To the Editor:

We congratulate Clifford et al.1 on their important contribution to the transfusion-related acute lung injury (TRALI) literature. There were a number of important findings in their article. First, the incidence of postoperative TRALI (1.3 to 1.4%) was higher than anticipated. Interestingly, in a previous study including the same center, the incidence of TRALI was estimated to be between 1 in 4,000 and 1 in 12,000 transfused units.2 Also, the mitigation strategies of leukoreduction and elimination of female donor plasma had no effect on TRALI incidence in Clifford et al.’s study. This is also contradictory to the findings by Toy et al. who suggested that transition to all male donor plasma decreased the incidence of TRALI substantially.

The data presented by Clifford et al. also suggest that there is substantial TRALI risk in patients who receive only red cell transfusion, and there were zero cases of TRALI in patients who received only plasma transfusion in their study. This is similar to the data presented in the Serious Hazards of Transfusion (SHOT) 2012 and 2013 annual reports.3,4 These data bring into question whether there is an alternative mechanism for TRALI. According to the Food and Drug Administration Transfusion-related Acute Lung Injury: More Questions Than Answers?


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Table 1. Recent TRALI Studies

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Whole blood only</td>
<td>1 (1.1)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Erythrocyte only</td>
<td>20 (22.5)</td>
<td>7 (30.4)</td>
<td>8 (36.4)</td>
<td>7 (63.6)</td>
<td>4 (40.0)</td>
</tr>
<tr>
<td>Plasma only</td>
<td>13 (14.6)</td>
<td>0</td>
<td>2 (9.1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Platelets only</td>
<td>5 (5.6)</td>
<td>0</td>
<td>1 (4.5)</td>
<td>2</td>
<td>1 (10.0)</td>
</tr>
<tr>
<td>Mixed</td>
<td>50 (56.2)</td>
<td>16 (69.6)</td>
<td>11 (50.0)</td>
<td>0</td>
<td>5 (50.0)</td>
</tr>
<tr>
<td>Others†</td>
<td>—</td>
<td>—</td>
<td>2 (36.4)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total TRALI cases</td>
<td>89</td>
<td>23</td>
<td>22</td>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>

Numbers in rows represent total number (and %) of TRALI events stratified by individual blood products.

* Included both definite and possible TRALI cases. † Included intravenous immunoglobulin and granulocyte transfusion.

SHOT = Serious Hazards of Transfusion; TRALI = transfusion-related acute lung injury.

This letter was sent to the author of the original article referenced above, who declined to respond.

References


Correspondence

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eliminating harmful antibodies from the plasma pool may not fully eradicate TRALI. Residual plasma in red cell units and platelet units may cause TRALI or these products may cause TRALI through alternative mechanisms. Considering these factors, there may be additional opportunities for anesthesiologists to prevent TRALI through preoperative optimization of anemia, careful management of antiplatelet agents during the perioperative period, and proper hemostatic interventions.

Competing Interests
The authors declare no competing interests.

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References

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