leukocytes, during storage, and hence is quite efficient in the prevention of febrile non – hemolytic transfusion reactions.

2. It also minimize the risk of HLA –alloimmunization in multitransfused patient as it removes the intact leukocytes as against the bed side where the leukocytes fragments after storage can pass through filters and alloimmunize the recipient against donor antigens.
3. Pre storage leukofilteration can minimize the risk of leukotropic virus transmission as leukocytes disintegrates and release the intracellular organisms after 72 hours of storage in blood components.

Thus the reduction of leukocytes below a certain threshold $\leq 5\times10^{6}$ in the blood components certainly helps in prevention of associated risks of transfusion. Therefore, keeping in view all of the above, universal leukoreduction seems to be justified, thus in future very soon we are planning for live demostration and detailed discussion regarding benefits and advantages of leukodepleted products.

Edited by : Dr. P. S. Jha & Dr. Meena Maheshwari
Kamal Kasliwal Bhawan 1, Basant Vihar, Kota Ph.: 2402020, 2402010 E-mail : kotabloodbank_97@rediffmail.com

Voluntary blood donors are the key to safe blood.

रक्तमा

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दीप मालिका की यह जगमग ज्योति
आपके जीवनपथ को
सदैव आलोकित करती रहे।
दीपावली के इस पावन पर्व पर
व नव वर्ष की हमारी शुभकामनायें।

Dr. J. K. Singhvi
President

Dr. Ashok Sharma
Secretary

All the Members & Staff of Kota Blood Bank Society

LEUKODEPLETED BLOOD COMPONENTS :

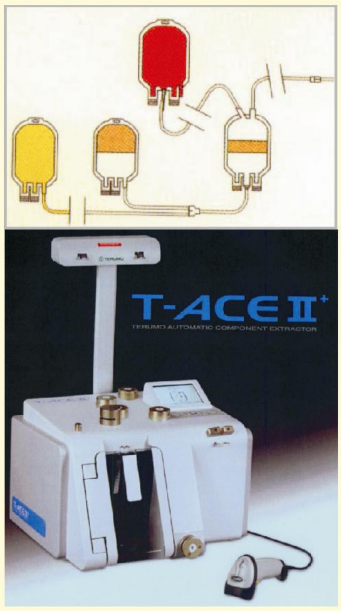
NEED OF THE DAY

One of the major challenges of blood transfusion services today is the provision of sufficient, safe and superior quality blood resources and to ensure a safe and appropriate blood /components supply to patients. Blood banking has undergone a revolutionary changes in the past few decades from better testing part to switching over to components from whole blood. Until recently, little attention had been paid to the leukocytes present in various blood components. It has been shown that the removal of leukocytes from various blood components can minimize the risk associated with these contaminating leukocytes.

Leukoreduction technically implies removal of leukocytes by gross removal method. Recently at our blood centre we had started the pre –storage leukoreduction technology from the blood components to minimize the risk associated with these contaminating leukocytes. Thus the reduction in the no of these leukocytes in allogenic blood components has been proven to be clinically relevant in the following :

- Reducing the frequency and severity of Febrile Non –Hemolytic Transfusion Reactions (FNHTRs)
- Reducing the risk of CMV (cytomegalovirus) transmission
- Reducing the risk of HLA-alloimmunization and platelet –refractoriness.

Ideally it is recommended that every unit transfused should be leukodepleted to minimize the risk of transfusion but definite benefits are seen in multiple transfusion patients like rapidly growing size of hemato-oncology and existing thalassemic children population requiring regular transfusion of different blood products support throughout life. A majority of these become alloimmune to various red blood cells, platelets , HLA antigens during course of their transfusion therapy, thus leads to various immunohematological problems in managing the blood component support to these patients, therefore transfusion of leukoreduced blood components assumes a lot of significance in these patients.



Recently we have adopted Centrifugation and Buffy coat removal method using an Terumo automated components extractors (T-ACEII+) for removal of leukocytes. It is a pre-storage leukoreduction method i.e. it removes the leukocytes prior storage within few hours of collection of blood. Its advantages over post storage best side filteration are :

1. It eliminates the scope of inflammatory (interleukin -1, interleukin -6, tumor necrosis factor) cytokine accumulation due to