

Epidemiologic characteristics of AIDS in the Zadar area, Croatia

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ABSTRACT

Data on AIDS patients in the Zadar area, Croatia are presented. Since the appearance of the first patient in 1990, to the end of 2000, there have been registered 18 patients; 15 of them were males and 3 women. It makes total morbidity of 10/100 000 inhabitants.

It is significantly higher than morbidity level in whole Croatia, which amounts to 3.5/100 000 inhabitants. The number of new cases oscillated from 0 to 5 annually.

7 patients were heterosexuals, 5 of them were bisexuals, 3 homosexuals and 3 wives infected by their husbands. None of them was in risky groups of intravenous drug users or hemophiliac.

Out of the total number, there were 8 (44,4%) sailors and two of them infected their wives. So, the total number of patients connected to this occupation amounts to 10 (55,5%). All diseased sailors contracted the infection in overseas harbors from prostitutes.

Although the presented data show a lower intensity AIDS epidemic in the Zadar area compared to certain areas in Europe and worldwide, the incidence is higher than in other areas of Croatia. In view of the seriousness of this disease all necessary measures are to be taken in order to prevent a further spread of the epidemic.

KEY WORDS

**AIDS,
epidemiology,
Zadar area,
Croatia**

Introduction

After the first information on an unknown disease in 1981, the medical science and the whole world soon realized that we were facing a very serious health problem.

The epidemics of AIDS with a great number of infected, diseased and deaths spread throughout the whole world, with terrifying consequences, especially in some countries of Sub-Saharan Africa, Caribbean,

North America and South and Southeast Asia. In some of these countries, data about the number of HIV and AIDS cases are really dramatic. Globally, 36.1 million people were living with HIV/AIDS at the end of 2000, and since the beginning of the epidemic, there have been 21.8 million AIDS deaths (1).

A few years after the appearance of the disease, in 1986, the first patient was registered in Croatia.

Table 1. AIDS patients in the Zadar area, Croatia

Year	M	F	Total
1990	1	0	1
1991	3	0	3
1992	0	0	0
1993	2	1	3
1994	3	0	3
1995	1	0	1
1996	1	0	1
1997	0	0	0
1998	3	2	5
1999	0	0	0
2000	1	0	1
Total	15	3	18 (10/100 000)

In this study we want to show some epidemiologic characteristics of AIDS in Zadar area, which is situated in the middle of Croatian coast.

Material and methods

We analyzed AIDS patients in whom the diagnosis was made at the General Hospital Zadar, in the period from 1990 to the end of 2000. Beside the clinical examination, in all patients laboratory tests were performed (ELISA Anti HIV 1 HIV 2, Asym test, Abbott). Diagnosis was confirmed afterwards by Western blot test in «Dr. Fran Mihaljević » Infectology Clinic, in Zagreb.

Results

During the 11-year period, 18 AIDS patients, 15 (83.3%) males and 3 (16.7%) females we registered in General Hospital Zadar. Table 1.

During the same period, 57 642 tests were made, which were positive in 21 (0.036%) persons. All patients were adults, 24 to 56 years old.

Table 2. Risky groups of AIDS patients in Zadar area

	n	%
Heterosexuals	7	38,9
Homosexuals	3	16,7
Bisexuals	5	27,7
Wives of diseased husbands	3	16,7
Total	18	100,0

According to estimated number of inhabitants of Zadar area, total morbidity is 10/100,000. During the mentioned period, the number of AIDS patients was from 0 to 5 cases annually that is 1.63 patients on an average. It makes annual incidence of 0.9/100,000.

Out of the total number, there were 7 heterosexuals, 3 homosexuals and 5 bisexuals, while 3 female persons were infected by their husbands. Table 2.

Our patients had different professions, but the majority, that is 8 of them, were sailors. Two female patients were sailors' wives and contracted the disease from their husbands.

By the end of 2000, 10 (55.5%) patients died and 8 (44.5%) were still living. The prevalence was 4.4/100,000.

Discussion

Although the number of newly infected HIV cases in certain countries of the world is becoming constant or is even on the decrease, as in the countries of Western Europe, the epidemic still poses the most important global health problem (1,2).

The data presented show that there is a significantly lower frequency of AIDS in Zadar area compared to Europe and other parts of the world (1-3). According to data of Croatian Institute of Public Health, morbidity for whole Croatia is even lower, and total morbidity by the end of 2000 was 3.5/100,000.

The incidence in Croatia is about 0.4/100,000 annually (4-6).

All our patients were of promiscuous behavior or homosexuals and bisexuals respectively. It is noticeable that none of them belonged to risk groups, e.g. intravenous drug users or blood and blood products recipients, as it is in the rest of Croatia, and elsewhere (4-7).

This is very important because of the great number of drug users in Zadar area, which has, unfortunately become a critical problem in our country.

According to their professions the majority of our patients were sailors who contracted the infection in overseas harbors after having sexual contacts with prostitutes. Two of them infected their wives, so the total number of diseased related to this profession is more than half (55.5%). It is evident that warnings and fear of AIDS as well as carrying out of preventive measures have not been accepted by the general population. Sailors should be best advised to use condoms and take additional precautions when having intercourse with prostitutes.

Conclusions

In conclusion, we can say that health authorities in our country were prepared to meet the AIDS epidemic

and undertook the necessary measures. These include education of all classes of society, early detection and observation of the diseased and infected, as well as of persons who had contact with them. Preventive measures among drug users, strict control of blood and blood products. Only volunteer blood donors from

Croatia are accepted. Strict measures for prevention of infection are observed in all health institutions.

Hopefully, these measures as well as a rational behavior of our people will create a successful barrier to further spreading of HIV infection and of other sexually transmitted diseases in Zadar area and in whole Croatia.

REFERENCES

1. UNAIDS and WHO. AIDS Epidemic Update: December 2000, Geneva, UNAIDS, 2000.
2. Piot P, Merson MH. Global Perspectives on Human Immunodeficiency Virus Infection and Acquired Immunodeficiency Syndrome. In: Mandell GI, Bennett JE, Dolin R. Principles and Practice of Infectious Diseases, 5th ed. Philadelphia: Churchill Livingstone 2000; 1332-40.
3. Begovac J. Rasprostranjenost HIV-infekcije u svijetu. In: Beus I, Begovac J, ed. AIDS : HIV bolest. Zagreb: Graphis 1996; 45-53.
4. Borčić B. AIDS u Hrvatskoj. In: Beus I, Begovac J, ed. AIDS: HIV bolest. Zagreb: Graphis 1996; 54-8.
5. Gjenero-Margan I. Epidemiologija HIV infekcije i AIDS-a. In: Zbornik radova stručno-znanstvenog skupa Promicanje zdravlja u hrvatskom pučanstvu. Zagreb: Hrvatski zavod za javno zdravstvo, 1999; 36-41.
6. Gjenero-Margan I. Izvješće Službe za epidemiologiju Hrvatskog zavoda za javno zdravstvo. Zagreb, April 2001.
7. Doherty MC, Garfein RS, Monterroso E, Brown D, Vlahov D. Correlates of HIV infection among young adult short-term injection drug users. AIDS 2000; 14: 717-26.

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