HIV/AIDS Cases According to the Year of Diagnosis and Selected Characteristics of Cases Registered in the Federation of Bosnia and Herzegovina 1991-2004

Jelena Ravlija[1], Sandra Puvačić[2],
Zlatko Puvačić[2]*, Ivan Curić[1]

1. Institute of Epidemiology, Faculty of Medicine, University of Mostar, Bijeli Brijeg bb, 88 000 Mostar, Bosnia and Herzegovina
2. Institute of Epidemiology, Faculty of Medicine, University of Sarajevo, Čekaluša 90, 71 000 Sarajevo, Bosnia and Herzegovina

* Corresponding author

Abstract

In the period between 1991-2004, in the Federation of Bosnia and Herzegovina there were altogether 59 registered HIV positive persons, out of those 43 were clinically diagnosed with AIDS. Gender-wise, 83% of the infected were male, and 17% female. The age groups with the highest risk of being infected with HIV are 20-24 and 40-44. The most frequent way of infection is heterosexual intercourse (46%), followed by intravenous drug use (31%), whilst 23% of the registered were infected through homosexual intercourse. Out of 43 diagnosed AIDS cases, 42% are heterosexuals, 35% intravenous drug users, whilst 21 % are homosexual or bisexual. Out of the total number of registered HIV/AIDS cases in the Federation of Bosnia and Herzegovina, thirty two died during the mentioned period (54%).

KEY WORDS: HIV/AIDS, Federation of Bosnia and Herzegovina, heterosexual, IDU, homosexual.

INTRODUCTION

AIDS – Acquired Immune Deficiency Syndrome caused by HIV virus. An AIDS case is a person who has received an AIDS diagnosis. In Bosnia and Herzegovina, like other countries members of WHO, AIDS is diagnosed if a person was tested positive for HIV, and has one or more of the clinical illnesses, or indicative diseases that characterize AIDS (opportunistic infections, PCP-pneumonia, tuberculosis, cancer such as Kaposi sarcoma etc. (even when the CD4 T-lymphocyte count is above 200 cells mm3;1). HIV is transmitted via sexual activity, penetration and prenatal-vertical way (2). An increase in number of the HIV infected is a result of risky behaviour within the population and only well-organised health services, with an organised HIV infection monitoring system, can provide effective prevention to those not infected, and also significantly reduce the possibility of transmission among those infected with HIV. Centre for disease control and prevention (CDC) points-out that 51% of all HIV infections among adolescents and adults occur via sexual activity (30% homosexual-MSM, and 11% heterosexual contact in male cases (3). Among the HIV transmission risk groups intravenous drug users are at the second place. Epidemiological studies show that percentage of intravenous drug users among the HIV infected stands between 24 and 35%, depending on a country (4). However, countries with developed programmes of HIV prevention among IDUs recently record a decrease in the rate of HIV infections in this risk group category. During 1994-2000 in the USA, IDU-related HIV diagnoses among persons aged 13-19 years, and 30-39 years fell by 19%. IDUs acquire HIV through sharing drug-injection equipment with HIV infected persons followed by other risky behaviour, such as having unprotected sex (5). One of the most substantiated studies on HIV transmission risk conducted in 25 American states between 1999 and 2000, showed that 23% of virus carriers were infected through needle and syringe sharing, and in 8% of the infected the risk of infection was connected to unprotected sexual activity with HIV infected IDUs (6).

SOURCES AND METHODS

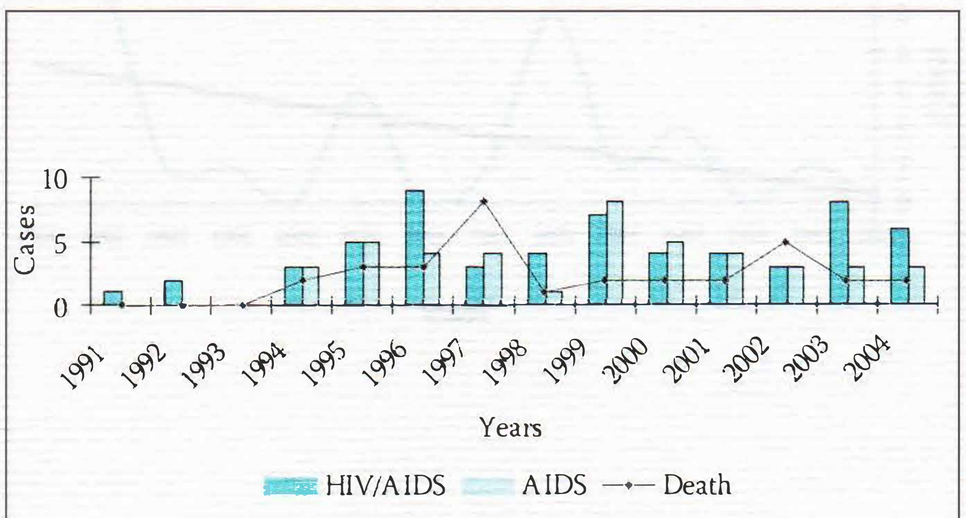
This study addresses trend of HIV/AIDS disease in the Federation of Bosnia and Herzegovina in the period between 1991 and 2004. HIV transmission characteristics for each registered HIV/AIDS case are determined on the basis of descriptive epidemiological analysis. The analysis is based on WHO recommended standard criteria for defining an HIV positive or AIDS case.

RESULTS

In the period 1991-2004, in the Federation of Bosnia and Herzegovina, there were 59 registered HIV positive cases, with 43 displaying a clinical picture of AIDS. Of the infected, 49 (83%) were male, and 10 (17%) were female. The median age was 38.3, ranging from 19 to 66 years (Graph 1). In the mentioned period, out of a total of 59 HIV/AIDS cases, 32 died (54%).

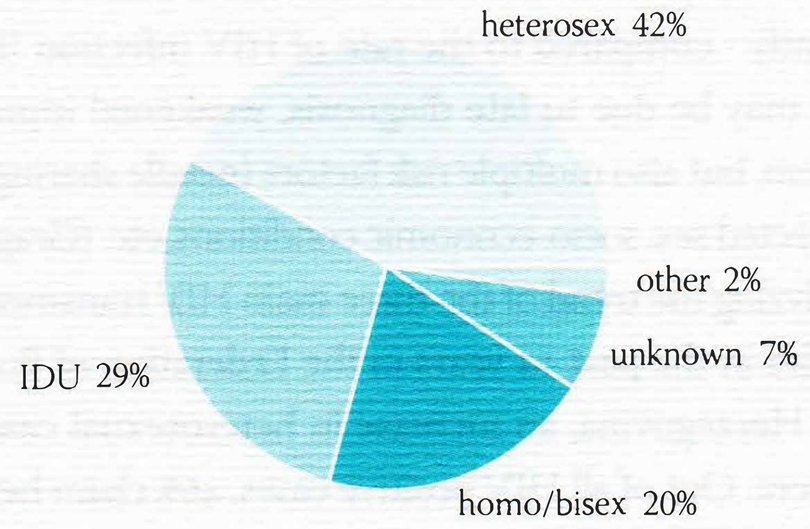
WAYS OF HIV TRANSMISSION AMONG THE REGISTERED HIV/AIDS CASES IN THE FEDERATION OF BOSNIA AND HERZEGOVINA

Sexual transmission is currently the most important route. Drug injection was the second factor that was strongly associated with HIV infection. Out of all registered HIV/AIDS cases in the abovementioned period, classified by the mode of HIV transmission, the largest number acquired HIV by sexual activity (62%), i.e. heterosexual 42% and homosexual 20% (Graph 2).



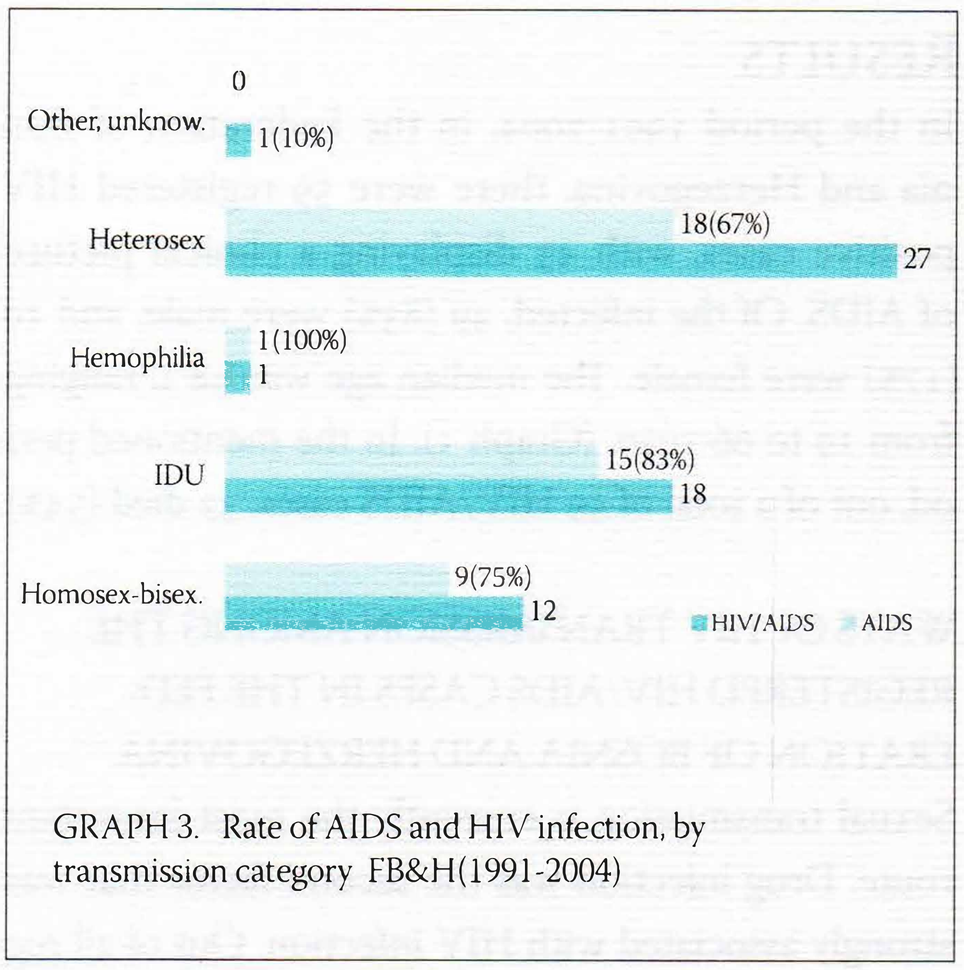
Source: Federal PHI, EuroHIV data

GRAPH 1. HIV/AIDS/death, FB&H (1991-2004)

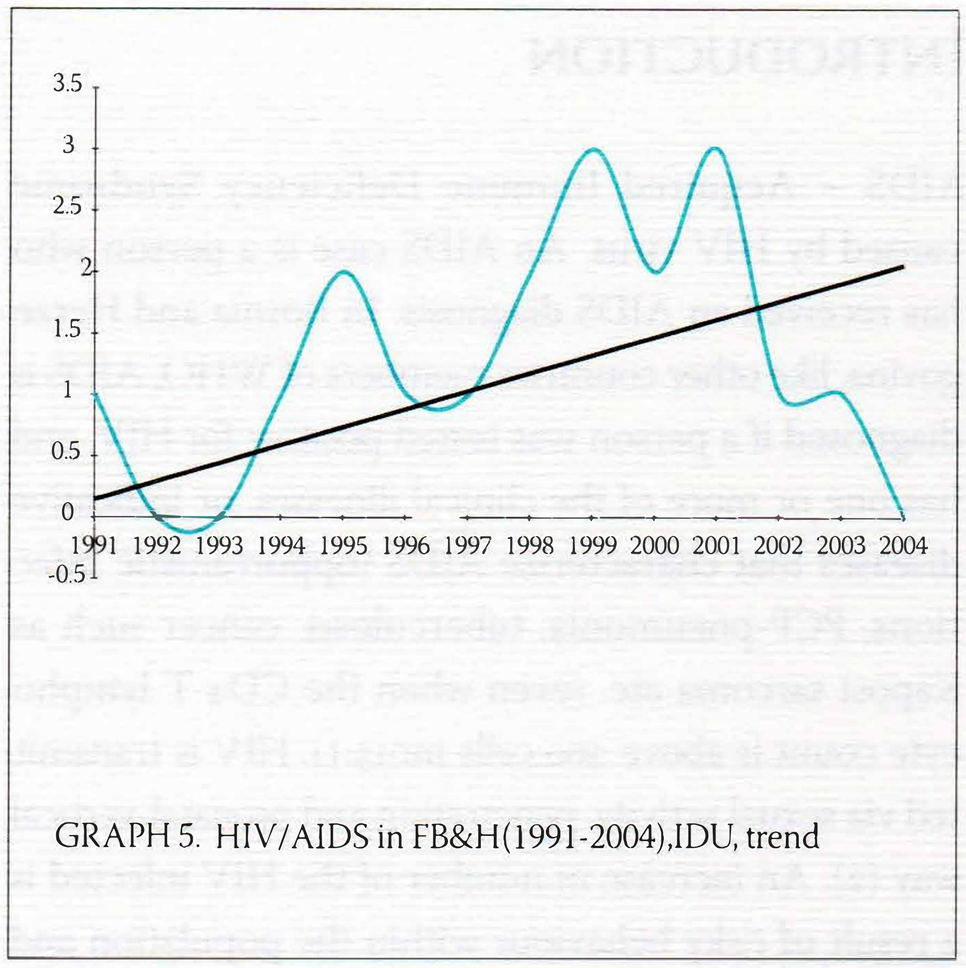


Source: Registered HIV/AIDS cases, PHI Federation Bosnia and Herzegovina, EuroHIV.

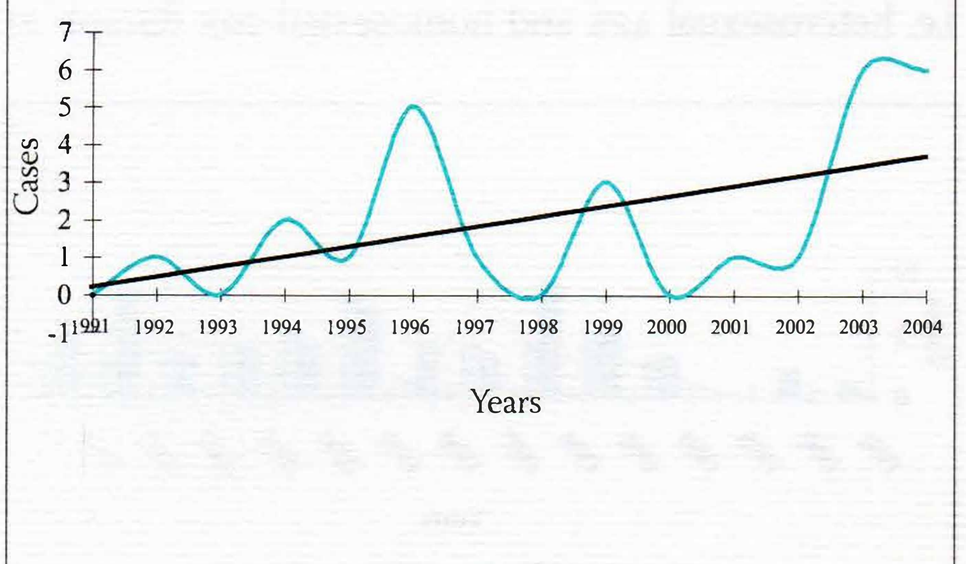
GRAPH 2. HIV/AIDS, FB&H (1991-2004) by mode of transmission



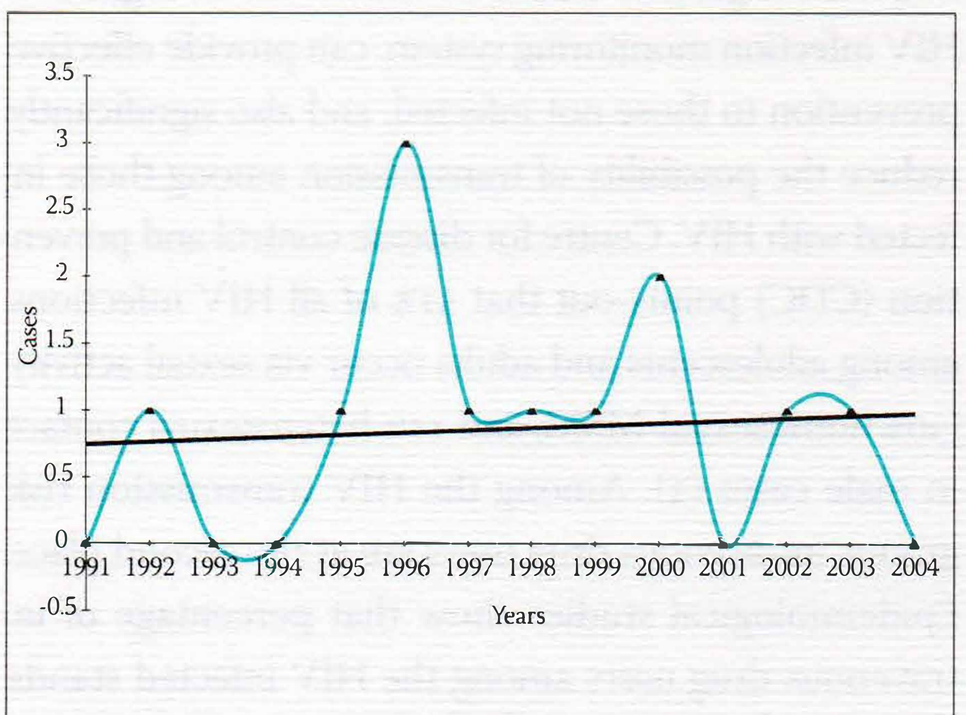
GRAPH 3. Rate of AIDS and HIV infection, by transmission category FB&H(1991-2004)



GRAPH 5. HIV/AIDS in FB&H(1991-2004),IDU, trend



GRAPH 4. HIV/AIDS in FB&H(1991-2004), heterosexual transmission

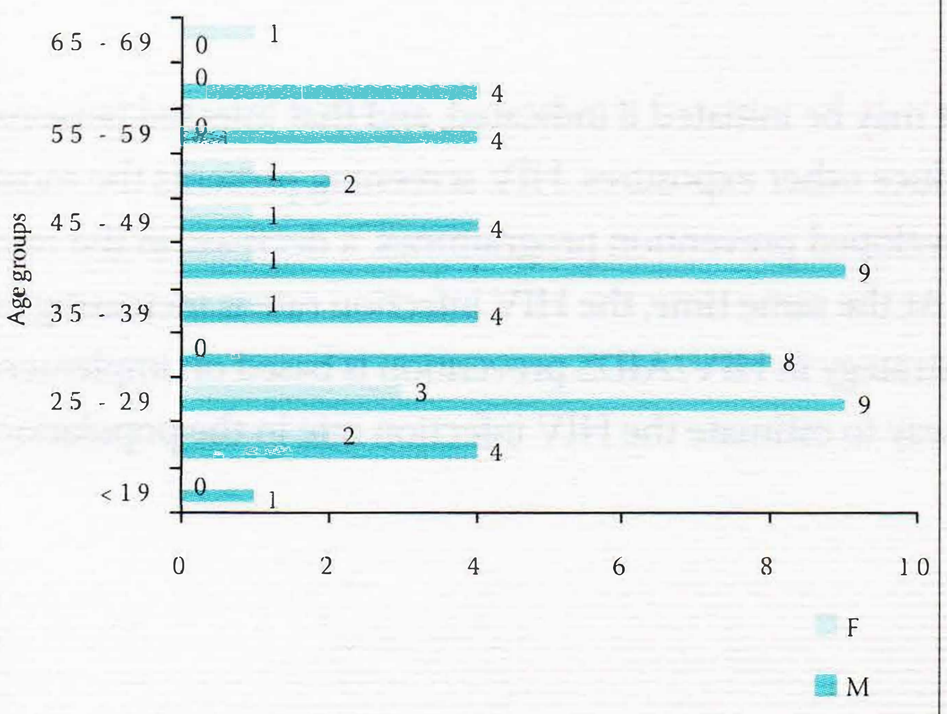


GRAPH 6. HIV/AIDS, FB&H(1991-2004), homo-bisexual.-trend

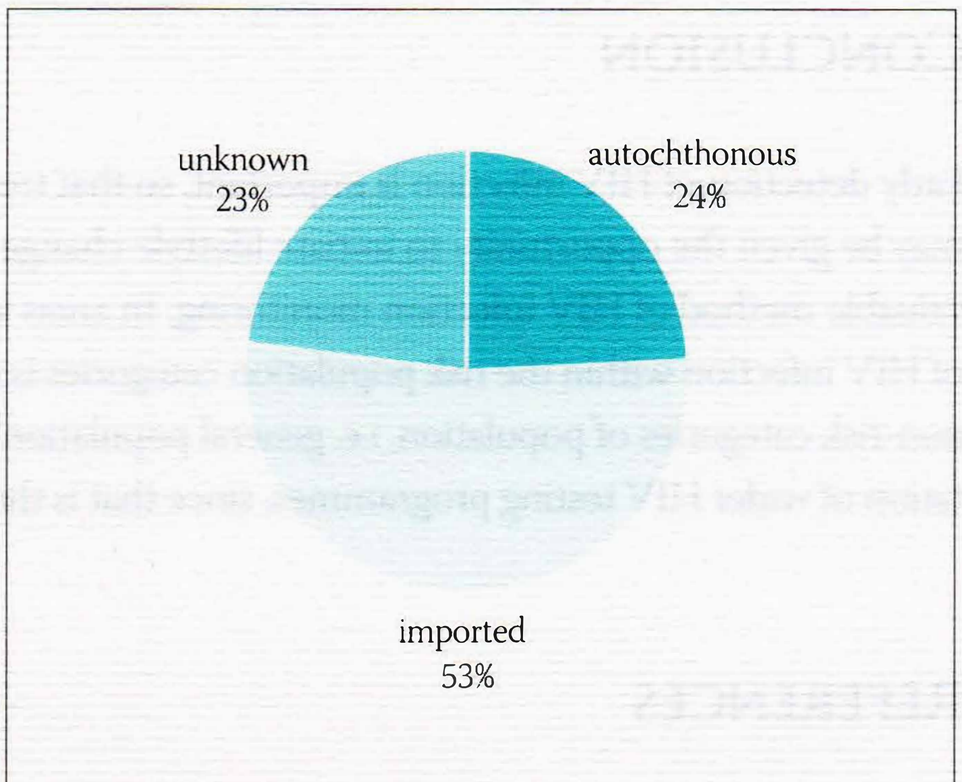
In the HIV/AIDS infected/ailing structure, intravenous drug users are second when it comes to the frequency of developing symptoms. It is among this population that the developed clinical AIDS manifests itself most frequently - compared to the rate of HIV infection (83%). This may be due to late diagnosis, weakened immune system, but also multiple risk factors (needle sharing, unprotected sex, socio-economic conditions, etc. (Graph 3). Analyzing the trend of the three main HIV transmission modes in the past 14 years in the Federation of Bosnia and Herzegovina, an increase in heterosexual cases is evident. Out of all HIV positive cases, 46% claim heterosexual activity as the mode of transmission (Graph 4). Intravenous drug users - as HIV transmission category that make 29% of all registered HIV/AIDS cases - also show a positive trend in the Federation of Bosnia and Herzegovina, in the period 1991-2004. Currently, about 12% of all cases of HIV infection in the Federation Bosnia and Herzegovina are attributable to syringe and needle sharing with an infected individual (Graph 5). Homosexual/bisexual HIV transmission category, in the analysed 14-year period in the Federation Bosnia and Herzegovina, shows rather steady trend. The men who have sex with men, may be at increased risk of spreading HIV if they engage in risky sexual practices. But use of needles and syringes is not only drug related risk factor for HIV (Graph 6).

AGE/SEX CHARACTERISTICS OF THE HIV/AIDS INFECTED/AILING IN THE FEDERATION BOSNIA AND HERZEGOVINA 1991-2004

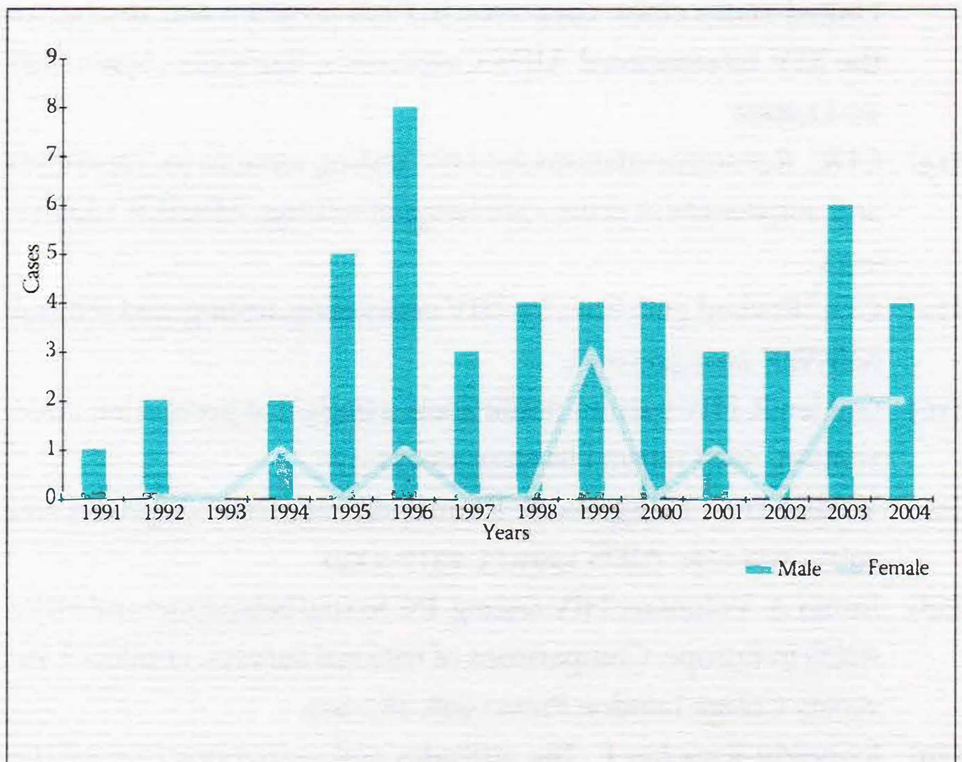
There is a slightly higher incidence of HIV in the younger population, aged 25-29, but also among those aged 40-44, notably males (Graph 7). The relation between age and sex and HIV infection may reflect the cumulative effect of risky behaviour (Graph 8).



GRAPH 7. HIV/AIDS in FB&H(1991-2004), by sex/age



GRAPH 9. HIV infection, FB&H(1991-2004), by origin



GRAPH 8. HIV/AIDS in FB&H(1991-2004),by sex

In the post-war period, an increase in women diagnosed with HIV is evident (prostitution, trafficking, (Graph 9.). Most of HIV/AIDS registered cases are imported (53%), whilst 24% of the infections are acquired locally. This concurs with characterisation of the population of Federation Bosnia and Herzegovina as unstable and mobile.

Discussion

HIV/AIDS statistics does not reflect the actual state of the infection rate not only because of low rate of registration, but also because a large part of the population is not aware of its HIV status. Strictly speaking, the real HIV prevalence state can only be established by means of voluntary blood testing not only of the population engaged in risky behaviour (which is already being conducted in Federation of Bosnia and Herzegovina by means of VCCT centre for voluntary and confidential advice and testing) but of general population too. Therefore, new strategies in HIV monitoring are being implemented with the aim of larger reach with the HIV screening activities not only among those requesting medical care, but during other medical interventions too. In the USA, HIV tests is a compulsory part of every in-hospital emergency medical treatment when the patient is received into the ward, with the aim of better monitoring of HIV prevalence (7,8,9). HIV screening of general population, and not just the risk categories, is becoming an evermore important monitoring measure in primary medical care (10,11,12). Model based cost effectiveness analyses of routine HIV screening in primary health care in the USA and inpatient settings have projected cost effectiveness ratio of $22 000-$ 36 700 per quality-adjusted life year gained, which is more cost effective than screening for colon cancer (13,14,15). New strategies for change are called for, including HIV testing as a routine part of medical care to increase the number of infected persons who are aware of their positive serostatus (16,17). The diagnosis of HIV in HIV infected persons is a priority in the USA (18,19). Routine voluntary HIV screening programs in emergency care wards, especially in areas of high HIV prevalence, can be successful at diagnosing persons with HIV and linking them to appropriate HIV care (20). .

Conclusion

Early detection of HIV infection is important, so that treatment may be initiated if indicated, and that infected persons may be given the opportunity to initiate lifestyle changes to reduce other exposures. HIV screening presents the most valuable method of HIV infection monitoring. In areas with developed prevention programmes, a decrease in the rate of HIV infection within the risk population categories is noted. At the same time, the HIV infection rate is increasing in non-risk categories of population, i.e. general population. New strategy in HIV/AIDS prevention is based on implementation of wider HIV testing programmes, since that is the only way to estimate the HIV infection rate in the population

References

(1) Acquired immunodeficiency syndrome (HIV infection, AIDS). In: Benenson A.S. Control of communicable diseases manual,16. rev.Washington:Am.Public Health Association 1995:1-8
(2) Last J.M. A dictionary of epidemiology, 4.th ed. New York: Oxford University press, 2001.
(3) National AIDS programmes: a guide to monitoring and evaluation . Geneva, UNAIDS, 2000 (http://www.who.int/hiv/pub/epidemiology/pubnap/en,accessed [access: 10.11.2003.]
(4) Centers for Disease Control and Prevention: HIV/AIDS Surveillance Report 2002, Vol. 14.
(5) UNAIDS/WHO, AIDS epidemic update, 2003.
(6) Leonard L., Gahagan J., Doherty M. et al. The experience of testing for HIV in pregnancy, Canadian Journal of Infectious Diseases 2001; 12: 85B
(7) CDC Advancing HIV prevention: New strategies for a changing epidemic. MMWR 2003; 52: 329-332.
(8) U.S. Department of Health and Human Services: HIV/AIDS Statistics, National Institute of Allergy and Infectious Diseases, 2004.
(9) World Health Organisation: Coverage of selected health services for HIV/AIDS prevention in less developed countries in 2001, WHO/HIV/2010.10, World Health Organisation, 2002
(10) Jürgens R. HIV testing and confindentiality: final Rewport, Montreal: Canadian HIV/AIDS Legal Network and Canadian AIDS Society, 1998.
(11) Janssen S, Holtgrave R. The serostatus approach figting the HIV epidemic: Prevention strategiges for infected individuals. Am. J. Pub. Health 2001; 91:1019
(12) Advancing HIV Prevention: New Strategies for Changing Epidemic United States, 2003. MMWR 2003; 52: 339-332.
(13) MacKellar A. Unrecognised HIV infection, risk behaviours, and misperceptions of risk among young men who have sex with men United States cities, 1994-2000.In:Final program and abstract of the XIV International AIDS Conference, Barcelona, Spain, July 15-12,2002.
(14) CDC. Recommendations for HIV testing services for inpatients and outpatients in acute-care hospital settings. MMWR 1993;42: 2-32.
(15) CDC Revised gudelines for HIV counseling, testing, and referral. MMWR 2001;50:19-23
(16) Golden R. HIV partner notification: a neglected prevention intervention. Sex Transm Dis 2002; 29:472-475.
(17) Valdiserri O, Holtgrave R. Promoting early HIV diagnosis and entry into care. AIDS 1999;13: 2317-2330.
(18) Jeanin A. Voluntary HIV testing. IN: Sexual behaviours and HIV/AIDS in Europe: Comparisons of national surveys. London: University Colege London Press,1998: 287-302.
(19) Joannidu-Kapolou E. The attitudes and sexual practices of the Greek population in the prevention of HIV infection as a basis for intervention policy. Health review 2001:12:33-38.
(20) Fichtner R. Influence of percieved and assessed risk on STD clinic clients' acceptance of HIV testing, return for test results, and HIV serostatus. Psyscho. Heath. Med. 1996;1:83-98