

Annual SHOT Report 2017 – Supplementary information

Chapter 20: New or Unclassifiable Complications of Transfusion (UCT)

Additional case studies not included in the main 2017 Annual SHOT Report

Three cases of transfusion-associated necrotising enterocolitis (TANEC)

Case 20.1: TANEC 1 (also described in the main Annual Report)

A red cell transfusion was given to a fully fed 25-week twin for anaemia (haemoglobin (Hb) 88g/L). During transfusion the baby became unsettled but no change in observations. Within a short time the baby's abdomen became distended and she had features of NEC and required ventilation. The baby was treated conservatively and made a full recovery.

Case 20.2: TANEC 2

A baby born at 28 weeks developed signs of NEC within 24 hours of a red cell transfusion (Hb 72g/L). The baby was managed conservatively and made a full recovery.

Case 20.3: TANEC 3

A 27-day-old baby developed signs of NEC within 24 hours of a red cell transfusion. No further details were given.

Other unclassifiable cases

These are miscellaneous cases where there is a temporal relationship between transfusion and a variety of adverse events which do not fit any other definitions and for which there are no other explanations.

Case 20.4: Unexplained transfusion reaction

One patient died [event reported in March 2016] unrelated to the transfusion. A male in his 60s with a primary diagnosis of sepsis, who was very unwell and already on a noradrenaline infusion, developed sudden onset of dyspnoea. About 40 minutes into a transfusion of a unit of fresh frozen plasma (FFP) (following one unit of platelets) his blood pressure fell from 120/60 to 80/40mmHg with red flushing of face and neck and upper chest. His heart rate increased from 90 to 130beats per minute (/min) and his oxygen saturation fell from 95 to 83%; temperature increased from 36 to 38.9°C. He developed wheezing and difficulty in ventilation requiring 100% oxygen. He was treated with adrenaline, salbutamol nebuliser, noradrenaline infusion was continued. The interval between this reaction and death is not reported.

Case 20.5: Sudden reaction to platelets

A man in his 70s on regular transfusion for aplastic anaemia felt unwell during a platelet transfusion (he had received chlorphenamine 30 minutes prior because of previous platelet reactions). He felt 'strange' and had sudden onset of shortness of breath within 5 minutes of starting, became cyanosed, grunting, and unresponsive. An emergency call was put out and he was given 100mg of intravenous (IV) hydrocortisone. However, he recovered quickly without further support. He had a history of ventricular tachycardia (VT) arrest (August 2016), severe left ventricular systolic dysfunction and unstable angina. He was admitted from the day-case unit and given washed platelets for subsequent transfusions.

Case 20.6: Severe pain during transfusion

A woman in her 80s had transfusion reactions with each of three transfusions (2014, 2016 and this episode); her red cells were crossmatched at a Blood Centre. She had known anti-E found in 2016. Her Hb was 65g/L related to gastric carcinoma with radiotherapy. She had iron deficiency anaemia but could not tolerate IV iron. She received premedication with hydrocortisone and chlorphenamine. The first observations during transfusion at 35 minutes were stable but an hour later she developed severe loin and back pain. Transfusion was stopped and she received hydrocortisone 200mg and a further dose of chlorphenamine together with analgesia (codeine and oral morphine). The pain resolved and she went home the same day. Relevant investigations gave negative results. The future plan was to give washed red cells, but she was admitted to a hospice for end of life care.

Case 20.7: Dyspnoea after a very small amount of transfusion associated with IgA deficiency

A man in his 40s with pancytopenia and jaundice following a viral illness developed shortness of breath requiring oxygen following a very small amount of transfusion (3-5mL) resulting in discontinuation of transfusion. He was IgA deficient <0.02g/L with a raised lactate dehydrogenase (LDH) 4681U/L. No search for anti-IgA antibodies was done. At discharge the diagnosis was pyrexia of unknown origin and pancytopenia possibly secondary to B12 deficiency. He is improving and under continued follow up by haematologists. He did not have sepsis although he received IV antibiotics because of fever and neutropenia.

Four cases transferred from febrile, allergic and hypotensive reactions (FAHR) with reactions possibly associated with transfusions**Case 20.8: Pain during transfusion**

A woman in her 60s with newly-diagnosed acute promyelocytic leukaemia developed chest and back pain requiring analgesia with morphine during infusion of cryoprecipitate and again on restarting more slowly two further times so it was discontinued. At local review the clinicians thought that this might be a reaction to all-trans retinoic acid (ATRA) which had been started before the cryoprecipitate. She also received 2 units of platelets and 4 units of FFP over a three-day period without other reactions.

Case 20.9: Pain during transfusion with respiratory symptoms

A man in his 50s with chronic monocytic leukaemia developed chest and abdominal pain together with dyspnoea and fall in oxygen saturation 30 mins into a red cell transfusion. Emergency life support was needed; he received adrenaline, hydrocortisone and chlorphenamine and was intubated. He was already on the intensive therapy unit. Blood cultures from the patient grew vancomycin-resistant enterococci from both bottles. He recovered within 6 hours. He was noted to have had a reaction to platelets previously so the decision was made to premedicate with hydrocortisone and chlorphenamine for future platelet transfusions.

Case 20.10: Hypotension following transfusion

A woman in her 80s developed hypotension (from 106/48 to 83/50) and became pale and clammy following a red cell transfusion. She had collapsed at home and was found to have sepsis, atrial fibrillation and pulmonary oedema. She received hydrocortisone and oxygen with discontinuation of the transfusion (1.5 hours). She recovered over a period of an hour.

Case 20.11: Sudden deterioration during transfusion

A man in his 60s had received two units of red cells and was receiving FFP. During the second unit he became acutely hypoxic, sweaty, clammy and shocked requiring cessation of infusion and resuscitation. He had chronic liver failure (hepatitis C) and had been found collapsed. He had acute kidney failure and possible sepsis (but blood and unit cultures gave no growth). He was treated with IV antibiotics, diuretic and oxygen. His IgA level was normal with no antibodies. He made a full recovery. No further information given.