Hematology-2013
OMICS Group Conferences
Accelerating Scientific Discovery
International Conference on
Hematology & Blood Disorders
September 23-25, 2013 Raleigh, USA

Detection of alloimmunization to ensure safer transfusion practice

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Abstract:

Serological safety is an integral part of the overall safety for the blood banks. Emphasis is on the importance of routinue RBC antibody screening at set time intervals after transfusion to reduce the risks related to alloantibodies. Also emphasis is on the importance of issuing antigen negative blood to alloantibody positive patients. The effect of using leucodepleted blood on the rate of alloimmunization has also highlighted. The concept of provision of phenotypically matched blood is also suggested. Repeat antibody screening, except if time interval of second transfusion was less than 72 hours, followed by antibody identification in relevant cases, was performed in patients requiring repeat multiple blood transfusions. Three cell panel of CAT (Column Agglutination Technology), two cell panel of the SPRCA (Solid Phase Red Cell Adherence Technology) were used for antibody screening followed by 11 cell panel of CAT and 16 cell panel of SPRCA for antibody identification for the repeat samples of 306 multiple transfused patients for a period from February 2008 to June 2009.Three to four log leucoreduced red blood cells were transfused to the patients in the study using blood collection bags with integral filters. A total of 306 multiple transfused patients were tested and showed an alloimmunization rate of 4.24%. These are the patients whose transfusion therapy may become significantly complicated.

Red cell antibody screening and identification and subsequent issue of antigen negative blood have a significant role in improving blood safety. Centers that have incorporated antibody screen and identification have ensured safe transfusion practice. The identified patients should be flagged in a database and information shared between institutions. The patients can also be given carry-on card and educated about the name of the identified antibodies. Full red cell phenotyping of the dividuals, patients and donors could be feasibility.

Biography:

Dr. Rashmi Sood has completed her MBBS at the age of 23 years from University in Punjab India and postdoctoral studies in Pathology as well as Immunohematology & Transfusion Medicine from an internationally recognized Board of Examinations. She is the Consultant Incharge in a premier hospital in New Delhi. She has a number of presentations and publications in National and International Journals to her credit.