Transfusion-associated circulatory overload (TACO)

Respiratory problems during or within 12 hours after transfusion, manifested by at least one pulmonary feature (criterion A or B). In all, at least 3 of the criteria below must be met.

A. New or worsening respiratory problems (see note 1)
B. Features of new or worsening pulmonary oedema, based on:
- Physical examination (see note 2) and/or
- Chest X-ray or other imaging of the chest (see note 3)

C. Relevant changes in the cardiovascular system (see note 4)
D. Findings suggestive of relevant changes in fluid balance (see note 5)
E. Biomarker result(s) consistent with TACO (see note 6)

Notes

Note 1. Respiratory problems can manifest as tachypnea, dyspnea, orthopnea, cough, drop in oxygen saturation; bronchospasm, wheezing or rattling breathing may occur; a ventilated patient may require higher ventilatory pressures.

Note 2. Findings on physical examination can be crepitations on lung ausculation, a third heart sound, cyanosis and pinkish frothy sputum.

Note 3. Radiology findings
Features consistent with pulmonary oedema as a result of circulatory overload include pleural fluid, widened vascular pedicle, lobar vascular widening, peribronchial cuffing, Kerley B lines, alveolar oedema with nodular increased radiodensity.

Note 4. Monitoring cardiovascular functions
Observation of tachycardia, hypertension, widened pulse pressure, raised CVP, increased cardiac silhouette and/or peripheral oedema. Often a rise in arterial blood pressure is observed, typically with increased pulse pressure; however hypotension can be a first feature in patients who are in a state of acute cardiac collapse through cardiac failure. Monitoring the arterial blood pressure is essential, particularly in patients receiving more than one unit of blood component.

(Based on the ISBT-IHN-AABB revised TACO surveillance case definition 2018)