In 2012, reported non-hemolytic adverse transfusion reactions totaled 1,595 cases; this accounted for 91.5% of the total of 1,744 case reports of adverse transfusion reactions and suspected transfusion transmitted infection. In 744 (46.6%) of the 1,595 cases, the symptoms of the non-hemolytic adverse reactions were evaluated to be severe.

The number of patients with any non-hemolytic adverse transfusion reactions was 883 for males and 712 for females. The median of age distribution was 66 years (range: 0 to 102 years).

Notes

[Anaphylaxis] A condition characterized by generalized flushing, urticaria, angioedema (e.g., face edema and laryngeal edema), dyspnea, and other similar systemic symptoms.


[Hypotension] Hypotension with no other clinical signs such as skin symptoms or dyspnea.

[Transfusion associated circulatory overload (TACO)] TACO is defined as cardiac failure due to transfusion associated circulatory overload accompanied with dyspnea, tachycardia, hypotension, etc... There may be findings of cardiac pulmonary edema in chest radiography such as pulmonary infiltration. TACO is occurring within six hours of completion of transfusion.

Non-hemolytic Adverse Transfusion Reactions Reported to JRC Blood Centers (2012)

Transfusion-associated adverse reaction and/or suspected transfusion transmitted infectious cases were reported by medical institutions to JRC blood centers. This issue of Transfusion Information shows the result of analysis for non-hemolytic adverse reaction cases in 2012, the most frequently reported cases.

The Number of Reports of Suspected Adverse Reactions and/or Infections Associated with Transfusion (reports from medical institutions; cases later evaluated to be unrelated to transfusion included)

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-hemolytic adverse reactions</th>
<th>Hemolytic adverse reactions</th>
<th>Suspected TA-GVHD</th>
<th>Suspected infections</th>
<th>Case reports in journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1,579</td>
<td>1,409</td>
<td>23</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>2005</td>
<td>1,573</td>
<td>1,381</td>
<td>32</td>
<td>30</td>
<td>10</td>
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<tr>
<td>2006</td>
<td>1,591</td>
<td>1,408</td>
<td>37</td>
<td>29</td>
<td>16</td>
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<tr>
<td>2007</td>
<td>1,626</td>
<td>1,512</td>
<td>35</td>
<td>31</td>
<td>20</td>
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<tr>
<td>2008</td>
<td>1,644</td>
<td>1,527</td>
<td>42</td>
<td>37</td>
<td>24</td>
</tr>
<tr>
<td>2009</td>
<td>1,541</td>
<td>1,444</td>
<td>25</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>2010</td>
<td>1,579</td>
<td>1,508</td>
<td>36</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>2011</td>
<td>1,597</td>
<td>1,495</td>
<td>48</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>2012</td>
<td>1,595</td>
<td>1,492</td>
<td>47</td>
<td>44</td>
<td>27</td>
</tr>
</tbody>
</table>

Age distribution of recipients (2012)

- 712 females
- 883 males
- Unknown

Details of reports (2012)

- In 2012, reported non-hemolytic adverse transfusion reactions totaled 1,595 cases; this accounted for 91.5% of the total of 1,744 case reports of adverse transfusion reactions and suspected transfusion transmitted infection.
- In 744 (46.6%) of the 1,595 cases, the symptoms of the non-hemolytic adverse reactions were evaluated to be severe.
- The number of patients with any non-hemolytic adverse transfusion reactions was 883 for males and 712 for females. The median of age distribution was 66 years (range: 0 to 102 years).

Number of reports by year

- 2004: 1,579
- 2005: 1,573
- 2006: 1,591
- 2007: 1,626
- 2008: 1,644
- 2009: 1,541
- 2010: 1,579
- 2011: 1,597
- 2012: 1,595

Non-hemolytic Adverse Transfusion Reactions (2012)

Breakdown of cases by symptoms

- 1,595 cases in total
- Anaphylactic shock 15.2%
- Urticaria 36.9%
- Dyspnea 12.1%
- Hypotension 5.6%
- Anaphylaxis 9.8%
- Anaphylactic shock 9.2%
- Others 7.3%
- TACO 6.6%
- TRALI 0.6%

Transfused blood components

- Most of the non-hemolytic adverse reactions were caused by platelets or red cells.

Transfused blood components

- Platelets 153
- Plasma 248
- Red cells 581
- Washed red cells 606

Note that the blood components mentioned above all include components irradiated before supply, and components irradiated at medical institutions.
This chart describes the number of TRALI and possible TRALI (p-TRALI) cases reported by medical institutions that were evaluated to meet the relevant diagnostic criteria. In 2012, 6 TRALI cases and 4 p-TRALI cases were confirmed. During the past nine years (2004 to 2012), 17 cases were considered to be fatal TRALI. No fatal cases have been reported since 2011.

In case any of adverse reactions and/or infections related to transfusion of blood components, please notify the medical representatives of your local JRC blood center immediately. Please provide the residual products, the recipient’s pre- and post-transfusion samples, and any other related materials; it is helpful to investigate and/or identify the cause. For storage of residual products and the recipient’s samples, refer to the “Guidelines for lookback studies of blood products.”

Online Haemovigilance Information for Healthcare Professionals
URL http://www.jrc.or.jp/mr/english/

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* For more information, please contact the medical representatives of your local JRC blood center.