ABSTRACT

BACKGROUND AND AIMS:

Blood transfusion is a common intervention in critically ill surgical patients, especially Burns patients. But transfusions have potentially life threatening risks. The aim of the study was to evaluate the appropriateness of various blood components, utilized in Burns patients and also to evaluate the relationship between age of red blood cells and wound healing.

MATERIALS AND METHODS:

Burns patient who were more than 16 years, with 15 – 40% Total body surface area burns and had survived treatment were included for a period of one year (September 2014 – August 2015). New York State health guidelines for RBC transfusion in Burns, Baxter’s original Parkland formula and platelet transfusion thresholds given by the American Association of Blood Banks (AABB) were used to categorize appropriate transfusions from inappropriate transfusions. Length of hospital stay was taken as the measurable outcome for wound healing and the factors influencing Length of stay were analysed.

RESULTS:

A total of 122 burns patients who fulfilled the inclusion criteria were followed. 85 patients received 308 red cell units of which 64% were appropriate. 114 patients were transfused with 441 fresh frozen plasma units of which 47%
were appropriate. One patient was transfused with platelet concentrate and all patients, who had their platelet count more than 10,000/µL, were not transfused.

The factors found to significantly increase the length of stay included the APACHE II score at admission, Red cell transfusions, surgical procedures and wound infections. The factors not significantly influencing Length of stay were age of the burns patient, sex and storage age of red cells.

CONCLUSION:

In our study, 64% of red blood cell transfusions and 47% of FFP transfusions were appropriate. As the storage age of red blood cells had no significant influence on length of stay, there is no rationale in ordering fresher whole blood to aid in wound healing. Length of stay for burns patients significantly increases following blood component transfusion. Successful outcome of burns patients purely depends on proper wound care, along with appropriate use of fluids and blood components.

Keywords:

Burns, Appropriate, Length of stay, RBC storage age