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Letters to the Editor

Blood storage and transfusion[☆]

Almacenamiento sanguíneo y transfusión

As concerns the Reflection Article “Blood Storage and Transfusion Injury”¹ written in relation with the article entitled “Blood Sparing Techniques in Surgery”² that proposes that a bank blood undergoes “storage” alterations leading to worse outcomes when “old” units are transfused, it is worth highlighting that studies with intermediate outcomes such as lung dysfunction, have not found statistical differences between transfusions using blood with different storage times, in particular in the ICU^{3,4}; while other studies report alterations, particularly in mass transfusions and trauma cases. Although the controversy still persists, it is important to transfuse blood with the least storage time. Some references that contribute to the discussion and that involve other blood products such as platelets are included below⁽⁵⁻⁹⁾.

In terms of Hb levels of 6 and 10 g/dl, there is no consensus as to the absolute need to use them as a basis for deciding about transfusions. However, clinicians’ tools are to elucidate the patient’s situation and, consequently, I believe that the phrase taken from the American Society of Anesthesiologists (ASA Task Force) is accurate: “The decision between 6 or 10 g/dl is an individual decision and must be based on clinical and paraclinical parameters pointing to tissue hypoperfusion”.⁵ This means that the signs of hypoperfusion need to be taken together with the Hb value, and this would be a reasonable and practical recommendation, despite the fact that it may still be subject of debate.

Finally, based on the evidence, I share the “restrictive” approach to transfusion.

REFERENCES

1. Aristizabal JP. La lesión por almacenamiento y la transfusión sanguínea. *Rev colomb anestesiología*. 2012;40:266-7.
2. Rivera D, Pérez A. Técnicas de ahorro sanguíneo en cirugía. *Rev colomb anestesiología*. 2011;39:545-59.
3. Kor DJ, Kashyap R, Weiskopf R, Wilson GA, Van Buskirk C, Winters J. Fresh red blood cell transfusion and short-term pulmonary, immunologic, and coagulation status: a randomized clinical trial. *Am J Respir Crit Care Med*. 2012;185:842-50.
4. Weiskopf RB, Feiner J, Toy P, Winford J, Shimabukuro D, Lieberman J. Fresh and stored red blood cell transfusion equivalently induce subclinical pulmonary gas exchange deficit in normal humans. *Anesth Analg*. 2012;114:511-9.
5. Nuttall GÂ, Brost BC, Gessner J, Chestnut H, Harrison Ch, Miller RD. American Society of Anesthesiologists Task Force on Perioperative Blood Transfusion and Adjuvant Therapies: A Practice Guidelines for Perioperative Blood Transfusion and Adjuvant Therapies. *Anesthesiology*. 2006;105:198-208.
6. Welsby IJ and Col. Storage age of transfused platelets and outcomes after cardiac surgery. *Transfusion*. 2010; 50:2311-7.
7. Vincent JL and Col. Association between duration of storage of transfused red blood cells and morbidity and mortality in adult patients: myth or reality? *Transfusion*. 2009; 49:1384-94.
8. Ranucci M, Carlucci C, Isgrò G, Boncilli A, De Benedetti D, De la Torre T, Brozzi S, Frigiola A. Duration of red blood cell storage and outcomes in pediatric cardiac surgery: an association found for pump prime blood. *Crit Care*. 2009;13:R207.
9. Gajic O. and Col. Acute lung injury after blood transfusion in mechanically ventilated patients. *Transfusion*. 2004;44:1468-74.

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