# BLOOD PRODUCTS – MANAGEMENT OF PREGNANT WOMAN UNABLE TO USE BLOOD PRODUCTS

*This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.*

## 1. AIM

- Appropriate assessment and management of a woman who is unable to use blood products during pregnancy, intrapartum and/or postpartum period

## 2. PATIENT

- Woman who refuses transfusion of blood products in pregnancy based on:
  - Religious beliefs (e.g. Jehovah's Witness (JW))
  - Personal grounds
- Woman with complex red cell antibodies and/or rare blood group

## 3. STAFF

- Medical, nursing and midwifery staff

## 4. EQUIPMENT

- Nil

## 5. CLINICAL PRACTICE

**Antenatal**

- Identify woman who would not accept blood products during pregnancy, intrapartum or postpartum period
- Identify woman with complex red cell antibodies and/or rare blood group
- Counsel woman about the increased risk of maternal mortality and morbidity if she is unable to use blood products. Discuss possible ways to minimise this
- Refer to haematologist/haematology clinic for documentation on a legally binding advanced care directive, including which products would and would not be acceptable to the woman.
- Place a copy in the medical record including:
  - which products are unacceptable or will be difficult to provide
    e.g. JW – no packed red cells (PRC), platelets, or fresh frozen plasma (FFP)
    If multiple red cell antibodies, generally only affects the PRC
  - which minor blood fractions are acceptable e.g. albumin, clotting factors, immunoglobulins, haemoglobin, haemin, interferons
  - which recombinant products are acceptable e.g. Eprex®, NovoSeven®
  - whether Anti-D is acceptable or not
  - which procedures, involving her own blood, are acceptable e.g. intraoperative blood cell salvage, acute normovolaemic haemodilution, haemodialysis, epidural blood patch
- Review by obstetrician/high risk antenatal clinic for initial consultation and again in the third trimester to:
  - identify woman at increased risk of haemorrhage
  - counsel woman of significant morbidity/mortality in the event of major haemorrhage
  - advise appropriate place of birth and model of antenatal/intrapartum care
  - recommend active management of the third stage of labour
  - discuss measures that may be required in the case of a major/life threatening haemorrhage including interventional radiology and postpartum hysterectomy
  - document and consent what action woman would sanction if she were unconscious/unable to communicate and likely to die from haemorrhage

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- Refer to anaesthetist/anaesthetic clinic prior to birth for consultation
- Review full blood count (FBC), ferritin, B12 and folate at antenatal booking visit
- Review blood group and antibody status. If a woman is Rhesus (Rh) negative, she should be counselled appropriately and recommended Anti-D as per NSW Health Guideline
- Optimise haematological parameters by:
  - identifying and treating haematinic deficiency i.e. iron, B12, folate
  - recommending oral iron supplement (100-200mg elemental iron/day) and oral folate (0.5mg/day) with a target ferritin $\geq$ 100ug/L
  - using intravenous (IV) iron therapy if oral therapy ineffective or not tolerated
  - reducing iatrogenic blood loss antenatally with a restrictive phlebotomy approach
  - withholding antiplatelet/anticoagulant drugs (e.g. aspirin, enoxaparin) for the appropriate time prior to delivery
  - considering erythropoiesis stimulating agents (ESA) e.g. erythropoietin, darbepoietin alfa, under haematology guidance
- Perform FBC and ferritin regularly, at least at booking, 28, and 36 weeks gestation
- Consider review by interventional radiologist in conditions with high risk of blood loss e.g. placenta praevia
- Ensure haematologist/haematology clinic has liaised with medical officers in Australian Red Cross Blood Service (ARCBS) for woman with complex red cell antibodies and/or rare blood group
- Ensure clear intrapartum and postpartum care plan is documented in medical records

**Intrapartum**

- Review the advanced care directive and documented care plan for birth
- Inform senior obstetrician, anaesthetist and haematologist that woman has been admitted in labour
- Inform blood bank if a woman with complex red cell antibodies and/or rare blood group has been admitted in labour
- Site 16g IV cannula and take FBC and ferritin
- Discuss intrapartum and postpartum plan with woman, including strategies to avoid prolonged labour, and active management of third stage

**Postpartum**

- Ensure careful and regular monitoring postpartum of maternal observations, fundal height, and blood loss, with accurate documentation of cumulative blood loss
- Manage active haemorrhage promptly as per postpartum haemorrhage (PPH) LOPs, involving consultant obstetrician, anaesthetist and haematologist early
- Consider the use of pharmacologic agents including tranexamic acid in cases of PPH
- Make the decision to take a woman to operating theatre (OT) early, as early definitive management e.g. intrauterine balloon tamponade, B-Lynch suture, hysterectomy, may be life saving
- Consider cell salvage intraoperatively – primarily managed by anaesthetic team

**Management of Postpartum Anaemia**

- Identify and treat haematinic deficiency (Iron, B12, Folate)
- Restrict excessive venesection, using paediatric sample tubes where possible
- Consider administration of IV iron infusion

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- Consider administration of fractions e.g. cryoprecipitate, prothrombinex if there is ongoing bleeding and the woman consents to its use, in consultation with haematology
- Consider the use of ESA and hyperbaric oxygen therapy on a case by case basis following consultation with haematology
- Advise woman to return promptly to hospital if she has any concerns about bleeding during the puerperium on discharge

### 6. DOCUMENTATION

- Antenatal card
- Medical record
- Advanced care directive

### 7. EDUCATIONAL NOTES

- There is a 45-65 times greater maternal mortality risk in those who refuse blood transfusions compared to the general obstetric population[3]
- The competent woman's choice must be respected, both ethically and legally. The competent woman has the right to refuse any form of life-sustaining treatment[3,4]
- Maternal autonomy before fetal beneficence upholds the law in New South Wales (NSW)[3]
- Health professionals have a continuing duty to provide care and may only refuse to provide care if this decision does not adversely impact upon the woman's health, and an alternative caregiver has agreed to accept responsibility for ongoing care[3]
- Early definitive management strategies to reduce blood loss should be employed[3,4]
- Early and clear communication with the woman, her partner and multidisciplinary team is imperative[3,4]
- Erythropoietin/darbepoietin:
  - requires haematologist review
  - is not subsidised for this indication on the pharmaceutical benefits scheme (PBS)
  - requires an Individual Patient Use (IPU) form to be completed, and be approved by the RHW Therapeutic and Drug Utilisation Committee, as are not approved on the formulary for this indication. The Committee will decide if the hospital or patient covers the cost of the medication.
  - Erythropoietin 300-600 units/kg subcutaneously (SC) weekly x 3-6[4]
  - Erythropoietin is ineffective in patients with iron, B12, or folate deficiency[4]
  - lacks good evidence for benefit
- Jehovah's Witnesses can obtain an advanced care directive from their own organization [4]
- The following apply to a woman who is Jehovah's Witness:
  - Unacceptable products include:
    - major blood components (e.g. red blood cells, platelets, fresh frozen plasma, white blood cells)
    - autologous blood transfusion
  - Potentially acceptably measures (up to the woman's personal decision) include:
    - blood fractions e.g. cryoprecipitate, albumin, prothrombinex, fibrinogen concentrate
    - Anti-D
    - intraoperative techniques e.g. blood salvage, acute normovolaemic haemodilution
  - Usually acceptable products include:
    - recombinant products
    - crystalloids
- Offer employee assistance program (EAP) counselling to either groups or individual clinicians involved in traumatic cases

## BLOOD PRODUCTS – MANAGEMENT OF PREGNANT WOMAN UNABLE TO USE BLOOD PRODUCTS cont'd

### 8. RELATED POLICIES / PROCEDURES / GUIDELINES

- Postpartum Haemorrhage - Prevention and Management
- Third Stage Management Following Vaginal Birth
- Anaemia and Haemoglobinopathies in Pregnancy
- Antepartum Haemorrhage
- Iron Deficiency Management in Maternity and Gynaecology-Oncology Women
- NSW Health Maternity – Rh (D) Immunoglobulin (Anti-D) Guideline GL2015_011

### 9. RISK RATING

- Medium

### 10. NATIONAL STANDARD

- Standard 7 – Blood Product Safety

### 10. REFERENCES

1. Massiah N et al. Obstetric Care of Jehovah's Witnesses: a 14-year observational study. Arch Gynecol Obstet 2007; 276: 339-343
2. Van Wolfswinkel ME et al. Maternal mortality and serious maternal morbidity in Jehovah's witnesses in the Netherlands. BJOG 2009; 116:1103-1110.
3. Kidson-Gerber et al. Caring for pregnant women for whom transfusion is not an option. A national review to assist in patient care. ANZJOG Volume 56, Issue 2, April 2016, Pages 127–136
4. Zeybek B et al. Management of the Jehovah's Witness in Obstetrics and Gynecology: A comprehensive medical, ethical, and legal approach. Obstet Gynecol Surv. 2016 Aug; 71(8): 488-500

**REVISION & APPROVAL HISTORY**

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