



Non-Medical Authorisation Course TRANSFUSION ALTERNATIVES

Thursday 22nd October 2015



Transfusion Alternatives

Leanne Hostler - my rescuer 😊
Associate Transfusion Practitioner
Sherwood Forest Hospital Trust

Aims



- Why we need alternatives
- What alternatives are there?

Guidelines:



Better Blood Transfusion (BBT) 2/3 (2002/2007):

- “Ensure the appropriate use of blood and use of effective alternatives in every clinical practice where blood is transfused”
- Trusts should review and explore the use of effective alternatives to donor blood and the appropriate use of autologous blood transfusion.
- “Avoid unnecessary use of donor blood in clinical practice”

Patient Blood Management (PBM) (2014):

- Avoid transfusion for managing anaemia if alternatives are available e.g. oral iron for iron deficiency anaemia and intravenous iron for functional iron deficiency
- Consider alternatives to transfusion for postoperative anaemia management (volume expanders, intravenous iron)

Cost



- **Expires quickly once donated:**

- Red cells 35 days
- Platelets 7 days
- FFP <24hrs once thawed

- **Blood is expensive:**

- Red cells £120.00
- Platelets £193.15
- FFP £28.46
- Cryoprecipitate £180.54 (pooled - equivalent to 5 single bags)

Patient choice



Patients do refuse blood, for various reasons:

Jehovah's Witness patients

- Due to personal belief
- Refuse Red cells (sometimes Platelets and Plasma)

It's your choice

Just say

NO

Knowledge

- Often patients refuse because know the facts
- Usually HIV is the issue

Is transfusion necessary?



Don't take as many samples!

- Each blood sample taken removes red cells from patient, and increasing any anaemia present:
 - Minimise venepuncture
 - Make sure you do it correct to prevent repeat samples
 - Studies show every 100ml taken reduces Hb by 0.7g/l

Check results !

- If they have had an FBC/Coag taken check all the results – or if no current one, take one - patient may not require a transfusion
- Make sure it is the current result
- Don't forget to check other parameters (MCH, MCHC, Folate etc)

Collection & Reinfusion of patient's own red blood cells

(Autologous blood transfusion)



- Stimulated by concerns about viral transmission by donor blood, 1980s
- Must be performed in a licensed blood establishment
- Most healthy adult patients can donate up to 3 RBC units before elective surgery
- BCSH 2007 severely questioned the rational, safety & cost effectiveness of routine Predeposit autologous donation (PAD)

Autologous blood transfusion



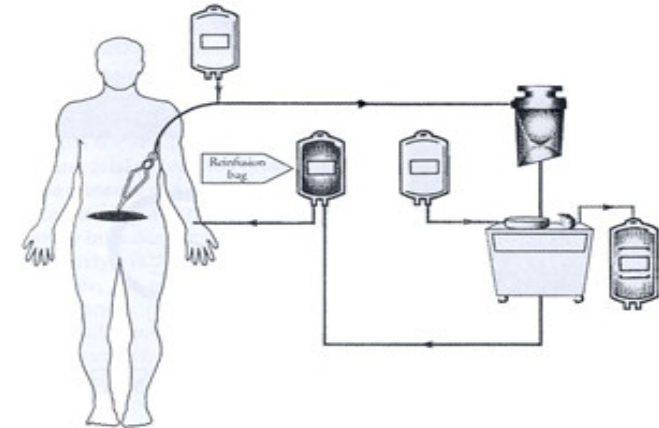
- Rarely performed in the UK
- BCSH only recommends its use in 'exceptional' circumstances;
 - ✓ Patients with rare blood groups/multiple blood group antibodies where difficulties in getting compatible donor blood
 - ✓ Patients at serious psychiatric risk because of anxiety about exposure to donor blood
 - ✓ Patients who refuse to consent to donor blood transfusion
 - ✓ Children undergoing scoliosis surgery

Alternatives - Cell salvage

Intra operative



- Collect blood lost intra -operative, and give back to patient – i.e. receives own blood back
- Suitable for various procedures – refer to Trust policy
- Depending upon device set up, could be used for Jehovah's Witness patients – check during consent process





Alternatives -Cell salvage

Post operative

- Collect blood lost post operative from surgical drains or wounds and given back to the patient
- Mainly cardiac and orthopaedic cases
- Washed or unwashed

Minimising Peri operative blood loss



Harmonic
scalpel

Anaesthetic techniques:

- Controlled hypotension
- Normothermia
- Avoid acidosis
- Regional anaesthesia

Fibrin sealant

Tranexamic acid

Alternatives - Chemical



- Iron tablets (ferrous sulphate etc) or IV
- B12
- Folate

- Better diet = better Hb = less transfusions

Alternatives – The future



- “artificial blood” products
 - Along way off but is being looked at
 - potential trial 2016



APR 2014

- Crocodile blood
 - Crocodile haemoglobin better at storing oxygen - ? Future blood source



**The safest unit of blood is the
one the patient never receives !**