



Patients requiring blood transfusions in hematologic intensive care unit were included in a prospective study using a single RBC unit per transfusion and were compared with an historical cohort who received 2 RBC units per transfusion” Chantepie et al (2016).

Abstract:

BACKGROUND: There is increasing evidence that excessive blood transfusion may be associated with impaired survival or cardiovascular events. One way to reduce the number of red blood cells (RBCs) is to transfuse 1 unit (1RBC) instead of 2 units of RBCs (2RBC).

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STUDY DESIGN AND METHODS: Patients requiring blood transfusions in hematologic intensive care unit were included in a prospective study using a single RBC unit per transfusion and were compared with an historical cohort who received 2 RBC units per transfusion.

RESULTS: A total of 1323 units were transfused to 126 patients between 2013 and 2014. The 186 patients in the comparative cohort received a total of 1824 RBC units in a 2-RBC-unit policy between 2010 and 2012. The mean number of units was 7.35 (SD, 5.9 units; 95% confidence interval [CI], 6.5-8.2 units) in the 1RBC group and 8.14 units (SD, 6.2 units; 95%

CI, 7.3-8.9 units) in the 2RBC group. The absolute mean difference was -0.79 (95% CI, -1.98 to 0.40 ; $p = 0.09$). In the 1RBC allogeneic hematopoietic stem cell transplantation (allo-HSCT) subgroup, a significant reduction in the number of RBC units transfused was observed in comparison with the historical 2RBC allo-HSCT group (5 units vs. 7.7 units; $p = 0.01$). No anemia-related side effects were reported. Overall survival did not differ between the two groups.

CONCLUSION: The 1RBC transfusion policy made is feasible in patients with transient hematologic toxicity after chemotherapy. The number of units transfused between the two groups was not different. However, in the allo-HSCT group, the use of a single RBC unit reduced significantly RBC consumption. A randomized trial comparing the two strategies is planned with a medicoeconomic evaluation.

Reference:

Chantepie, S.P., Mear, J-B., Parienti, J-J., Bazin, A., Benabed, K., Cheze, S., Gac, A-C., Johnson-Ansah, H., Macro, M., Cabrera, Q., Reboursiere, E., Lancesseur, C., Damaj, G. and Reman, O. (2016) Blood transfusion in hematologic intensive care unit. *Transfusion*. November 11th. .

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