

Blood needs at anemic patients admitted in ICU ,can be evaluated by lactate level and vital parameters on admission time

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Aim: Evaluation of red cell transfusion effects on tissue oxygenation, by measuring blood lactate levels before and after hemotransfusion. Blood lactate level are suggested as sensitive parameter to evaluate tissue oxygenation. The aim of this study was to verify the efficiency of hemotransfusions that were performed on patients in intensive care based on lactate level.

Material and Methods: In this prospective observational study on (n= 59 patients) who considered that required red cell transfusion .(the patients more than 25 point according to APACHE II-score were excluded). We monitor vital signs (BP,HR, Age, APACHE II-- score) at admission time, and also was strictly observed lactate level and hemoglobin level at admission before red cell transfusion (pre T), two hours after transfusion (2h post T) and 24 hours after (24 h post T with or no any other red cell transfusion). At first the patients group based at hemoglobin level, Group Ia with Hb < 8g/dl and Group Ib with Hb ≥ 8g/dl. After that the patients group again based at lactate level, Group Ic lactate level ≥ 2,4 and Group Id lactate level <2,4.

Results: Among another findings, comparison between group Ic and group Id showed that patients belong at group Ic needed 3 more time blood packs than patients on group Id with statistical significance (p < 0.01). On the other hand, we concluded statistical differences (p < 0.05) between groups Ic and Id on admission time as belongs vital parameters, such as blood pressure, heart rate, age and APACHE II- score.

Conclusions: Statistical significance evaluation (p < 0,05) between above mentioned groups shown that lactate level and vital parameters are sensitive indicators in evaluation of blood needs for patients on ICU.

Key words : red cell transfusion, lactate level, hemoglobin level, oxygenation, anemia.