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Scientific comment

Tools to implement and improve blood donor hemovigilance in Brazil☆

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Hemovigilance deals with the safety of the blood transfusion chain and can be summarized in one phrase "safety from vein to vein".[1] The first hemovigilance system was established in 1993 in Japan. In 1994, as a consequence of the HIV scandal, France launched a national hemovigilance system and was followed by other European countries, such as the United Kingdom with the Serious Hazards of Transfusion (SHOT) initiative in 1996.[1] The French Hemovigilance Network and SHOT became a model for other hemovigilance systems worldwide. In 2002, The Brazilian Hemovigilance Network developed a pilot project to encourage the notification of transfusion reactions. At first, this program was only available to hospitals belonging to the Sentinel Network. In 2006, the possibility to notify a transfusion reaction was expanded to all health services with the implementation of a web based platform called Notivisa.[2] Currently, the Brazilian Hemovigilance Network, in line with other international systems, is evolving to cover the whole transfusion chain, from the collection of blood and its components to the follow-up of recipients. The expansion of hemovigilance is justified as the occurrence of adverse events or noncompliance in the blood chain may impact on product quality and on the safety of the donor or recipient, and jeopardize the national blood transfusion system.

Donor vigilance, a process designed to improve the safety of blood donation and the satisfaction of blood donors,[3] is a subsection of hemovigilance that is gaining more and more importance in recent years. Blood donors´ safety and satisfaction are the cornerstones to construct a model of trust between blood centers and the general community. Donor vigilance can be applied not only to whole blood donations, but also to platelet apheresis, granulocytes, lymphocytes and peripheral hematopoietic stem cell donations. It is well-known that donors who experience major reactions delay longer to return for further donations or do not return than those with minor or no reactions.[4] Additionally, media messages that combine safety of the donation process along with who benefits from the donation are considered the most effective motivators to donate blood and components.[5] Today, Brazil collects 3.6 million blood units annually which corresponds to donations by 1.9% of its population.[6] The goal of the Brazilian Ministry of Health is to attain 3% of the population donating blood regularly to maintain a sufficient blood supply. Consequently, measures to record and prevent donation reactions must be warranted by national, regional and local policies.

The International Society of Blood Transfusion (ISBT) provided a Standard for Surveillance of Complications Related to Blood Donation in 2008.[7] Blood donor complications were classified according to type of symptoms (local vs. generalized vs. related to apheresis), grading of severity (severe vs. non-severe), grading of causality (definitive, probable, possible, unlikely and excluded) and temporal relation (immediate vs. delayed). One of the most challenging barriers to be crossed

☆See paper by Braz AC et al. on pages 139-146.

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to get an effective surveillance network is standardizing definitions of reportable events in the transfusion chain. Although the ISBT has provided a robust reference for donors vigilance, that has already been translated to the Portuguese spoken in Portugal, cultural and language differences can hinder the broad application of this guideline in Brazil.

The prevalence of vasovagal reactions is 2.3% of all whole blood donations in Brazil. Young age, low estimated blood volume, first-time donor status and female gender are major predictors of a vasovagal reaction. Of note, the lack of consistent reporting practices based on common definitions across Brazilian blood banks may contribute to the different rates reported over the country.[8] In this issue of the Revista Brasileira de Hematologia e Hemoterapia, Braz et al.[9] present the translation into Brazilian Portuguese and the validation of The Blood Donation Reactions Inventory (BDRI). The BDRI provides an assessment of subjective ratings of presyncopal symptoms that is brief and easily understood by donors, and quick to administer and score.[10] The BDRI has 11 items in its full scale, while short scales have 6 or 4 items. After translation, the BDRI scale was applied and validated in 1001 Brazilian blood donors. The authors concluded that the BDRI was a reliable tool for collecting information about systemic reactions experienced by blood donors. Moreover, the BDRI yields important information about the donor's experience that can be used to predict satisfaction and likelihood of repeat donations.[10] The BDRI can also help target a population of donors in which interventions such as educational measures, limited blood volume collection, application of muscle tensing exercises, provide distraction and restore plasma volume; these are important and likely to reduce the unpleasant adverse events of blood donation and increase donor retention.

In conclusion, although blood donation is perceived by our population as a very safe procedure, standardized instruments to standardize registries, to generate reports, to boost bench marking among institutions, to prevent unpleasant donation reactions, to recruit new and retain repeat donors, are welcome. The stronger hemovigilance becomes, the higher the credibility and the satisfaction of blood donors; and the higher the efficacy of transfusion chain processes will be.

Conflicts of interest

The author declares no conflicts of interest.

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