Women who decline blood transfusion

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Checklist for women who decline blood products during pregnancy

This checklist contains fluids, drugs and treatments used in the management of excessive bleeding during pregnancy and at birth. It considers four aspects of managing excessive bleeding:

1. **replacement of lost volume**
2. **replacement of lost oxygen carrying capacity**
3. **replacement of lost clotting factors**
4. **other products**

1. Volume replacement

Gelofusine

Synthetic solution used to replace lost fluid

I accept this product **Yes** ☐ **No** ☐

Hartmann's solution

Water based fluid replacement

I accept this product **Yes** ☐ **No** ☐

Sodium chloride 0.9 %

Water based fluid replacement

I accept this product **Yes** ☐ **No** ☐

Dextrose 5%

Water based fluid replacement

I accept this product **Yes** ☐ **No** ☐

Albumin

This is made from the non cellular component of whole blood and is used to replace blood loss and to treat complications of pregnancy in some circumstances

I accept this product **Yes** ☐ **No** ☐

2. Replacement of oxygen carrying capacity

Whole blood

Anonymously donated blood without any components removed. Not commonly used in clinical practice

I accept this product **Yes** ☐ **No** ☐

Red blood cells

Anonymously donated red blood cells, concentrated by removal of most of the non cellular components of donated whole blood. They also provide volume replacement

I accept this product **Yes** ☐ **No**

Procedures for preserving and reusing the patient's own blood

Autologous blood transfusion – Not applicable here

The patients own whole blood is collected several days before a procedure and stored for use during or after the procedure

I accept this product **Yes** ☐ **No** ☐

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Normovolaemic haemodilution

This is a technique used immediately before a planned procedure. The patient's blood is saved in a blood collection set that remains in contact with the patient's circulation. While the blood is being saved, the volume removed is replaced with intravenous fluid, such as Hartman's solution. Once the source of bleeding is controlled, the saved blood is returned into the patient's circulation

I accept this product **Yes** □ **No** □

Cell salvage

Blood lost through the vagina or at caesarean section can be collected. The blood is filtered to remove debris and then reinfused into the woman. There are various limitations to this procedure

I accept this product **Yes** □ **No** □

3. Replacement of clotting components

Platelets

Platelets are a vital part of the clotting system and are extracted from whole blood

I accept this product **Yes** □ **No** □

Fresh frozen plasma

Fresh Frozen Plasma (FFP) is defined as the fluid portion of one unit of human blood that has been centrifuged, separated, and frozen solid at -18° C (or colder) within 6 hours of collection. It contains clotting factors that need to be replaced if they are lost by haemorrhage or used up by complications of pregnancy

I accept this product **Yes** □ **No** □

Cryoprecipitate

Cryoprecipitate is a frozen blood product prepared from the non cellular fraction of donated blood. It contains concentrated clotting factors

I accept this product **Yes** □ **No** □

Recombinant factor VII 'Novoseven®'

Factor VII is an important clotting factor and 'Novoseven' is a genetically engineered product. It is only used in extreme circumstances and requires normal levels of other clotting factors to work. So, it is mostly used in conjunction with Fresh Frozen Plasma and Cryoprecipitate

I accept this product **Yes** □ **No** □

4. Others Products

Anti D

Given to Rhesus negative women to prevent complications caused by differences in blood type between mother and baby. Anti D is derived from the non cellular fraction of blood

I accept this product **Yes** □ **No** □

Iron infusion

Infusion of iron to increase iron stores rapidly. It is used during pregnancy in severely iron deficient women or after birth if severe blood loss has caused anaemia

I accept this product **Yes** □ **No** □

Erythropoietin

A genetically engineered drug that acts like the natural hormone. It stimulates the production of red blood cells

I accept this product **Yes** □ **No** □

Signed.....**Witness**.....**Name**.....**date**...../...../.....

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Guidelines for the management and treatment of obstetric haemorrhage in women who decline blood transfusion

Introduction

- The vast majority of women accept blood products if the clinical reasons for their use are fully explained. However, a few may continue to decline blood products because of personal or religious beliefs
- Massive obstetric haemorrhage is often unpredictable and can become life-threatening in a short time
- In most cases, blood transfusion can save the woman's life and very few women decline transfusion in these circumstances
- If it is known in advance that a woman may decline blood products, plans for the prevention and management of massive haemorrhage, should it occur, should be made and discussed during the woman's pregnancy
    - Documentary evidence e.g. a checklist detailing blood products that will be accepted in the event of massive obstetric haemorrhage (see above) should be completed, signed and witnessed and a copy placed in the medical record and its contents respected

Booking

- Usually occurs with a midwife in early pregnancy
- When women are asked about religious beliefs they should also be asked if they have any objections to receiving a blood transfusion and the discussion should be documented
- There may be non religious objections as well. These need to be documented and information provided to the woman about blood transfusion
- Any documentary evidence such as a Refusal of Treatment Certificate or Medical Directive Card (in the form of Schedule 1 to the Medical treatment Act 1998) should be requested from the woman, examined and a copy placed in the medical record
- If a woman would not accept blood transfusion, she should be advised to accept referral to specialist medical care for delivery in a unit with facilities for prompt management of haemorrhage, such as interventional radiology, cell salvage and surgical expertise
- Take routine booking bloods, including
    - Blood group and antibody screen
    - Complete blood picture
    - Serum ferritin and B_{12} levels
- Consider oral iron supplements (throughout pregnancy to maximise iron stores)
    - Adjust dose in relation to haemoglobin and ferritin levels
- Treat any haematinic deficiency (Vitamin B_{12}, Vitamin C, folate)
- If Iron levels unsatisfactory at 28 weeks, consider iron infusion (link to ch 95 Iron infusion)
- If B_{12} levels low, consider B_{12} injections (1,000 micrograms of vitamin B_{12} by intramuscular injection may be given at 3 monthly intervals)

Antenatal care

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Obstetric consultation

- The obstetric consultant (GP obstetrician) or obstetric registrar must discuss and document the following (see check list above):
  - The minor blood fractions and blood products the woman will accept e.g. Rhesus immunoglobulin (anti-D) if Rh (D) negative
  - Acceptable treatment options in the event of unexpected haemorrhage
  - Labour management plan, including intravenous access in labour, and active management of the third stage of labour
- All relevant information should be offered to the woman in a non-confrontational manner, including the possibility that hysterectomy may be required if massive haemorrhage occurs
- Determine if there are any risk factors predisposing to postpartum haemorrhage (for further information, refer to the PPG 'Antenatal and intrapartum risk factors for PPH')
- If the woman has any of the following risk factors, an intravenous infusion of oxytocin (Syntocinon®) should be planned after delivery of the baby
  - History of postpartum haemorrhage,
  - Antepartum haemorrhage
  - Increased maternal age (over 35 years)
  - Fibroids / myomectomy scars
  - Obesity
  - Multiple pregnancy
  - Abnormal placentation
  - Large baby (over 4 kg)
  - High parity
  - Polyhydramnios
- The placental site should be identified by ultrasound scan in late pregnancy
- Even if autologous transfusion is acceptable to the woman, collection of blood is not recommended during pregnancy, as the amount of blood required to treat massive obstetric haemorrhage is usually far in excess of what can be collected during pregnancy
- If cell salvage is available, establish if the woman would agree to this
- Refer for anaesthetic and haematologist consultation

Anaesthetic consultation

- The consultant anaesthetist will discuss relevant techniques to avoid blood transfusion e.g.
  - Normovolaemic haemodilution (see check list)
  - Cell salvage (see check list)
- Determine if there is agreement to either or both of the above procedures in the event of unconsciousness

Haematology consultation

- Discuss available treatments with the woman and ensure check list is completed, signed, witnessed and in her medical record

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- If appropriate, explain the technique of haemoglobin enhancement using recombinant erythropoietin (EPO) and iron infusion and recommend where appropriate

Labour

- The consultant obstetrician, anaesthetist and haematologist should be informed when a woman who declines transfusion is admitted in labour or for birth
- Vaginal birth is usually associated with lower blood loss than caesarean section and caesarean section should be performed only if there is a clear medical indication. In that case a consultant obstetrician should be present
- Establish intravenous access with a 16 gauge cannula
- A medical officer should attend the birth
- Ongoing risk assessment for postpartum haemorrhage. Additional risk factors for PPH that may arise in labour are:
    - Prolonged first stage of labour
    - Prolonged second stage of labour
    - Epidural block
    - Augmentation of labour
    - Instrumental delivery
- Active management of the third stage of labour (oxytocics, controlled cord traction and uterine massage)

Postpartum

- The woman should be continuously supervised for at least an hour after birth
- Close observations every 15 minutes for the first hour (including uterine massage as required)
- Depending on risk assessment, consider need for a prophylactic Syntocinon® infusion and indwelling catheter
- Consider oral or rectal Misoprostol 6 hourly for 24 hours

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Postpartum haemorrhage

- Should haemorrhage occur, senior obstetric and anaesthetic staff must be contacted and attend promptly
- Physician review if acute blood loss and haemodynamic instability
- The South Australian Perinatal Practice Guideline on postpartum haemorrhage should form the approach to the clinical situation (For further information, refer to the PPG 'postpartum haemorrhage guideline')
- Ensure accurate estimation of blood loss (weigh blood-soaked pads, linen etc)
- If bleeding is ongoing, obtain blood for:
    - Complete blood picture
    - Check D-dimer
    - Coagulation studies including INR, APTT, fibrinogen, FDPs
- Interventions such as bimanual compression, balloon tamponade, embolisation of uterine arteries, B-Lynch suture, Internal Iliac Artery ligation or hysterectomy may be life saving
- If there is ongoing bleeding, it may be necessary to proceed with these interventions at an earlier stage than would be contemplated in other women
- The woman and her partner should be kept fully informed throughout. If the situation is critical, it is appropriate to ask the woman in a non confrontational manner whether she would accept transfusion, in case she has changed her mind
- It should be ensured that the woman is not under undue pressure when deciding on whether to accept or refuse transfusion
- If the woman continues to decline blood or blood products, her wishes must be respected. Any adult who has the necessary mental capacity is entitled to refuse treatment, even if that will result in death. No other person can consent to or refuse treatment on behalf of the woman

It is very distressing to see a woman die in such circumstances. Support must be available for staff and relatives

Postpartum treatment of severe anaemia

- Physician review
- Haematology review to consider benefit of recombinant human erythropoietin (rhEPO). **Note:** Patients receiving erythropoietin therapy require large quantities of iron to keep pace with the demands of the bone marrow during active erythropoiesis
- Take blood for iron, folate, and vitamin B_{12} levels
- Parenteral iron may be used to improve iron stores (for further information, refer to the PPG 'Iron infusion')

- Supportive measures include:
    - Oxygen supplementation, monitoring oxygen saturation levels

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- Restore fluid volume with intravenous solutions (crystalloids and colloids)
- Minimise frequency of blood draws
- Gauge tolerance of anaemia (significant normovolemic anaemia is well tolerated in haemodynamically stable patients)
- Adequate nutrition
- Adequate analgesia
- Maintain normothermia
- Commence oral iron, vitamin B_{12} and folic acid

- Hyperbaric oxygen therapy is an option in life threatening anaemia
  - Intermittent treatment in a hyperbaric chamber encourages plasma itself to aid in carrying dissolved oxygen

References

1. Massiah N, Athimulam S, Loo C, Okolo S, Yoong W. Obstetric care of Jehovah's Witnesses: a 14 year observational study. Arch Gynecol Obstet 2007; 276: 339-343.
2. NHMRC. Clinical practice guidelines on the use of blood components. Commonwealth of Australia 2002. Available from URL: http://www.nhmrc.gov.au/publications/synopses/_files/cp78.pdf
3. Said S, Geary M. Prevention of obstetric haemorrhage. Fetal and Maternal Medicine Review 2007; 18: 257-288.
4. Remmers PA, Speer AJ. Clinical strategies in the medical care of Jehovah's Witnesses Am J Med 2006; 119: 1013-1018.

Useful website links

Parliament of Australia. Parliamentary library. The common law right to refuse unwanted medical treatment. Available from URL:
http://www.aph.gov.au/library/pubs/rp/1996-97/97rp3.htm

Pamphlet: Blood – who needs it? Common questions about blood component therapy
http://www.nhmrc.gov.au/publications/synopses/_files/cp83.pdf

Blood components: A guide for patients
http://www.nhmrc.gov.au/publications/synopses/_files/cp85.pdf

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Abbreviations

APTT	activated partial thromboplastin time
e.g.	For example
EPO	Erythropoietin
FDPs	Fibrin degradation products
FFP	Fresh Frozen Plasma
GP	General practitioner
INR	international normalised ratio
kg	Kilogram(s)
%	Percentage
PPH	Postpartum haemorrhage
®	Registered trademark
Rh	Rhesus

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