Safety Alternatives

Blood Bulletin

Autologous Appropriate

Editors for this Issue:

Julie Yates
Transfusion Practitioner, Warrington and Halton Hospitals NHS Foundation Trust
Email:
julie.yates@whh.nhs.uk

Tony Davies,
Transfusion Liaison Practitioner.,
NHSBT / SHOT.
Email:
tony.davies@nhsbt.nhs.uk

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Expanding Roles in Transfusion Safety!

Transfusion Practitioners have been present in most of our Hospitals in the North West for some years now and as their roles have developed to include responsibility for a wider range of initiatives, some hospitals have been able to appoint Assistant Practitioners to support them.
Marsha Whittam, Assistant Practitioner from Trafford Hospital, describes for us her role.

The Role of the Assistant Practitioner in Blood Transfusion at Trafford hospital—How have I made a difference?

I have now been in post for 12 months, and when I first started the Transfusion Practitioner used to have to trace all the units that were not captured by Blood Track. I have been able to take on this responsibility and have also begun to include batch products such as albumin, as well as red cells. This is quite time consuming, but gives us an excellent traceability results.

I have carried out my first audit, including the design and registration of the audit tool and looked at the way wards and departments stored their empty blood bags. It was interesting to evaluate teaching and receive staff feedback.

I presented the findings at one of our haematology meetings and even though a little nervous felt proud of my achievement.

I have been made very welcome at regional transfusion events and the Transfusion Practitioners have been very supportive of my role.

I was also able to attend the North East Assistant Practitioner meeting and found it interesting to meet other Assistant Practitioners and the problems they face individually.The group is currently working on a resource file for transfusion assistant practitioners. My ideas for the next year I would like to be involved in a transfusion awareness event. I now help coordinate the blood van at my hospital to encourage staff to donate and I would like to take this further.

This for me has been a very rewarding position, I get to help my patients and learn something new everyday!

Wrong Bay, Wrong Bed

An F2 doctor collected samples from a patient in Bay D, Bed 4. The samples were labelled at the bedside with the patient's name, date of birth, hospital number. The sample was signed and dated and the information matched the request form. A perfect example with one small problem: the blood in the bottle belonged to somebody else!

When the laboratory tested the sample on their blood grouping machine the historic blood group did not match the current sample hence the BMS was alerted of a possible problem. The historic group was O Positive, but the current group was A Negative.

A further sample was requested and the patient was confirmed to be O Positive. On investigation it was concluded that the F2 doctor had collected samples from a patient in Bay C, Bed 2. The doctor had failed to positively identify the patient by checking the wristband and asking the patient to confirm their name and date of birth. They did however ask the patient if they were patient X to which the patient agreed!

Collection of Samples Procedure

- The collection of the blood samples from the patient and the subsequent labelling of the samples should be performed as one continuous, uninterrupted procedure at the patient's (bed)side, involving one patient and one member of staff only.
- All members of staff involved in sample collection should be competency assessed to NPSA Safer Practice Notice 14 (2006) standards

Patient Identification

- Positively identify the patient: They must be asked (where possible) to state their name and date of birth.
- Outpatients must be also asked to state their address.
- This information must match the request form.
- All inpatients must wear a wristband.

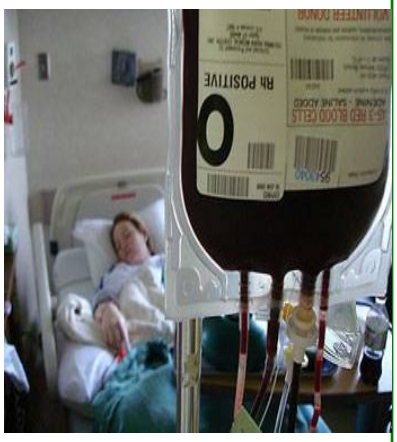
For further information:
Visit www.bcshguidelines.org
"Administration of Blood Components"

Sample Labelling

- The sample must contain: full name, date of birth, hospital/NHS number (some hospitals also state address—see your local policy).
- The information must exactly match the request form and the patient's wristband.
- Date and time of sample taken and the signature of the person taking the sample must be recorded on each sample and the request form.
- Never pre-label samples
- Hand written samples must be legible and accurately completed.
- Labels printed away from the patient's (bed) side must not be used on transfusion samples.

Acute Transfusion Reactions - Haemolysis due to ABO Incompatibility

Acute transfusion reactions due to ABO incompatibility occur because the patient has "naturally occurring" antibodies that react with the transfused cells. An example is when group A red cells are accidently transfused to a patient that is group O.



The group O patient has both anti-A and anti-B antibodies in all their body fluids. Therefore if group A or group B red cells are transfused to this patient the antibodies in their body will attach themselves to the transfused cells. The strength of these "naturally occurring" antibodies can vary from patient to patient depending on age, whether they are immuno-compromised etc, but they always have the potential to cause a very serious reaction.

When the antibody attaches itself to the transfused cells the cells are very quickly destroyed within the arteries/veins (intravascular haemolyis – removal within the circulation) and the patient may go into shock or even renal failure.

The patient feels restless, agitated or they say they don't know what's wrong but they "don't feel right".

Signs and symptoms

- Chills
- Unease, restlessness
- Muscle/joint pain classically in the chest, lumbar region and at the cannulation site
- Shortness of breath
- Drop in blood pressure
- Temperature

Management

- Act fast but don't panic - contact the doctor
- Stop the transfusion immediately
- Disconnect the unit and connect a saline drip with a new administration set to maintain access
- Record the blood pressure, pulse, respiratory rate, temperature and oxygen saturation
- Check the unit details against the patient, wristband and paperwork
- Inform the transfusion laboratory (there may be another patient at risk if the wrong blood has been taken) and follow the transfusion reaction procedure

Laboratory Investigations

The laboratory needs to investigate any suspected transfusion reaction. Depending on local policy they will need:

- The implicated blood bag and the administration set
- Two crossmatch samples (pink top)
- One clotted (red top) sample
- A set of blood cultures

Transfusion reaction form containing all the details (patient details, unit number, amount given, time started, time stopped, signs and symptoms etc).

Julie Yates, Transfusion Practitioner, Warrington Hospital

Highlights from the SHOT Report 2008

Over the 12 years SHOT has been collecting data, trends in reporting have borne the hallmarks of an effective haemovigilance system, increasing patient safety through the promotion of a culture of learning and improvement. The number of events has risen year on year while the frequency of the most serious types of event, and the mortality directly related to blood transfusion, has fallen.

The total number of questionnaires analysed from 2008 was 1040, an 85% increase in reporting across the board since 2007.

- 1 death that was a direct consequence of blood transfusion, a case of transfusion-transmitted bacterial infection
- 9 others where a patient who was already very unwell died, and where the transfusion reaction was considered to have contributed to the death.
- 10 cases involved ABO-incompatible red cell transfusions and 1 case involved ABO-incompatible FFP transfusion. 4 of these cases resulted in major morbidity for the patient.
- Laboratory errors have increased from 332 cases reported in 2007 to 477 cases in 2008

Anti- D Errors

Anti-D reports more than doubled in 2008, to 137, presumably as a result of increased awareness of the need to report errors associated with this blood product.

- There were 58 cases where anti-D was delayed or omitted altogether, putting the patient at risk of sensitisation to the D antigen
- There were 63 cases where anti-D was administered inappropriately, thus exposing patients unnecessarily to a human blood product

Recommendations

The main recommendations are;

- Awareness of criteria for reporting adverse reactions and events
- A national specification for transfusion laboratory IT systems
- Standardised transferrable competency certification for all staff involved in transfusion
- Discontinue the use of the compatibility form in checking patient identification at the bedside
- Ensure adequate observation of patients receiving transfusion
- Develop a supportive culture for hospital staff involved in transfusion

Tony Davies, Transfusion Liaison Practitioner, SHOT

Adverse Effects

55 cases of Haemolytic Transfusion Reaction (HTR) were reported, 9 acute reactions and 46 delayed reactions. There was 1 death in the delayed reaction group, and there were 6 cases of major morbidity across both groups.

There were also:

- 17 cases of possible Transfusion Related Acute Lung Injury (TRALI)
- 1 case of Post Transfusion Purpura (PTP) due to anti-platelet antibodies
- 4 cases of Transfusion Transmitted Infection (TTI)
- Transfusion-Associated Circulatory Overload (TACO) was responsible for 1 death, 6 cases of ICU admission, and 4 cases where the reporter considered the reaction as 'life-threatening'

For further information:

The Annual Report and Summary, along with toolkits to help in the reporting of adverse incidents are available and may be downloaded from the SHOT website www.shotuk.org