Learning points

- The same standards should apply to pre-transfusion testing in and outside of laboratory 'core hours'
- Laboratory procedures should be consistent with current guidelines
- Maternal results must always be checked before issuing blood for a neonate
- Recommended best practice (included in forthcoming BCSH guideline on Specification and Use of IT Systems in Blood Transfusion Practice) is that all electronic issue procedures should be controlled by computer algorithms to validate appropriateness of actions

Inappropriate transfusions (n=56)

Table 3

Cause of inappropriate transfusion	Number
FBC sample unsuitable (e.g. from 'drip arm') or from wrong patient	19
Analytical error in haematology laboratory	11
FBC result wrongly transcribed on ward	4
Wrong component given*	6
Transfusion given before haematology results available, on basis of out of date result, or in contravention of instructions	10
Blood components available 'on standby' and given without prescription	3
Wrong dose given (e.g. request for '4 units' of platelets - 4 ATDs issues)	2
Excessively rapid transfusion of platelets to an infant undergoing cardiac surgery	1

*In 1 case, 2 qualified nurses on a surgical ward gave red cells when platelets were prescribed

Case 5

A request for full blood count (FBC) was left on a ward for a phlebotomist. A blood sample was sent to the laboratory, where a Hb of 7.9g/dl was recorded and telephoned to the ward. The haematology laboratory suggested that a repeat sample was required because of the change from the previously recorded level on this patient. No repeat was sent, instead a 3 unit transfusion was prescribed and given. The post-transfusion Hb was 18.7 g/dl. Blood grouping of the pre-and post-transfusion samples revealed that the pre-transfusion sample was from a different patient. The patient was venesected but developed cardiac failure and subsequently died.

Case 6

A frail elderly lady was admitted with a chest infection, dehydration and impaired renal function. Her Hb was within the normal range. Two days later a further sample was taken and the Hb was found to be 7.7g/dl. The result was sent to the ward computer without comment. The biochemistry laboratory realised that the sample was diluted with saline and rejected the results obtained. The sample had been taken from the 'drip arm'.

A 2 unit transfusion was prescribed and given, following which the Hb was 18.0g/dl. Her creatinine increased to 251umol/l. Her renal function continued to deteriorate and she died 5 days later.

Learning points

- Correct procedures must be followed for patient sampling
- A decision to transfuse must be based on clinical assessment as well as laboratory results - look at the patient!
- Blood components must not be given without prescription
- Blood should only be prescribed by a doctor who has undergone training in blood transfusion and has been assessed as competent
- Diagnostic laboratories must carry out checks to identify large changes in parameters ('delta checks') and should not issue unvalidated reports
- Nurses giving blood must be familiar with blood components and the indications for their use