RBC transfusions and related adverse events in ICU care

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Abstract

Background: RBC transfusion is commonly used in patients admitted in ICU care in order to correct anemia, although it is accompanied with complications and adverse events which put the clinicists in doubt to take a decision when and whether to transfuse or not.

Aim: To determine the incidence and types of various adverse transfusion reactions occurring in patients of an ICU care service.

Methods: This study was conducted at ICU care unit of UHC "Mother Theresa", Tirana during January – December 2015. In this prospective observational study 105 patients were enrolled, and all acute transfusion reactions were monitored and analyzed based on their clinical features and lab tests.

Results: A total of 207 units of packed blood cells were transfused of which only seven cases were reported as complications after blood transfusion. The highest incidence reported were the febrile non-hemolytic transfusion reactions (FNHTR) four from seven cases in total (57%), then allergic reactions (AR) 2(29%) and only 1 patient (14%) developed acute non-immunologic hemolytic transfusion reaction (ANIHTR) as presented on Figure 1. These reactions were accompanied by these signs and symptoms: chills 5 from 7(71%), fever 4(57%), cutan rash 6(85.7%), urticaria 5(71%) and 3 from 7(42.8%) developed other symptoms such as tachycardia, myalgia, hematuria, anxiety, pruritis and sweating.

Conclusions: Although blood transfusion is a frequent therapy in ICU care, it's very important to monitor carefully all the process of transfusion in order to minimize such complications.

Image

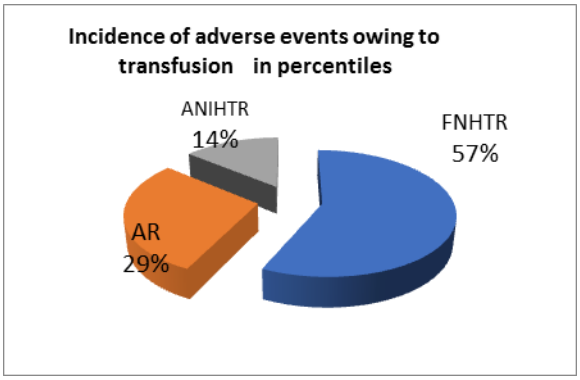


Figure: Incidence of adverse events owing to transfusion in percentiles

Recent Publications

1. Bassi R, Aggarwal S, Bhardwaj K and Thakur K K (2017) Patterns of adverse transfusion reactions in a tertiary care centre of North India: a step towards hemovigilance. Indian J Hematol Blood Transfus. 33(2):248-253.

2. Vasudev R, Sawhney V, Dogra M and Raina T R (2016) Transfusion-related adverse reactions: from institutional hemovigilance effort to National Hemovigilance program. Asian J Transfus Sci. 10(1):31-6.

3. Harvey A R, Basavaraju S V, Chung K W and Kuehnert M J (2015) Transfusion-related adverse reactions reported to the national healthcare safety network hemovigilance module, United States, 2010 to 2012. Transfusion 55(4):709-18.

4. Kumar R, Gupta M, Gupta V, Kaur A and Gupta S (2014) Acute transfusion reactions (ATRS) in intensive care unit (ICU): a retrospective study. J Clin Diagn Res. 8(2):127–129.

Biography

M D Ermira Biu completed her Graduation as Physician at Faculty of Medicine of Tirana, Albania in 2011. In 2012, she became a Full Time Lecturer of the Para clinical Department of the Faculty of Technical Medical Sciences of Tirana. She has also developed her skills as an Assistant of Esthetic Surgery. She is a PhD candidate and her research is based on blood and its transfusion products, data collected mostly on ICU care, which most of her publications consists.

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Notes/Comments: