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СОЦИАЛЬНО-ДЕМОГРАФИЧЕСКИЙ ПРОФИЛЬ ЛИЦ, ЖИВУЩИХ С ВИЧ/СПИД В ВАРНЕ ПОСЛЕ 2015 ГОДА

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Цель исследования: анализ социально-демографического профиля лиц, живущих с ВИЧ/СПИД (ЛЖВ) в Варне после 2015 г.

Материалы и методы. В исследовании приняли участие 100 ЛЖВ. Все статистические анализы выполнялись с использованием программного обеспечения SPSS v. 20.0. Использовали дисперсионный анализ, сравнительный анализ (ρ2), корреляционный анализ (коэффициент Стьюдента, ρ) и анализ отношений риска (RR). Уровень значимости был принят равным 0,05 и рассчитывались 95% доверительные интервалы.

Результаты эпидемиологического анализа показывают, что для региона Варны характерен низкий эндемический риск ВИЧ/СПИДа. Основу ЛЖВ составляют мужчины (72,00%), в основном имеющие имеющих секс с мужчинами, преобладают лица в возрасте от 20 до 29 лет (56,00%) со средним образованием (58,00%), болгарской этнической принадлежности (66,00%) и жители города (82,0%). Приблизительно у ⅓ (32,0%) пациентов были инфекции, передающиеся половым путем, с преобладанием сифилиса (43,80%) и гепатита С (25,0%).

Заключение. Город Варна определен как успешная модель в области профилактики ВИЧ/СПИДа, судя по характеристикам групп риска с отличным сотрудничеством между заинтересованными учреждениями, с хорошим стратегическим подходом в планировании и развитии местной политики в области профилактики СПИДа.

Ключевые слова: эпидемиология, социально-демографический профиль, лица, живущие с ВИЧ/СПИД, инфекции, передающиеся половым путем

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EPIDEMIOLOGY OF THE SOCIO-DEMOGRAPHIC PROFILE OF HIV-POSITIVE PEOPLE IN VARNA AFTER 2015

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Introduction. The epidemic process of HIV/AIDS is a complex mix of diverse epidemics in and between different countries and regions around the world and is a leading public health crisis of our time.

Aim. The purpose of this study is to analyze the socio-demographic profile of HIV-positive people in Varna. after 2015.

Materials and methods. This study included a total of 100 HIV-positive people. All statistical analyzes are performed using SPSS v. 20.0 software. Analysis of variancecomparative analysis (ρ2), correlation analysis (Student's coefficient, ρ) and risk analysis (RR) were used. Level of significance was taken to be 0.05 and 95% confidence interval were calculated.

Results. The results of the epidemiological analysis show that the Varna region is characterized by a low endemic risk of HIV / AIDS. The majority of PLHIV are men (72.0%), mainly among men who have sex with men (72.0%), persons aged 20–29 (56.00%) with secondary education (58.0%), bulgarian ethnicity (66.0%) and those living in the city (82.0%) predominate. About ⅓ (32.0%) of the subjects had sexually transmitted infections, with syphilis rankng first (43.80%) followed by hepatitis C (25.0%).

Conclusion. The city of Varna is defined as a successful model in the field of HIV/AIDS prevention, based on risk groups characteristics, with excellent cooperation between the interested institutions, and a good strategic approach in the planning and development of local HIV/AIDS prevention policies.

Key words: epidemiology, socio-demographic profile, HIV-positive people, STIs

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Introduction. The HIV/AIDS pandemic is a complex mix of diverse epidemics in and between countries and regions around the world and is a leading public health crisis of our time [1, 2]. HIV/AIDS has become a global challenge for scientists, leading to many studies in the fields of epidemiology and risk groups, etiology, pathogenesis, a diverse clinical picture in different stages of the disease, diagnosis, treatment and prevention [3]. The socio-cultural prejudices that HIV/AIDS has been described and categorized by some authors define it as a moral and medical problem [4].

After 39 years of diagnosing the first cases of HIV/AIDS, experts reject the stereotypes associated with the infected as well as the continent suspected that disease arise. They emphasize that the disease affects a much larger population, the whole world, and not just the risk groups.

Significant progress has been made in the global efforts to diagnose, prevent HIV infection and treat people living with HIV/AIDS [3]. Despite significant advances in diagnosis and treatment, HIV/AIDS is not yet fully controlled and has serious implications for millions of people worldwide, affecting mainly young people, MSM, IDUs, prisoners, and sex workers [5].

Bulgaria is in the group of countries with low prevalence of HIV/AIDS infection.

The demographic situation in our country with the continuing decline and aging of the population, the migration of young people and their realization abroad, the declining birth rate and the persisting high level of overall mortality play an important role in the low level of infection.

The occurrence and spread of HIV/AIDS infection in Varna region follows the pattern specific for the country and the country. The city of Varna and the region with its specific geographical location are an important economic, tourist and maritime center. An educational complex of higher education institutions (universities) with international recognition and students from all over the world has been established and operates in the city. The combination of these factors determines the continuous migration of people of different ages and nationalities and overpopulation during the summer tourist season. Opportunities are being created for the dissenimated and spread of various diseases, including HIV/AIDS. In Varna region, the first cases were reported in 1989 were three sailors.

Aim. The purpose of this study is to analyze the socio-demographic profile of HIV positive persons in Varna for the period 2015–2019.

Materials and methods. This study included a total of 100 HIV-positive people. Serum samples were used to detect HBV, HCV infection and syphilis. All statistical analyzes are performed using SPSS v. 20.0 software. Variation analysis, comparative analysis ($\rho 2$), correlation analysis (Student's coefficient, ρ) and risk analysis (RR) were used. Level of significance $p<0.05$ and 95% confidence interval CI 95%.

Results. The study involved 100 HIV-positive people who were followed and treated in hospital for 2019.

Table 1 presents the data of the number of patients who were monitored and treated at the hospital «St. Marina» Varna for the period 2015–2019.

The characteristics of the respondents is presented in Table 2.

The results show that men (72.0%), persons aged 20–29 (56.0%) with secondary education (58.0%), Bulgarian ethnicity (66.0%) and living people in the city (82.0%) predominate. Just over half of the respondents (58.0%) share the risky behavior that led to their HIV infection. In the analysis of gender risk behavior, we found a significant difference between men and women ($\chi^2=30.51$; $p<0.001$) (Fig. 1). Between gender and risk behavior was found a strong correlation ($\rho=0.552$; $p<0.001$), the skirt formed around 30.50% of the risk behavior of the individuals. We have shown that male gender is a risk factor for HIV infection (RR=5.25 (2.09–13.14)).

The seropositives we study belong to basically three groups, one in the group of the prostituting men and those with HIV positive sexual partners (Fig. 2).

In more than ⅓ (38.0%) of cases, the duration of HIV infection is between 1 and 2 years (Fig. 3).

In examining the relationship between the ages of seropositives and HIV infection limitation, we found a

Table 1

Number of patients for follow-up and treatment at St. Marina Hospital in Varna, HIV/AIDS Sector, Department of Infectious Diseases, for the period 2015–2019

Таблица 1

Количество пациентов, находящихся на наблюдении и лечении в больнице Святой Марины в Варне, в секторе ВИЧ/СПИДа, Отделение инфекционных заболеваний, за период 2015–2019 годов

Year	2015	2016	2017	2018	2019
Total	143	148	168	175	201
			113 men | 43 women	127 men | 48 women	146 men | 53 women
Treatment	110	132	154	168	199
Tracking	33	16	14	7	2

Table 2

Characteristics of the seropositive respondents examined

Таблица 2

Характеристики обследованных серопозитивных респондентов

Socio-demographic factors	N/%	
Sex	Men	72/72,0%
	Women	28/28,0%
Age group	Mean±SD	37,7±10,5 г
	<19 лет	12/12,0%
	20–24 года	26/26,0%
	25–29 лет	30/30,0%
	30–39 лет	14/14,0%
	40–49 лет	10/10,0%
	> 50 лет	8/8,0%
Education	Without education	4/4,0%
	Basically	20/20,0%
	Primary	8/8,0%
	Secondary	58/58,0%
	High	10/10,0%
Ethnic origin	Bulgarian	66/66,0%
	Roma	14/14,0%
	Turkish	16/16,0%
	Other	4/4,0%
Residence	City	82/82,0%
	Village	18/18,0%

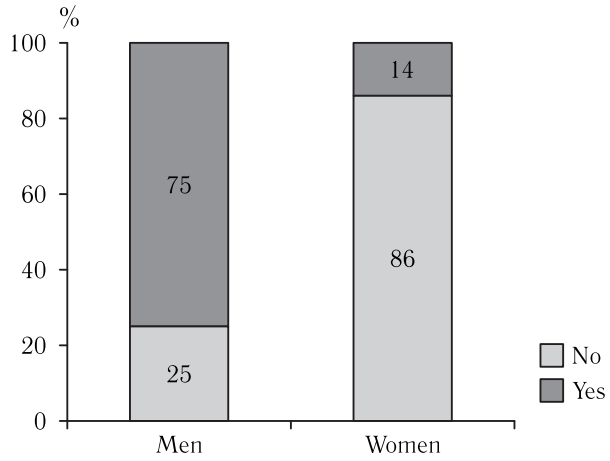

Fig. 1. Belonging to risk group according to gender
Рис. 1. Принадлежность к группе риска по полу

moderate proportional dependence (ρ=0.478; p<0.001), i.e. with increasing age, the limitation of infection increases.The minimum age of HIV infection in our sample is <18 years (Fig. 4).

About 1/3 (32.0%) of the subjects researched had sexually transmitted infections, with syphilis predominant (43.80%) followed by hepatitis C (25.0%). Total HIV-positive people with hepatitis are 56.2% (Fig. 5).

The results show that there is a significant difference in the transmission of STIs. SBS is more common in men (χ^2=8,09; p=0.003), and the male sex is a risk factor for the transmission of SBS (RR=3,92 (1,28–12,04) (Fig. 6).

Residence, age, ethnicity, education and duration of HIV infection showed no dependence on STIs.

The analysis of the two risk groups, injecting drug users and men having sex with men showed a significant difference in the type of STIs (χ^2=115.09; p<0.001), with those with hepatitis C predominant (80,0%), while the MSM predominate persons with syphilis (61.5%). The results show that all HIV seropositive injecting drug users have STIs, mainly hepatitis (B or C), while 51.9% of MSM are without STIs.

Discussion. The results of the study show that younger people are at a higher risk of HIV infection than older, as they begin their sexual lives at an early age.

The mean age of the individuals in our sample is 37.7 years, which is consistent with the results of other researches [6]. While a study in Thailand found that women under the age of 16 were more likely to have HIV infection [7, 8].

In our research, 72% of HIV-positive individuals were men, which is higher than the results of other researches, in which 62.51% of HIV-positive individuals are men [9]. Men are 1.6 times more likely to be HIV positive than women (CI 1.321–2.022) [6].

HIV infection is a preventable disease and improved awareness and behavioral changes can reduce the

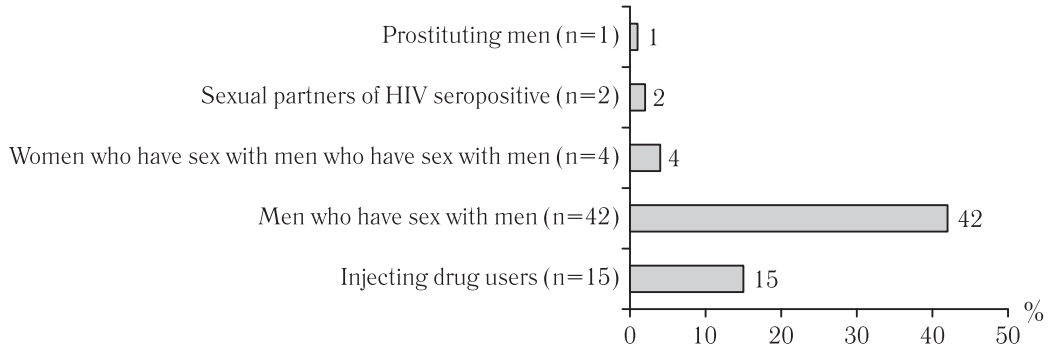

Fig. 2. Affiliation with risk groups
Рис. 2. Принадлежность к группам риска

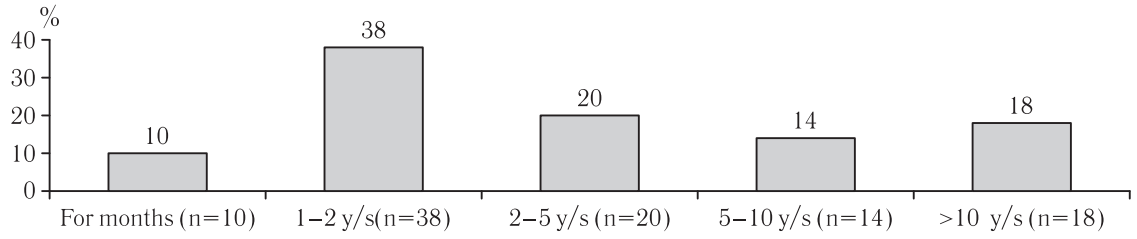

Fig. 3. Limitation of HIV infection
Рис. 3. Ограничение ВИЧ-инфекции

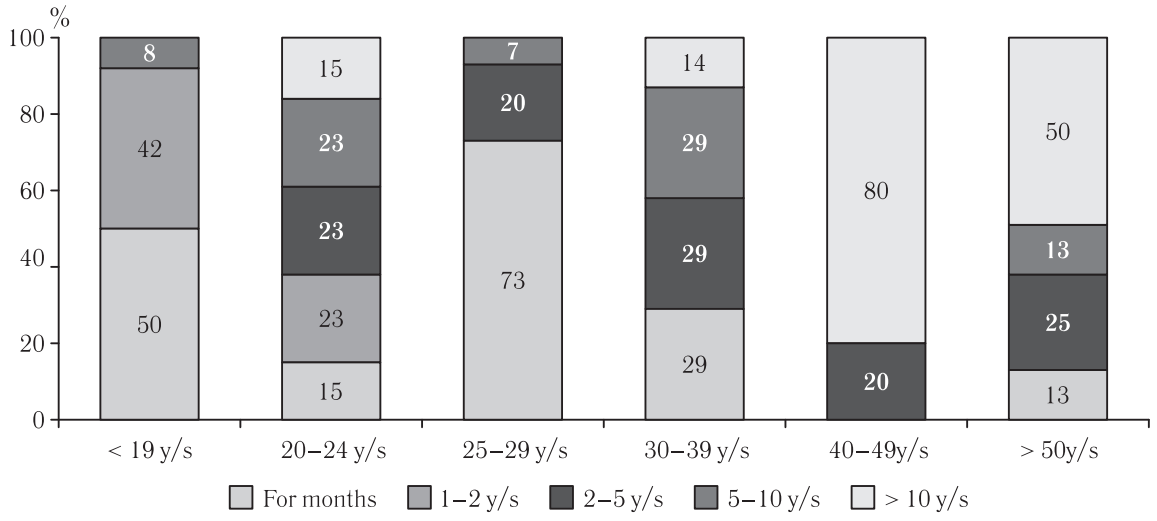

Fig. 4. Age-limitation relationship of HIV infection
Рис. 4. Зависимость ВИЧ-инфекции от возраста

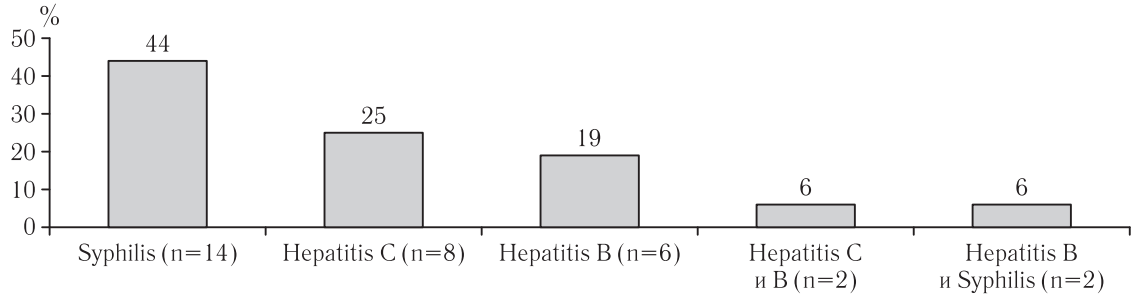

Fig. 5. Distribution of HIV seropositives by type of STI
Рис. 5. Распределение серопозитивных к ВИЧ по типу ИППП

infection. Socio-economic status, measured by an individual's income, occupation or education, reflects his or her position in society and is one of the major predictors of illness and health [10]. It is known that

education plays an important role in preventing early sexual debut and risky sexual behavior [11].

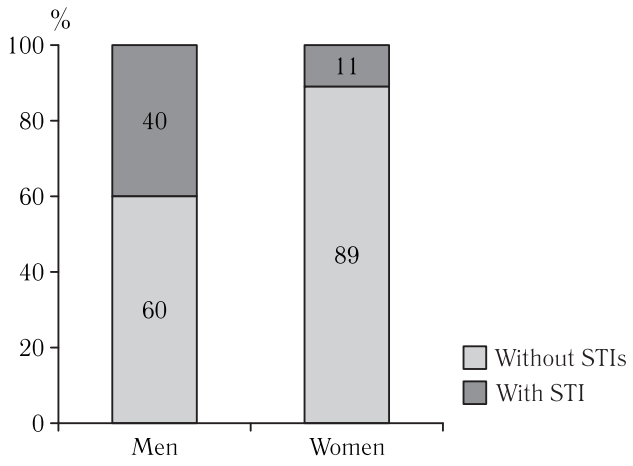

Fig. 6. Gender-based STI
Рис. 6. Гендерные ИППП

The overall incidence of syphilis in the world has increased in recent years [12–14], partly due to its association with HIV infection [15], especially in high-risk groups, including injecting drug users and men having sex with men [16–18]. In our study, as well as in other studies, men who have sex with men (MSM) showed the highest exposure to syphilis [17, 19, 20].

The presence of HIV infection facilitates the transmission of hepatitis viruses through blood and through sexual contact [21]. HCV coinfection is higher in HIV-infected men compared to women's group, which is primarily due to unprotected sexual contact between them and the use of a common needle for injection of drugs [22, 23].

Conclusion. Seropositive respondents are dominated by age group 20–29, secondary education, Bulgarian ethnic and male, with half sharing about risky behavior (MSM followed by IDUs and representatives of the group of prostituted men), while the rest do not define their behavior as risky or are afraid to admit it because of the risk of discrimination. The prevalence of syphilis among HIV patients remains high and follows the same trend as HIV infection. Our results indicate that HIV-positive people were at high risk of acquiring HBV and HCV co-infections primarily through the use of a common needle for drug injection. Adequate surveillance and control practices have been set up, adapted to the local national epidemic situation by monitoring the particularities of groups at risk, to cope with the epidemic process in the region. The city of Varna is defined as a successful model in the field of HIV/AIDS prevention, by following the characteristics of groups at risk with excellent cooperation between the interested institutions, with a good strategic approach in the planning and development of local HIV/AIDS prevention policies.

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