

## Comparison of Early Post-operative Outcomes of Cardiac Surgery Patients Who Have Had Blood Transfusion Based on Fixed Cut-off Point versus of Change in Percentage of Basic Hematocrit Levels

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**Abstract :** Back ground: Blood transfusion is one of the major issues in cardiac surgery patients. Transfusing patients based on fixed cut-off points of hemoglobin is the current protocol in most institutions. The hemoglobin level of 7- 10 has been suggested for blood transfusion in cardiac surgery patients. We aimed to evaluate if blood transfusion based on change in percentage of hematocrit has different outcomes. Methods: In this retrospective cohort study, we investigated the early postoperative outcome of cardiac surgery patients who received blood transfusions at Tehran Heart Center Hospital, IRAN. We reviewed and analyzed the basic characteristics and clinical data of 700 patients who met our exclusion and inclusion criteria. The two groups of blood transfused patients were compared, those who have 30-50 percent decrease in basal hematocrit versus those with 10 -29 percent decrease. Results: This is ongoing study, and the results would be completed in two weeks after analysis of the date. Conclusion: Early analysis has shown no difference in early post-operative outcomes between the two groups, but final analysis will be completed in two weeks. 1-Department of Anesthesiology and Critical Care, Tehran Heart Center, Tehran University of Medical Sciences, Tehran, IRAN 2- Department of Research, Tehran Heart Center, Tehran, IRAN Quantitative variables were compared using the Student t-test or the Mann-Whitney U test, as appropriate, while categorical variables were compared using the  $\chi^2$  or the Fisher exact test, as required. Our intention was to compare the early postoperative outcomes between the two groups, which include 30 days mortality, Length of ICU stay, Length of hospital stay, Intubation time, Infection rate, acute kidney injury, and respiratory complications. The main goal was to find if transfusing blood based on changes in hematocrit from a basal level was better than to fixed cut-off point regarding early post-operative outcomes. This has not been studied enough and may need randomized control trials.

**Keywords :** post-operative, cardiac surgery, outcomes, blood transfusion

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