13 Adverse Events Relating to Autologous Transfusion

SHOT has received no reports this year of adverse reactions relating to autologous pre-deposit donation. Although the use of this technique has fallen in recent years, previous studies have estimated that the incidence of associated adverse events is approximately 2.6%[23] suggesting that there is under-reporting to SHOT.

There have been three reports of adverse events relating to the re-infusion of autologous blood. Two of these are included in the IBCT chapter and one as an ATR (case 8). The two IBCT cases are summarised below.

Case 1

A 40 year old woman was admitted for a renal transplant. Prior to operation she had donated 3 units of autologous blood, which was stored in the hospital blood bank. There was no documentation either in the patient's notes or the laboratory to alert staff that autologous blood was available. When the laboratory received a request for 2 units of red cells, they provided allogeneic blood, one unit of which was transfused during the operation. Only when the expired autologous blood was discovered in the blood bank stock refrigerator was the error recognised. The hospital has since instituted a system whereby alerts are placed in the patient's laboratory record and hospital notes when autologous blood is available.

This patient was exposed to risk in two ways; firstly her haemoglobin level was reduced by the removal of three units of blood, so that she was more likely to require peri-operative transfusion, and she was then unnecessarily exposed to allogeneic blood because of poor communication.

Case 2

An unrelated volunteer bone marrow donor was receiving his predonated autologous blood post-operatively when nursing staff noted that the in-line filter had become blocked. Closer inspection of the unit revealed the presence of multiple small clots. These had not been noticed by the laboratory or by the nurses who checked the unit before administration. The transfusion was abandoned. There was no harm to the patient.

The reporter did not state whether the pre-deposited unit had been collected by the blood service or by the hospital. This case highlights the importance of correct handling of autologous pre-deposited blood. The EU Directive on blood safety, which is due to become law in February, requires that autologous blood is subject to the same regulations as homologous blood.

Case 3

See ATR chapter 6, case 8

Strategies for blood conservation include the use of blood salvage in appropriate circumstances. With increasing use of these technologies it is important that adverse events are reported and documented, so that the relative risks of alternatives to allogeneic blood transfusion can be assessed. SHOT is therefore keen to receive reports of problems associated with all modalities of autologous transfusion. Defects of blood salvage devices should also be reported to the MHRA.