ISSN 1304-2718

Blood Banking and Transfusion Medicine

Journal of Blood Banks and Transfusion Society of Turkey

Volume 1 Number 1 July 2003 Supplement 1

PLENARY & STATE OF THE ART LECTURES ABSTRACTS

VIII EUROPEAN CONGRESS

of the International Society of Blood Transfusion

July 5-9, 2003

İstanbul - Türkiye

DEOMED

Blood Banking and Transfusion Medicine

Journal of Blood Banks and Transfusion Society of Turkey

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Aims and Scope

The Journal of "Blood Banking and Transfusion Medicine" (ISSN 1304-2718) is published quarterly (January, April, July, October) by Deomed Medical Publishing Services for the Blood Banks and Transfusion Society of Türkiye, and considers the publication of original manuscripts dealing with important and novel developments in the fast growing field of transfusion medicine. In addition reviews, case reports, original articles of clinical and laboratory trials as well as papers dedicated to more practical aspects covering new devices and techniques will be published. Reviews from authors are invited.

All contributions, coming from all over the world undergo the peer-review process guided by international editors of the highest scientific level. Articles are sought which emphasize research especially in the fields of, but by no means limited to; organization, quality management, promotion of voluntary blood transfusion, safety of blood, epidemiology of infectious factors transmitted by transfusion, haemovigilance, new trends in biotechnology, clinical subjects of haemotherapy.

Send subscription inquiries to: Blood Banks and Transfusion Society of Türkiye, Bağdat Cad. Kumbaracılar Çıkmazı Birlik Apt. B. Blok No: 16 D. 24 81030 Feneryolu Kadıköy İstanbul, Türkiye

Subscription price: ***Outside Türkiye:*** *Institutional:* 80 Euro /per year. *Personal:* 40 Euro/per year. ***In Türkiye:*** *BBTST members:* 40.000.000 TL / per year. *Institutional:* 80.000.000 TL/per year.

Change of adress: Please forward to the subscriptions adress 6 weeks prior to move, enclose present mailing label with change of address.

Cancellations: Subscription cancellations will not be accepted after the first issue has been mailed.

Deomed Medical Publishing Services,
a division of Deonta Medya Ltd.
Acıbadem Cad. İsmail Hakkı Bey Sok. No: 7 Kat: 1
Kadıköy 34718 Istanbul, Türkiye
Phone: (0216) 414 83 43 (Pbx) Fax: (0216) 414 83 42
http://www.deomed.com e-mail: medya@deomed.com

Printed in Türkiye on acid-free paper by Kaya Press, İstanbul (July, 2003).

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THE USE OF AUTOMATED MICROBE-DETECTION SYSTEM FOR IMPROVING BACTERIAL SAFETY OF BLOOD COMPONENTS

S. Balen-Maruniç, N. Lukeïiç, S. Dokiç*, K. Vujaklija-Stipanoviç

Institute of Transfusion Medicine, Microbiological Laboratory, Clinical Hospital Center Rijeka, Croatia*

Background: The introduction of closed sterile blood bag systems for blood collection, processing and storage greatly improved the sterility of transfused components. Despite these measures, bacteremia continues to be the most common transfusion-related infection today.

Materials and methods: Automated bacterial blood culturing system satisfies many of the requirements of rapid, affordable and quite sensitive tests. Using an automated microbiologic blood culture device for detection of bacteria in blood components, we want to satisfy criteria for safe and effective transfusion therapy, according our standards and low. We took the samples in Institute of Transfusion Medicine and testing was performed in Microbiological Laboratory, using an automated culture system for detecting bacterial contamination – Bactec 9000 with standard aerobic and anaerobic cultures.

Results: The testing was performed on: 94 red cells concentrates, 56 leukoreduced red cells concentrates, 53 platelets components, 9 platelet pools (leukoreduced) and 58 fresh frozen plasma units. Only in one red cell component we found Staphylococcus epidermidis.

Conclusion: Automated microbe-detection systems could be utilised in either a blood collection center or a hospital transfusion service to rapidly screen blood components for bacterial contamination. We are aware that the number of samples was too small, but despite of that, it suggests that the quality of work in our Institute meet national standards for quality and bacterial safety of blood components.

Fax: +385 51407335

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DETECTION OF VIRAL MARKERS (HBSAG, ANTI HCV) IN MULTITRANSFUSED THALASSEMIC PATIENTS

T. Timova, R. Madzunkov, S. Ortakovska, L. Maninska

Transfusion Department, Medical Centre-Strumica, Rep. of Macedonia

Post-transfusion hepatitis is an important health problem in everyday practice, especially in patients who have to receive transfusion of erythrocyte concentrates as the only possible treatment for many years.

Objective: Observation of post-transfusion occurrence of HBsAg and anti HCV in multitransfused thalassemic patients.

Materials and Methods: At the moment in our region there are 6 patients suffering from thalassemia major who are aged between 7 and 40, and who have been receiving erythrocytic transfusion 1-2 times a month since the age of one or two. They receive washed red blood cells, and in certain periods filtered red blood cells, controlled for viral markers and they mostly receive blood from voluntary, periodic and regular donors. The patients are tested periodically for the presence of viral markers (HBsAg, anti HCV) using tests for HBsAg (Abbott Auxyme Monoclonal EIA) and for anti HCV (Abbott HCV EIA 3.0).

Results: The presence of markers for Hepatitis B and Hepatitis C hasn't been detected in any of these multitransfused thalassemic patients who receive at least 20 transfusions a year. The tests in all 6 patients were negative.

Conclusion: The blood used for transfusion must be tested for viral markers, and for the patients who have to receive blood for their whole life the blood should be from voluntary, regular and periodic donors who donate blood at least three times a year, because then the risk of transfusion transmissible infections is very small.

timovat@hotmail.com

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INCIDENCE OF CYTOMEGALOVIRUS IN VOLUNTEERED BLOOD DONORS IN THE ESTERN PART OF REPUBLIC MACEDONIA PROVED WITH CMV IGG INSTANT TEST AND CMV IGG, M INSTANT TEST

N. Kamcev, J. Vitlarova, M. Kamceva, D. Dimitrova, V. Dejanova

Department of Transfusiology, Medical Center, Stip, Rep. of Macedonia

Introduction: CMV has been spread all over the world, but it has been mostly present in countries with low socioeconomic status.

Goal: To find the incidence of CMV antibodies in volunteered blood donors in the Eastern part of Republic Macedonia at age between 18 and 65.

Material and methods: For determining incidence of anti-CMV in the last three years in 302 donated blood units from schoolchildren and students at age between 18 and 25 in 898 donated blood units from donors at age 40-65 serologic tests for detection of anti-CMV have been made. For this purpose we used CMV IgG Instant test and CMV IgG, M Instant test. ELISA tests and PCR test are not used because of financial problems.

Results: From 302 tested blood donations from school children and students at age of 18 to 25, the presence of anti-CMV was detected in 63 (20.86%) and from 898 tested blood units got from few-times donors of age of 40 to 65, presence of anti - CMV was detected in 502 (55.9%) serum samples.

Conclusion: The incidence of anti-CMV in the blood of volunteered blood donors is from 20.86% to 55.9%. For prevention of transfusiologically transmitted CMV infection we recommend: the use of anti-CMV negative blood products, the use of blood products from which Le have been removed by filtering through special filters.

longurov@mt.net.mk

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INCIDENCE OF HBSAG, ANTI-HCV, ANTI-HIV AND TREPONEMA PALLIDUM ANTIBODIES IN BLOOD DONOR OF HIGH SCHOOL AND STUDENTS POPULATION IN STIP MUNICIPALITY - REPUBLIC MACEDONIA

J.Vitlarova, N. Kamcev, M. Kamceva, D. Dimitrova, V. Dejanova

Department of Transfusiology, Medical Center, Stip, Rep. of Macedonia

Introduction: Transfusion transmissive diseases have still been serious transfusion and health-social problem in Republic Macedonia.

Goal: To determine the incidence of HBsAg, anti-HCV, anti-HIV and Treponema Pallidum antibodies from the donated blood in school children and students on age between 18 and 25.

Material and methods: In the last five years the Transfusion Department has realized totally 1989 donated blood units from school children and students in Stip municipality. In the Transfusion Department in Stip of transfusiology in Skopje for detection and confirmation of positive results for HBsAg, anti-HCV and anti-HIV in both examined groups ELISA-tests from the third generation from the company Organon Teknika; and for Treponema pallidum antibodies TrepanostikaTM TP-Microelisa system.

Results: From totally 1989 donated blood units from high school and students population, the presence of HBsAg has been detected in 80(4.0%). The presence of HCV antibodies is detected in 50(2.5%) from the total number of blood donors - school children and students. Neither in one of the tested 1989 serum samples, there have been no detected presences of HIV and Traponema pallidum antibodies.

Conclusion: The incidence of HBsAg and anti-HCV in school children and students who donate blood for the first time is higher especially in the last few years, compared with common blood donor population.

longurov@mt.net.mk