Non-Medical Authorisation Course

November 2017

Authorising, Prescribing & Sampling

Janice Smith

Matron Transfusion Specialist

Chesterfield Royal Hospital NHS

NHS Foundation Trust

Aims of this session

To discuss and understand:

- Authorising blood / blood components
- Prescribing of blood / blood components
- Sampling requirements

Authorisation Practice

- Non-medical practitioners/nurse specialists may only authorise blood components in their specific clinical area and are responsible for their own actions.

- The non-medical practitioners/nurse specialists will undertake the extended role solely within their clearly defined clinical transfusion guidelines for their area of practice.

Authorisation Practice

- This area of competence is not transferable to any other areas within the Trust / Organisation

- They must ensure they keep themselves up-to-date with the policies and procedures associated with Blood Transfusion and maintain their competency to authorise transfusion.

It is essential to:

- Explore alternatives to blood component transfusion
- Only authorise blood components if it will be of benefit to the patient
- Ensure the patient has given informed consent for transfusion and that this is documented in the patient notes
- Document the reason for authorising blood component transfusion

It is essential to:

- Refer cases to Clinical Teams with the relevant expertise where there is doubt or concern about authorising transfusion.
- Contact a registered medical practitioner without delay if any adverse reaction or event is suspected and comply with local policy and procedure.

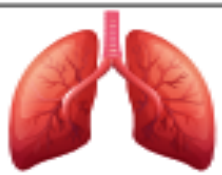
Prescribing

- Prescribing requirements may vary between Trusts
  - Electronic or paper?
- Ensure you are prescribing for the correct patient. Core identifiers are a MUST:
  - First name, Last name, DOB, Unique patient ID no.
- Specify component required & amount
- Any “special requirements” ? e.g. irradiated
- Are concomitant drugs required? e.g. diuretic
- Specify rate / duration of transfusion
- Think TACO risk…

Recommendation

- A formal pre-transfusion risk assessment for transfusion-associated circulatory overload (TACO) should be performed whenever possible as TACO is the most commonly reported cause of transfusion-related death and major morbidity. An example is shown in Figure 18b.1

Action: Trust/Health Board Chief Executive Officers and Medical Directors responsible for all clinical staff

TACO Checklist	Red cell transfusion for non-bleeding patients
	Does the patient have a diagnosis of 'heart failure' congestive cardiac failure (CCF), severe aortic stenosis, or moderate to severe left ventricular dysfunction? Is the patient on a regular diuretic?
	Is the patient known to have pulmonary oedema? Does the patient have respiratory symptoms of undiagnosed cause?
	Is the fluid balance clinically significantly positive? Is the patient on concomitant fluids (or has been in the past 24 hours)? Is there any peripheral oedema? Does the patient have hypoalbuminaemia? Does the patient have significant renal impairment?

If 'yes' to any of these questions

1. Review the need for transfusion (do the benefits outweigh the risks)?
2. Can the transfusion be safely deferred until the issue can be investigated, treated or resolved?
3. Consider body weight dosing for red cells (especially if low body weight)
   - Transfuse one unit (red cells) and review symptoms of anaemia
   - Measure the fluid balance
   - Consider giving a prophylactic diuretic
   - Monitor the vital signs closely, including oxygen saturation

Due to the differences in adult and neonatal physiology, babies may have a different risk for TACO. Calculate the dose by weight and observe the notes above.

Questions around prescribing

- Timing of transfusion
- Rate decisions
- Special requirements?
- Nurse authoriser versus nurse prescriber & concomitant drugs
- Management of adverse events

Table 8.7 Indications for irradiated cellular blood components[a] in haemato-oncology patients

Reducing the risk of TA-GvHD

Patient group	Irradiated blood components
Adults or children with acute leukaemia	Not required (except for HLA-selected platelets or donations from first or second degree relatives)
Recipients of allogeneic (donor) HSC transplantation	From the start of conditioning chemo-radiotherapy. Continue while receiving GvHD prophylaxis (usually for 6 months post-transplant) If chronic GvHD or on immunosuppressive treatment, continue irradiated blood components
Bone marrow and peripheral blood stem cell donors	Provide irradiated cellular components during and for 7 days before the harvest
Bone marrow or peripheral blood HSC harvesting for future autologous reinfusion	Provide irradiated cellular components during and for 7 days before the harvest
Autologous HSC transplant patients	From start of conditioning chemo-radiotherapy until 3 months post-transplant (6 months if total body irradiation was used)
Adults and children with Hodgkin lymphoma at any stage of the disease	Irradiated cellular components indefinitely
Patients treated with purine analogues (fludarabine, cladribine and deoxycoformicin)[b]	Irradiated cellular components indefinitely
Patients treated with alemtuzumab (anti-CD52) therapy[c]	Irradiated cellular components indefinitely

Indications for the Use of CMV Negative Red Cell Components

SaBTO recommendations for the use of CMV negative components (RBC and platelets) for **Specific Patient Groups**:

Intra-uterine Transfusions & Neonates

- CMV seronegative red cell and platelet components should be provided for IUT's and neonates (up to 28 days post EDD)

Pregnant Patients

- CMV seronegative red cell and platelet components should be provided for elective transfusions during pregnancy (not during delivery)

SaBTO Recommendations for Specific Patient groups

- **HIV and immunodeficient patients**
- **Haemopoetic stem cell transplant patients- adults and children**
- **Organ transplant patients:**

CMV PCR monitoring should be considered for all groups to allow early detection of possible CMV infection.

(All blood is leucodepleted)

Indications for the Use of HEV Negative Red Cell Components

2017 - All donors are screened for HEV and

HEV negative components are now issued, so . . .

Indications for the Use or Phenotyped Red Cell Components

- To provide antigen negative blood for patients with pre-formed alloantibodies
- To reduce the incidence of further immunisation in a patient already producing alloantibodies
- Transfusion dependant patients (haemoglobinopathies (Sickle,Thalessaemia), oncology)
- To prevent the formation of alloantibodies in pre-menopausal females that can cause HDFN
- (may vary due to local policies/ stock holding/ deliveries)

Washed / Re-suspended

- Red cells are washed and then re-suspended
  - Usually for patients who get recurrent reactions when transfused
  - Can be used for IgA deficient patients with reactions
- Platelets can be re-suspended in PAS and very minimal plasma (similar indications)
- Requires discussion with NHSBT consultant

Requests to the laboratory

- Clear communication with the labs is key!
- They are your friends & have a vast amount of knowledge
- Local policy may be electronic or written
- Caution if requesting over the phone . . .
- Be aware of:
  - patients with known antibodies as they may be difficult to crossmatch
  - or who have “special requirements” as provision may take longer

Requests to the laboratory

- Ensure all requests include:
  - full patient ID (4 identifiers)
  - location of patient
  - exact details of product required
  - amount required & any special requirements
  - details of any previous reactions
  - any recent pregnancies or transfusions
  - reason for transfusion
  - when is the product required?

Sampling requirements

- What is the “2 sample rule” all about?
- Why does Blood Bank reject so many samples?
- Sample labelling requirements:
  - Positive patient ID
  - Labelling at the bedside, don’t pre-label
  - You take the sample, you label the bottle
  - Stickers or hand written?
  - 4 identifiers, signature, date, time & location

What could possibly go wrong?

Common errors

- Decisions made on another patient's results
- Diluted samples
- Not using most current result
- Transfusion indication not clear
- Patient history not reviewed or considered
- Poor clinical documentation
- Failure of positive patient ID
- Poor knowledge re transfusion process
- Transcription errors
- Not using lab based result

Wrong blood in tube (WBIT)

- Woman grouped 10 years ago at CRH, A⁻ tve
- Seen in pre-assessment, re-grouped O ⁻ tve
- Presumed error in pre-assessment, patient re-sampled
- Repeat grouping undertaken: O ⁻ tve
- Sampling error had been made 10 years ago and wrong data held on the system

Reported to SHOT

Failure to give irradiated blood

- Haematology patient on a surgical ward requiring transfusion.
- Dr questioned whether patient should receive irradiated products and contacted Blood Bank.
- Blood Bank reviewed history and found no flags or alerts on their system.
- Discussed with Haematology Consultant who confirmed patient did require irradiated products.
- Patient had already received non-irradiated blood earlier that day.

Reported to SHOT

Failure to inform the laboratory about specific requirement for irradiated components

- A 67 year old man had been treated for chronic lymphocytic leukaemia (CLL) at another hospital with fludarabine
- At initiation of treatment at the second hospital no notification was made to the transfusion laboratory until he had received 10 units of non-irradiated components
- Several different haematology doctors had requested the transfusion on different occasions
- The hospital transfusion policy was amended to require the requestor to check for specific requirements

A pregnant woman fails to receive CMV negative red cells

- A pregnant woman (gestation 19 weeks) was having a liver transplant
- The red cells requested and transfused were not CMV negative because the blood transfusion laboratory was unaware the patient was pregnant
- The requestor did not select CMV negative or indicate that the patient was currently pregnant on the request form
- This was discovered when pregnancy was documented on the second request form after the initial red cells had already been administered
- There was no historical record in the transfusion laboratory for this patient

Wrong twin transfused

- Pre-term twins being managed on NNU
- Twin A had required previous transfusions and was O_2 dependent. Twin B more stable.
- Routine result rung through from the lab regarding twin B; Hb 74g/L
- Initially recorded correctly, but then the Nurse reconsidered and thought she had documented for the wrong twin as twin B less O_2 dependent and no previous transfusions.
- Notes amended, twin B's results now in twin A's notes
- Electronic record not reviewed by Dr prior to transfusion
- The following night, Nurse rechecked both twin's Hb and was concerned to find that twin A had an Hb of 171g/L , twin B's was 74g/L
- Twin A had received an unnecessary transfusion

Reported to SHOT

Any questions?

Summary

- Authorise blood / blood components only for patients within your agreed sphere of practice and knowledge boundaries
- Ensure you prescribe clearly, based on up-to-date, accurate results & correct information
- Samples and requests must be correctly labelled and provide all the required information.
- Thanks for listening