

ПРЕВАЛЕНЦА НА HBsAg, ANTI-HCV И ANTI-HIV АНТИТЕЛА КАЈ КРВОДАРИТЕЛИТЕ ВО ОПШТИНА БИТОЛА

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Извадок

Цел на трудот е да се одреди преваленцата на HBsAg, анти - HCV и анти - HIV антитела кај доброволните крводарители во Службата за трансфузиологија во Битола за периодот од 2000 до 2006 година.

Хепатит В, хепатит С и HIV/СИДА се значаен социјален и јавно здравствен проблем како во светот, така и кај нас.

Сите единици крв се тестирани на HBsAg, анти - HCV, анти - HIV антитела и контрола за сифилис во Службата за трансфузиологија во Битола.

во периодот од 2000-2006 година вкупно се тестирани 24052 крводарители во Службата за трансфузиологија во Битола, од кои вкупниот број на HBsAg позитивни крводарители е 120(0.5%), 66(0.3%) се анти-HCV позитивни, а анти HIV позитивни крводарители не се регистрирани во ниедна година.

Во Службата за трансфузиологија во општина Битола е регистрирана ниска серопреваленца за дадените вирусни маркери.

Клучни зборови: преваленца, HbsAg, анти-HCV, анти HIV, крводарители

THE PREVALENCE OF HBsAg, ANTI-HCV AND ANTI HIV ANTIBODIES TO THE BLOOD DONORS IN BITOLA MUNICIPALITY

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Abstract

The purpose was to determine the prevalence of HbcAg, anti-HCV and anti-HIV antibodies to the voluntary blood-donors in the Transfusion Unit in Bitola for the period of 2000 to 2006.

Hepatitis B, C and HIV/AIDS are significant social and public health problem in the world and in our country as well.

All the units have been tested of , HbsAg anti-HCV and anti-HIV antibodies and the syphilis control at the transfusion unit in Bitola.

During 2000-2006 there has been a total of 24052 tested blood-donors , in which, HbsAg positive are 120(0.5%), 66(0.3%) are anti-HCV positive, and anti HIV positive blood-donors are not registered at all to any.

In the transfusion unit in Bitola municipality it's been registered a low rate of seroprevalence for the given viral markers.

Key words: prevalence, HbsAg, anti-HCV, anti HIV, blood-donors

Introduction

Hepatitis B, C and HIV/AIDS are a social and health problem in the world and in our country as well. Because of the high rate of the prevalence of these diseases (apart from the transmission manner) and their serious occurrence in almost all the countries in the world, they became a public issue.

Hepatitis B virus has a global distribution and it is estimated that more than 1/3 of the world population is

being infected by Hepatitis B virus out of which 5% are chronically carriers and 25% pout of all chronically carriers are developing serious diseases of the liver as a chronic hepatitis, cirrhosis and hepato-celular cancer.

HCV infections are common and registered throughout the world and until the occurrence of the anti HCV screening blood-donors' tests in 1990/91 has been the main reason for the occurrence of the transfusion hepatitis (1).

HIC/AIDS is spreading rapidly throughout the world especially in the high developed countries. The Red Cross is estimating the risk of HIV transfusion infection to 1: 1.215.000 (2).

The blood safety needs to be secured in the entire transfusion chain starting with the message that is appointed to the target groups, the proper selection of the potential the blood donors, the blood transport, the control, the preparation of the blood components, their proper maintaining and the rational application.

The worldwide rate of controlled blood by viral markers is marked as 30%. In many countries, even in the ones where the blood is accessible, the risk of transfusion-transmitted infection is current as a result of bad selection of blood donors or the usage of untested blood units. In the developing countries where 80% out of the blood supplies are gained by paid blood-donors, the number of infected in high. In these countries 5% of HIV infections are acquired by transfusion of contaminated blood where the infection percentage is 100% and ending as deceased by the end of the first year.

It is well-known that by blood transfusion and HBV /HIV infected blood components will be infected more than 95% of the transfusion patients and with the transfusion of positive anti-HCV antibodies blood will come out as 85-90% infected patients. (3).

Transfusion transmitted infection are a real problem in the transfusion unit. Post-transfusion reactions (together with the TTI) are occurring at 5-12% from the transfusion infected patients. (4,5). The risk of getting an infection (or other type of reaction) has to be compared with the benefit of the used blood(6).

To preclude the spreading of the transfusion-transmitted infection, it is necessary to provide a timely detection of the infected blood-donors and their exclusion from the blood usage and treatment. At the same time the screening and the confirming tests are being improved and developed, which also need to be:

- Highly sensitive and specific
- Simple to complete
- Maximally automated in order to avoid the subjective errors.

In our country it is mandatory to test each blood units with using transfusion transmitted markers for: HBsAg, anti-HCV antibody, anti HIV antibody and antibodies of Treponema Palidum.

Materials and methods

This paper is a retrospective-prospective study. All the blood-donors registered in the transfusion unit in Bitola municipality have been comprised during the retrospective analysis, in the period of 2000-2005. The prospective analysis has been implemented during 2006 using the questionnaires. The study is of an incidental character i.e. the examined blood-donors are registered during the last 7 years.

All blood units' are tested by HbsAg, anti HCV, anti HIV antibodies as well as controlled for syphilis at the transfusion unit in Bitola.

To prepare the analysis the data from the daily registrars was used from the transfusion unit in Bitola.

The imuno-enzym tests from BIOMERIUX" and „ORTHO" to the devices of „ORGANON" were used in order to prove the viral markers.

The testing is being performed with the confirmed procedure and manuals given by the manufacturer to the test reagents and with the compulsory set up of the positive and negative controls.

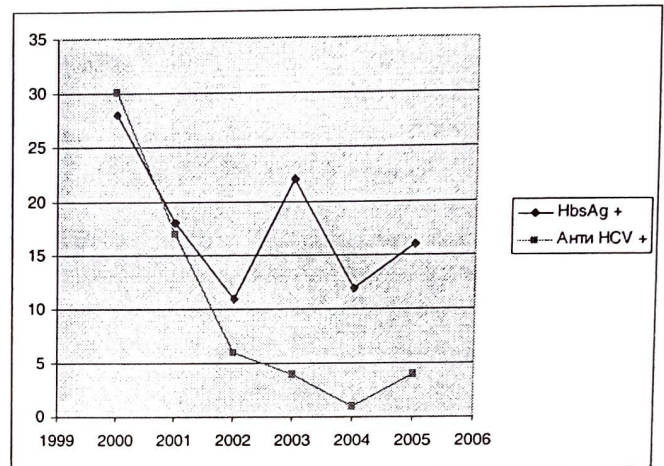


Fig.1. Graphical presentation of the frequency of HbsAg, anti HCV antibodies to the blood-donors in Bitola municipality in 2000-2006

Results

As of the table 1 it can be seen that during the period of 2000 to 2006 the total of 24052 blood donors were tested at the transfusion unit in Bitola. The total number of HbsAg positive blood-donors is 120(0.5 %), 66(0.3%) are anti HCV positive and anti HIV positive blood-donors are not registered at all during this period.

During the period of analysis most of the HbsAg positive blood-donors are registered in 2000 (28 or 0.8%), and at this same year 30(0.8%) are registered as anti HCV positive. The number of HbsAg positive registered is minimal in 2002 with a total of 11(0.3%), while the least anti-HCV positive blood-donors are registered in 2004 with a total of 1(0.2%).

Table 1. The frequency of HbsAg, anti HCV and anti HIV antibodies to the blood-donors in Bitola municipality in 2000-2006

Year	Blood-donors	HbsAg +	anti- HCV +	anti- HIV +
2000	3685	28	30	0
2001	3414	18	17	0
2002	3483	11	6	0
2003	3363	22	4	0
2004	3520	12	1	0
2005	3470	16	4	0
2006	3117	13	4	0
Sum.	24052	120	66	0

Discussion

In Bitola municipality the voluntary blood-donors are registering the prevalence such as:

1. HbsAg in 0.5%
2. anti HCV antibodies in 0.3%

which belongs to the low seroprevalence rate. The positive markers for anti HIV antibodies are not registered during the period of analysis which might be coming as a result of low rate for morbidity in R. of Macedonia.

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