2020 Annual SHOT Report – Supplementary information

Chapter 12: Avoidable, Delayed or Under/Overtransfusion (ADU) and Incidents Related to Prothrombin Complex Concentrate (PCC) n=285

Major morbidity

Case 12.1 Bleeding in a high-risk patient after total hip replacement (THR) requiring interhospital transfer
A man in his 50s underwent THR. He had significant comorbidity with a metallic aortic valve replacement and renal disease. He also had a history of bleeding after several procedures in the past including a previous THR and renal biopsy. This history was missed at preoperative assessment as the previous notes were not available. He was seen by anaesthetist but there was no haematology collaboration. His renal team had suggested he should be managed at a level 3 site, but this letter was sent only to the general practitioner. A high dependency unit bed was booked for post-operative care and his anticoagulants were resumed later on the day of surgery. Early next morning oozing was noted and two units of red cells were requested from the main site. There was a delay of 6 hours due to confusion about how to request components and lack of a major haemorrhage protocol at the treating site. His Hb on the blood gas machine was 60g/L. He returned to theatre for wound exploration – general ooze, received five units of red cells and cell salvage. Later four units of FFP were administered and the patient required transfer to another hospital for level 3 care including renal dialysis. He recovered and was discharged 10 days later.

Deaths in which delayed transfusion played a role

Case 12.2 Severe anaemia with delayed transfusion leads to cardiac arrest
A man in his 70s was admitted with symptomatic anaemia (Hb 41g/L) due to gastrointestinal (GI) bleeding. One unit of red cells was prescribed at 13:15 but not given. A second sample was sent at 15:00, four units were issued at 16:45. Following transfer to MAU he had a cardiac arrest at 20:00 then was transfused all four units 7 hours after they were issued. He should have been reviewed before being transferred out of the emergency department, the urgency of transfusion was not indicated to the laboratory and transfusion request forms not correctly completed. He could have received emergency group O red cells.

Case 12.3 Delay and death due to lack of venous access
An elderly man with many comorbidities had a major haemorrhage and MHP call made but there was delay (25 minutes) in finding the crash trolley which had the intraosseous gun needed to obtain venous access, and administration of emergency red cells. The patient died and the review felt that failure of timely receipt of blood was contributory. Site of bleeding not stated.

Case 12.4 Misinterpretation of black stools - missed diagnosis of GI bleeding with delayed transfusion
An elderly man attended the emergency department with a history of loose black stools which were observed on admission. He was on chemotherapy for myelodysplastic syndrome and had been transfused 2 days before. On this admission his Hb was 64g/L, he was hypotensive (blood pressure 89/47) and was treated for sepsis with intravenous fluid and antibiotics. He was noted to have a raised urea (17.4mmol/L, normal range 2.5-7.8) with a normal creatinine. He was known to have

been anaemic and the black stools were attributed to his treatment with ferrous sulphate. After this 4-hour admission he was discharged home to continue oral rehydration.
Two days later he was readmitted (at 11:23) having collapsed at home. He was short of breath, had evidence of myocardial ischaemia and blood gas analysis showed Hb 52g/L. Transfusion was prescribed but delayed to 15:35 as one of the two samples was rejected. He received 3 units, post transfusion Hb 76g/L. The following day he became progressively more unwell with evidence of heart failure and falling Hb to 50g/L. Transfusion did not take place as not prescribed. He died on the 4th day of this admission.

In addition to the black stools, the considerably raised urea with a normal creatinine was an important clue to gastrointestinal bleeding.

Case 12.5 Delayed transfusion due to fever
An elderly woman presented after chemotherapy with epistaxis, fever of 39^{o}C and shortness of breath. Her Hb was 57g/L and platelets 9x10^{9}/L. Blood component therapy was withheld due to fever until the following morning. This was due to misunderstanding by the junior doctor of what to do. Death some days later was not contributed to by this 6-hour delay.

Case 12.6 Incorrect sample labelling and delayed collection contribute to death
An elderly woman with comorbidities was not transfused until the second day of her admission. Her Hb had reduced from 77 to 66g/L. The first transfusion sample was not processed as it was wrongly labelled with an addressograph label. When the blood was ready there was a delay in collection. The transfusion delay was considered to contribute to her death.

Case 12.7 Delayed transfusion despite severe anaemia and gastrointestinal bleeding
An elderly woman presented to the emergency department with lethargy and a history of dark stools. She was taking apixaban for atrial fibrillation. Her Hb was 36g/L. Two units of blood were prescribed but not ordered from the laboratory. There was delayed medical review. She had a massive gastrointestinal bleed after transfer to the ward and died without receiving the blood after a 9-hour delay.

Case 12.8 Delayed transfusion and failure to recognise deterioration
A woman in her 70s was admitted with acute leukaemia and sepsis. There was failure to identify her deteriorating condition over several hours despite a high early warning score and poor communication between teams. The non-specialist staff were reluctant to start transfusion because the patient had a fever. She was admitted to intensive care and transfused after more than 12 hours but died a few hours later.