Letter to the Editor

Non—evidence-based platelet transfusions for protocol eligibility

The recent pandemic of a novel coronavirus has brought the need for more aggressive blood conservation strategies to the forefront of many hospital disaster management policies. In particularly short supply are platelets. Platelet transfusions are one of the higher risk, high-cost, and low-availability blood components to transfuse because they are stored at room temperature in plasma, creating the perfect medium for bacteria. This type of storage preserves structure and function but necessitates short outdates, wastage, and additional testing and is expensive. Despite all of the additional precautions, the reported rate of transfusion transmitted infections remains more than three times higher in platelets compared with red cell products, and transfusion-related acute lung injury is almost four times higher in female- versus male-donated products [1,2]. To address the infectious risk, pathogen-inactivation technologies are now widely used in many countries, but this also increases the cost, in addition to decreasing the number of available doses due to platelet loss during processing [3]. It is because of these patient risks and inventory challenges that many transfusion services have strict evidence-based criteria for transfusion that are frequently audited.

For patients in our institution, the transfusion threshold for a single dose of platelets (1 single donor platelet product, approximately 3×10^{11} platelets) in nonbleeding patients not undergoing invasive procedures is 10 000/ μ L as there has been no demonstrated benefit in higher doses or higher transfusion thresholds [4]. During a routine audit review, we discovered a trend of these guidelines being disregarded specifically in clinical trial patients. On further investigation, we observed a trend of bioindustry cellular therapy trials establishing arbitrary non—evidence-based guidelines for transfusion. Of 86 clinical trial records for cellular therapies covering 19 protocols, 67% of released platelets did not meet hospital transfusion guidelines established by an interdisciplinary team of experts compared with only 18% of guideline release in patients who were not on a cellular therapy protocol. Platelet transfusion thresholds for the clinical trials ranged from 20 000 to 150 000/ μ L (median 50 000) with no literature cited to justify these increased thresholds.

It has been a decade since Callum *et al.* [5] pointed out the need for a formal process regarding transfusions for study eligibility. It is now time to reconsider blindly following “for clinical trial” guidelines and question protocols that do not follow the standards of care established for other patients. This is important both for the greater good of conserving this rapidly depleted resource during shortages and also during routine operations for the well-being of our patients and study subjects to whom we owe only the highest standard of care as physicians.

Declaration of Competing Interest

The authors have no commercial, proprietary, or financial interest in the products or companies described in this article.

Author Contributions

S.V. performed the literature review; contributed significantly to the conception, design and implementation of the reported audit process; and drafted the submission. J.S. contributed significantly to the literature review; the conception, design and implementation of the audit; reviewed and revised the draft; and acted as the senior author. Both authors have approved the final submission.

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