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Single donor versus pooled random donor platelet concentrates: A review of literature

Sayeedul Hasan Arif, Rehman S, Ahmad S S, Khan A I, Nasreen T and Aden D
Jawaharlal Nehru Medical College, India

Both platelet concentrates (PC) obtained from 6-7 Buffy coat of whole blood or single donor platelets (SDP) obtained by aphaeresis are indicated to treat hemorrhage secondary to thrombocytopenia which includes Dengue, Malaria, ITP, TTP, DIC, Septicemia etc. Dengue and Malaria are very important indications in developing countries like India. It is also used to provide prophylaxis from hemorrhage in patients with bone marrow suppression. Currently platelet transfusion therapy is limited due to several reasons, including the consequences of alloimmunization in chronically transfused patients and septic reactions caused by bacterial contamination. There is lot of discussion and debate about which platelet product should be used; many transfusion medicine services favor the primary use of PC, whereas others favor SDP. This review will discuss five areas that should be considered when there is a debate between use of SDP or PC: Infectious complications, transfusion reaction rate, leuko-depletion, reduction of transfusion frequency in patients with bone marrow aplasia and alloimmunization associated with their use and prevention. Various authors believe that SDP offers main advantages over PC for most of these issues. However, taken the issue of high cost with SDP, a PC should be considered wherever possible in developing countries like India, taking into account risk benefit ratio.

Biography

Sayeedul Hasan Arif has completed his MD in pathology in the year 1991. He has joined the Department of Pathology, J. N. Medical College, AMU Aligarh (India) as Demonstrator for three years and later joined the Department as Assistant Professor in 1995, promoted to Associate Professor in 2004 and joined as Professor in 2010 and still working on same post. He is also In-charge of Blood Bank and of Central Investigation Laboratory. He was Member of Medical Education Unit in Faculty of Medicine since 2009-2014 and Fellow in Medical Education (FIME). He has also served Hospital in the capacity of DMS from 2011-2013. He has more than 30 papers to his credit in various international and national renowned journals. He is the winner of William Harvey Research Award in Hematology-2015 for his publication for Incidental detection of Hemoglobin C trait in a 7 year male child in *Journal for Hematology*. He is also Member of Review Committee for various national and international journals.

s_h_arif@yahoo.com

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