no education and had an initial 8.8% of respondents among the respondents. Among respondents 33.4% were persons without defined occupations. At the same time, 66.5% of respondents were socially adapted citizens (working and students). There were 69 cases of STI among men of all age groups who applied to the venereologist, which accounts for 67.6% of the incidence of STIs, of which 23.2% of the incidence is among those with a preventive purpose.

It has been established that in the age group of 20-29 years, genital herpes occupies the leading position - 36.4%, urogenital ureaplasmosis - 22.7%. In 75% of cases of genital herpes and 60% of ureaplasmosis, those are people with secondary or incomplete secondary education. In the age group of 30-39 years, the leading pathology is urogenital chlamydia - 41.4%, human papillomavirus infection - 31.0%. 58.3% of cases of urogenital chlamydiasis are persons with secondary or incomplete secondary education and 66.7% of the incidence of human papillomavirus infection are in people with higher education. In the age group of 40 years and over 50% of cases revealed trichomoniasis, 16.7% of cases - genital herpes. 62.5% of cases of trichomoniasis are persons with secondary or incomplete secondary education (Table 2). Not married patients accounted for 50.8% among patients with STIs, which can be considered as a factor contributing to the spread of casual sex and the spread of sexually transmitted diseases. The reason for application of women in 37.5% was casual sex; 67.9% filed complaints had regular sexual partner; 64.6% were sent by specialists from other medical institutions; 52.9% of women applied for a preventive examination, of which 14.4% before planning pregnancy and during pregnancy. Among the women surveyed, persons with higher and incomplete higher education prevailed - 39.8%; 49.6% - had secondary education, did not have education or only had an initial - 10.6% of respondents among the respondents.

Among respondents 31.0% were persons without defined occupations. At the same time, 69.0% of respondents were socially adapted citizens (working and students).

79 cases of registration of STIs among women of all age groups who applied to the venereologist were detected,

Table 1: Characteristics of the gender, age and social composition of the respondents.

Gender	Male		Female		Total
	102	47.40%	113	52.60%	215
Age group					
20-29	37	46.80%	42	53.20%	79
30-39	36	48.60%	38	51.40%	74
40 and older	29	46.80%	33	53.20%	62
Education					
Higher, uncompleted higher	17	31.50%	37	68.50%	54
Secondary	83	59.70%	56	40.30%	139
Initial or no education	10	45.50%	12	54.50%	22
Marital status					
Married	35	42.20%	48	57.80%	83
Not married	67	50.80%	65	49.20%	132
Reason for application					
Complaints	18	32.10%	38	67.90%	56
Casual sex	35	62.50%	21	37.50%	56
Directive from doctor of another specialty	17	35.40%	31	64.60%	48
occasional sexual relationship of a regular sexual partner	9	37.50%	15	62.50%	24
Pregnancy	7	58.30%	5	41.70%	12
Preventive	16	47.10%	18	52.90%	34
STI diagnosed	69	46.60%	79	53.40%	148

Table 2: Age structure of diagnosed STIs.

Age group	Pathology	Quantity	%
20-29 years	Genital herpes	8	36.40%
	Ureaplasmosis	5	22.70%
30-39 years	Chlamidiosis	12	41.40%
	Human papillomavirus	9	31.00%
40 years and older	Trichomoniasis	9	50.00%
	Genital herpes	3	16.70%

Table 3: Characteristics of the incidence of STI among women of all age groups who applied to venereologist.

Age group	Pathology	Quantity	%
20-29	Ureaplasmosis	15	41.70%
	Human papillomavirus	8	22.20%
30-39	Trichomoniasis	14	50.00%
	Genital herpes	7	25.00%
40 and older	Ureaplasmosis	7	46.70%
	Chlamidiasis	4	26.70%

which accounts for 70% of the incidence of STIs, of which 22.8% of the incidence is among those with a preventive purpose.

In the age group of 20-29 years, urogenital ureaplasmosis holds the leading position - 41.7%; human papillomavirus infection - 22.2%. In 55% of cases of urogenital ureaplasmosis incidence are persons with secondary or incomplete secondary education; in 69.2% of the incidence of HPV infection are persons with higher education. In the age group of 30-39 years old, trichomoniasis takes the largest number of identified pathologies - 50%, genital herpes - 25%. In 61.1% of cases of trichomoniasis incidence are persons with secondary or incomplete secondary education, in 55.6% incidence of genital herpes are persons with higher education. In the age group of 40 years and over, 46.7% of cases of registration of urogenital ureaplasmosis, 26.7% of cases of chlamydia. In 58.3% of cases of urogenital ureaplasmosis and in 57.1% of cases of chlamydia are persons with secondary or incomplete secondary education (Table 3).

In the group of socially adapted patients, venereal diseases are more common among workers (34.0% respectively in men and 34.8% in women), students of all types of educational institutions are in second place (12.8%) among STI patients. The results of the survey differed slightly from the above statistics (Table 4).

Thus, persons without a family accounted for 43.3% of men with STIs of men and 56.7% of women who were ill, which can be considered as a factor contributing to the spread of casual sex and the spread of sexually transmitted diseases. A distinctive feature of 48.7% is the fact of not knowing the circumstances under which the infection occurred. Of those who pointed out the circumstances and source of infection,

Table 4: Clinical and epidemiological characteristics of the prevalence of STI among respondents according to the survey data.

	Male		Female		Total
Total number	102	47.40%	113	52.60%	215
STI diagnosed	69	46.60%	79	53.40%	148
Age group					
20-29	22	37.90%	36	62.10%	58
30-39	29	50.90%	28	49.10%	57
40 and older	18	54.50%	15	45.50%	33
Marital status					
Married	27	52.90%	24	47.10%	51
Not married	42	43.30%	55	56.70%	97

23.6% of patients with STIs and 27.7% noted casual sexual partner. Promiscuity was noted in 35.8% of cases among STI patients. Men more often than women changed their sexual partners during the year.

Every third person among STI patients noted that they do not follow any rules in order not to expose others to the risk of infection. In addition, 57.4% of patients very rarely use barrier contraceptives as a means of prevention or do not use them at all.

A significant proportion (29.0%) of STI patients sought medical help after one month or more after the onset of the first symptoms. The main reasons are the low level of knowledge about sexually transmitted infections and the fear of violation of medical confidentiality by medical professionals. This fact testifies to the need for greater alertness and increasing the level of knowledge of medical workers of the general medical network about the first symptoms and differential diagnosis of STIs.

The survey established a low level of medical knowledge of patients about sexually transmitted infections, 46.8% do not suspect that they are at risk of infection during unprotected sexual contact with such venereal diseases as gonorrhea, trichomoniasis and chlamydia, and every fifth (21.9%) do not know at all what he can become infected through unprotected sex.

Patients with STIs have the following risk factors: an asocial lifestyle, sex-free relationships that lead to the spread of sexually transmitted diseases. Consequently, the prevention of classic sexually transmitted diseases and STIs of the new generation should be based on the same principles and should be directed not only at persons of active sexual age, but also at students of various educational institutions, including school children.

Summary and Conclusions

Thus, the developed infrastructure of the public finance sectors and the comprehensive development of society are the basis of any control program. To study the factors of the spread of STIs, it is necessary to study regional characteristics, living conditions, gender and age characteristics of a particular locality, and the study of the economic and social infrastructure. Many traditional risk factors for STIs (number of sexual partners, casual sex) are directly related to the possibility of infection, others (condom use, age, sex, etc.) affect the possibility of infection or disease if contact with an infected partner has occurred. The identification of risk groups makes it possible to more effectively carry out measures to prevent infection and reduce the spread of STIs. The solution of problems associated with these diseases should be based on the development of modern methods of diagnosis, the search for new drugs and vaccines, as well as prevention. Demographic and economic consequences of STIs exist, since these diseases have a significant impact on reproduction, social and family structures. Therefore, control of STIs should not be limited to the field of medicine. The main focus of this program is the availability of screening and implementation in practice. Public awareness of symptoms is a major part of secondary prevention. STIs, unlike most infections, can be asymptomatic, especially in women. It is necessary to inform the population that if any symptoms appear, it is necessary to stop any sexual activity and seek medical help, especially for people at high risk (individuals with multiple sexual partners and commercial sex workers). This risk group should be regularly examined to identify STIs.

When an STI is detected, treatment must be carried out by specialized institutions that provide dermatovenerological assistance. In real life, most often the treatment is carried out on the recommendation of pharmacists, advice from familiar people and Internet. This situation requires fundamental solutions in identifying, laboratory diagnosis, and treatment of STIs. With a syndromal approach to the treatment of STIs, there is a low detectability and lack of timely treatment of patients with asymptomatic forms of STIs, especially in women.

Development of various models and programs to control the incidence of STIs and complications after these infections is advisable. The basis of such models of prevention should be based on 2 basic principles:

a) Prevention of the development of STIs in different categories of citizens, their complications and consequences (special control over morbidity among young people, women, people of commercial sex);

b) Interruption of the routes and reduction in the frequency of transmission of infections in various social strata of the population.

Of course, the main task in the prevention of STIs is based on avoiding infection. For example, banning hormonal contraception with media commercials targeting barrier contraceptive methods should be considered. These measures reduce susceptibility to STDs. When using

condoms, especially among prostitutes, there is a significant reduction in STI infections in these individuals, representing a group with a high risk of infection. It is necessary to state funding programs for the implementation of free distribution of condoms in dormitories and public places, monitoring the quality of sold condoms in pharmacies.

In addition, to reduce the employment of women as commercial sex workers, it is necessary to develop special economic programs for communicating with regular partners and potential clients as part of safe sex.

Programs aimed at health education should cover all sexually active persons, but special attention should be paid to high school students and students from various educational institutions. It is necessary to develop methodological manuals on safer sex in terms of STIs prevention. Introduction of a course of sexology for undergraduate students of vocational schools with the participation of the Department of Psychology of the Herzen State Pedagogical University of Russia. This is a fundamental element of primary prevention.

It is necessary to create departments for the prevention of STIs free of charge at clinics in order to instill sexual literacy and awareness of the spread of STIs in citizens. Learning the characteristics of anal sex, in view of its distribution at the present time, not only among homosexuals, but also traditional couples is needed. The matter of the need for an enema before anal contact to prevent microflora from mixing should be reported to wide public.

To reduce accessibility to commercial sex workers and interrupt the spread of STIs, it is necessary to widely develop sex shops in order to meet the needs of the population in intimate matters. To achieve that, it is necessary to create a special department for the realization of the belonging of an accessible sex life.

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DOI: 10.36959/719/583