University of California San Francisco (UCSF) Health

Title: Blood Products Refusal Procedure for Obstetric Patients

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BACKGROUND:

Respect for patient autonomy is a fundamental part of the clinician-patient relationship and discussion of healthcare interventions. Some patients decline transfusion of blood products, either for religious or non-religious reasons, but most frequently as part of the Jehovah's Witness faith. Acceptance of, and decision-making surrounding, blood products and human blood derived medications is complex, however, and some patients who decline certain blood products may still accept other interventions. Because childbirth can be associated with excess blood loss and need for resuscitation, it is important before delivery to clearly delineate which blood products will be accepted or declined, realizing that the patient can change her preferences at any time. Pregnant women less than 18 years of age are considered emancipated minors, and therefore can decide which, if any, blood products they would accept.

PROCEDURE:

Note: Appendix A provides a checklist for providers to manage pregnant women who refuse blood products during prenatal care, labor and delivery, and post-partum, which summarizes the information below.

Preconception

Preconception Counseling

Patients who decline blood products may benefit from counseling about the risks of blood product declination before becoming pregnant. This may be more imperative in patients at higher risk for postpartum hemorrhage (PPH), such as those needing or desiring cesarean delivery or a trial of labor after cesarean (TOLAC), as well as those with a history of coagulopathy or PPH. Diagnosing and treating anemia in the preconception period is beneficial to this subset of patients as well. In patients who are Rh-negative, the risks and benefits of declining Rho(D) immune globulin (e.g., RhoGAM, WinRho) to future pregnancies should also be discussed in the preconception period because these products are human blood-derived.

Those intending in-vitro fertilization (IVF) may benefit from a discussion regarding the risks and benefits of multiple gestation and/or multifetal pregnancy reduction. Referral to the Anesthesia pre-operative clinic in the preconception period also should be considered.

Antepartum

Counseling of obstetric patients who decline blood products

Ideally, a provider should review any documentation from the patient's religious leaders regarding what types of blood products are allowed as part of counseling. If the patient has an advanced directive and/or a durable power of attorney, all relevant documents will be copied and placed in the patient's medical record (i.e., scanned into the patient's medical record, printed and placed in the patient's chart on admission). In addition, patients will be provided a handout describing blood product options and the provider will use the Blood Product Refusal Form to document what human-derived products (if any) the patient is willing to receive (See Appendices B and C).

Anesthesia Consultation

OB providers will refer all patients who refuse blood to the Anesthesia pre-operative clinic, with the goal of consultation completed by 32 weeks of gestational age at the latest. Should a patient not be seen in the Anesthesia pre-operative clinic by 32 weeks of gestational age, the OB provider will attempt to have the on-call OB Anesthesia team consent the patient during her prenatal care appointment or any triage or antenatal testing clinic visit. OB providers should complete the Blood Product Refusal form by 32 weeks of gestational age if not previously done by Anesthesia. This form should be scanned into the medical record and may be superseded by a later form completed during a consultation with Anesthesia either in their pre-operative clinic or upon admission. This form will be printed and placed in the chart on admission to the hospital.

Any patient who wishes to decline a potential blood transfusion for their neonate should be referred for a consult with Neonatology for a discussion of their options.

The following points should be discussed and documented before 32 weeks gestation:

1. Patient understands the risks and benefits of accepting or not accepting each blood product and intervention in Appendix C.

2. Patient is aware that declining blood products may result in organ and/or tissue damage, if her life is preserved.

3. Patient understands that if significant bleeding cannot be stopped then the patient eventually will die without transfusion.

4. Patient understands that with declining blood products, the care team may opt to proceed more expeditiously to definitive procedures that have may stop the bleeding, such as administration of uterotonic agents, uterine tamponade, cesarean delivery, interventional radiology procedures, hysterectomy, etc.

5. Patient understands that she may reverse her decision to refuse blood products at any time. If this occurs, the care team will abide by all patient privacy standards and not discuss the acceptance of blood products with family or clergy without patient consent.

Diagnosis and treatment of antepartum anemia

Pregnancy is associated with a dilutional anemia. One of the goals of antepartum care in patients who decline blood products is to optimize circulating red blood cell volume, i.e. correction of anemia and/or enhancing the hemoglobin concentration. These patients may require the following in the antepartum period:

- Repeat hemoglobin checks and further laboratory analyses with frequency to be determined by clinical indications (e.g., complete blood count, reticulocyte count, iron studies, folate, Vitamin B12)

- Iron supplementation
    - Oral (PO) iron
        - All patients who decline red blood cell transfusions should be prescribed ferrous sulfate 325 mg PO daily as tolerated regardless of hemoglobin level and results of iron studies, unless contraindicated.
        - Anemic patients should be prescribed ferrous sulfate 325 mg PO BID as tolerated.

        - Patients prescribed ferrous sulfate should be recommended to take it with citrus beverages such as orange juice or with an ascorbic acid supplement. In addition, patients should be advised to increase their intake of iron-rich foods.

- Intravenous (IV) iron for those patients refractory to PO supplementation
    - Candidates for IV iron supplementation should be prescribed preservative-free Ferrelcit 125 mg IV, which can be given as a one-time dose or weekly for up to 6-8 weeks.
    - Patients should be referred to the infusion clinic for IV iron administration.

- Recombinant human erythropoietin
    - Should patients not respond to PO or IV iron, consider Maternal FetalMedicine consultation for consideration of erythropoietin administration.
    - For non-anemic patients anticipated to undergo cesarean delivery, consider erythropoietin administration.

- Hematology consultation

Rho(D) immune globulin

Rho(D) immune globulin (e.g., RhoGAM, WinRho) often is administered at approximately 28 weeks of gestation to Rh-negative pregnant women to prevent maternal isoimmunization. RhoGAM is a derived from pooled human blood and therefore may be declined by the patient. The risks and benefits to future pregnancies of declining RhoGAM in Rh-negative patients should be discussed. Paternal blood typing may aid in the counseling.

Intrapartum

Multi-disciplinary team check-in

Upon admission and after any change in clinical status, an attempt will be made to meet in person as a team (OB provider, Anesthesia Provider, Primary Nurse, Charge Nurse) to discuss management of care and ensure a shared understanding of the patient's wishes. In addition, the Neonatalogy service should be made aware of the patient's admission because patients who decline blood products may also wish to withhold transfusions from their neonate. If a patient who wishes to decline blood products for their neonate has not already met with Neonatology to discuss this wish, this consultation should happen in the intrapartum period.

Type and Screen

Patients who decline blood products should have an active blood bank sample in case of a sudden change of patient preference. The decision for type and hold vs. type and screen vs. crossmatch should follow the UCSF Postpartum Hemorrhage Guideline.

Cesarean delivery (CD)

Providers should discuss the risks and benefits of a TOLAC vs. elective repeat CD prior to delivery. Consideration of a vertical midline skin incision should be made due to the lower estimated blood loss (EBL) associated with this surgical approach compared to a Pfannenstiel incision.

Administration of pre-incision tranexamic acid should be considered and given by the anesthesia team if felt to be appropriate and beneficial.

Cell salvage

Cell salvage (also known as "Cell Saver") is the process by which surgical blood loss is suctioned from the surgical field, anticoagulated, filtered, batch-processed via density centrifugation, and washed. For patients who desire or require CD and who are amenable to receiving cell salvaged autologous blood, the Perfusion Service should be notified. For a scheduled CD, the cell salvage can be requested well in advance. For an unscheduled CD, request of cell salvage should be made immediately with the awareness that 30-90 minutes may be required before processed RBCs would be available. If possible, delay of the CD until cell salvage readiness is optimal.

To obtain cell salvage at UCSF: Call the main OR front desk at 415-476-1015 and ask for the Perfusion Service on-call pager number. At the minimum, have the patient's name, birth date, and medical record number available and, if known, the patient's current weight and current hemoglobin. In extenuating circumstances, the nurse at the main OR front desk can contact the Perfusion Service.

Interventional Radiology

There is often a lower threshold in a patient who declines blood products to obtain the services of Interventional Radiology in the intrapartum or immediate postpartum period. Antenatal consultation with Interventional Radiology should be considered.

Postpartum

Postpartum anemia treatment

See recommendations for diagnosis and treatment of antepartum anemia.

Intensive care unit (ICU) admission

Due to severe maternal anemia and subsequent hemodynamic derangements, patients who decline blood products may require the care of the Critical Care Service in order to optimize physiological tolerance of anemia. In addition to the availability of more frequent and invasive monitoring, the ICU setting also may offer:

- General anesthesia and paralysis for reduction of metabolic demand
- Hyperbaric oxygen therapy to increase oxygen delivery to tissues

Rho(D) immune globulin (see above for discussion)

See recommendations regarding Rho(D) immune globulin in the antepartum period.

Postpartum tubal ligation

Although the American Congress of Obstetricians and Gynecologists (ACOG) considers tubal ligation surgery to be non-elective surgery, non-surgical sterilization techniques may be favored in a patient who declines blood products. The risk of hemorrhage from tubal ligation surgery must be balanced with the risk of future pregnancy. If a tubal ligation surgery is indicated, the same surgical planning as a CD is required, i.e., request for cell salvage, consideration of IR consultation.

Epidural blood patch

Post-dural puncture headache (PDPH) is a severe postural headache that complicates approximately 1% of lumbar epidural labor analgesia procedures. The most effective treatment for PDPH is performing an epidural blood patch (EBP). An EPB is a procedure in which autologous whole blood is injected into the patient's epidural space, akin to the procedure of placing a lumbar epidural catheter for labor analgesia.

Because some patients who decline blood products may object to the removal and reinfusion of autologous blood, an EBP may not be an option for treatment of PDPH. Unfortunately, conservative therapies such as hydration, caffeine, and fioricet (caffeine/butalbital/acetaminophen) lack rigorous efficacy data. Patients who decline blood products should be counseled prior to neuraxial placement of the treatment options for PDPH.

REFERENCES:

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2. Husarova V, Donnelly G, Doolan A, Garstka M, Ni Ainle F, McCaul C. Preferences of Jehovah's Witnesses regarding haematological supports in an obstetric setting: experience of a single university teaching hospital. Int J Obstet Anesth. 2016 Feb;25:53-7.

3. Kidson-Gerber G, Kerridge I, Farmer S, Stewart CL, Savoia H, Challis D. Caring for pregnant women for whom transfusion is not an option. A national review

Appendix A: Checklist for Management of Pregnant Women who Decline Transfusions

Prenatal Care

☐ Comprehensive discussion with a checklist specifying acceptable interventions

☐ Aggressively prevent anemia (goal: HCT: 36-40%)

- ☐ Iron—PO or IV (iron sucrose) with Folate and B12 as needed
- ☐ Erythropoietin 600 u/kg SQ 1-3x per weekly as needed (most preparations have 2.5 mL of albumin so may be refused by some Jehovah's Witnesses but others do accept)

☐ Anesthesiology Consult

Labor and Delivery

☐ Anesthesia consultation early

☐ Reassessment of hemorrhage risk and discussion of options (e.g. Surgery, Interventional Radiology)

☐ Review specific techniques (e.g. Options Checklist and Fibrin/Thrombin glues)

☐ Review references—Have a Plan!!

☐ Be decisive

Postpartum

☐ Maintain volume with Crystalloids and Blood substitutes

☐ Aggressively treat anemia

☐ Iron—IV (iron sucrose)

☐ Erythropoietin 600 u/kg SQ weekly (3x week)

☐ RCT's show benefit in Critical Care units

Description of blood and blood products used during pregnancy, birth or after birth

Sometimes we need to use blood or products derived from blood to help women who are bleeding too much during their pregnancy, labor, birth, or postpartum period. Here is a list of blood products and treatments that we use to help a woman when she is losing too much blood. These are brief general descriptions and should be discussed in detail with your care providers.

Red Blood Cells (Packed Red Blood Cells, PRBCs): the part of blood that carries oxygen to tissues.

Plasma (Fresh Frozen Plasma, FFP): the liquid part of the blood without any cells that contains proteins that help with clotting the blood.

Platelets: the part of blood that helps make the blood clot.

Cryoprecipitate: a concentrated form of Plasma (see above).

Albumin: a protein that binds medications and other hormones and helps support blood pressure.

Intraoperative isovolemic hemodilution: blood is removed from your body and replaced with saline. Your blood is returned to you if needed.

Cell salvage (Cell Saver, intraoperative blood salvage): a machine that collects and washes blood that you lost during surgery so that it can be returned to you if needed.

Fibrinogen concentrate: a protein that helps blood clot and stop bleeding.

Prothrombin Complex Concentrate (PCC, Kcentra): proteins that help blood clot and stop bleeding.

Rho(D) immune globulin (Anti-D, RhoGAM, WinRho): if you have a negative blood type, this is a protein that can protect your baby and future babies from becoming anemic.

Hemodialysis: your blood is passed through a machine to clean it before it is returned to your body. This is used to treat kidney failure. It is also used to remove extra fluid, toxic materials, and acid from your body.

Extracorporeal membrane oxygenation (ECMO): your blood is passed through a machine to add oxygen and move it through your body. This is also used when patients have heart and/or lung failure.

Cardiopulmonary bypass: this is like ECMO, but for a shorter time period.

Epidural blood patch: a procedure to treat the temporary headache that can happen in 1 out of 100 people who get an epidural or spinal injection of pain medication. Blood is drawn from your vein and placed in the lower back near the spine.

Thrombin, optional in Floseal, Surgiflo, Gelfoam: a protein that helps blood clot and stop bleeding.

Fibrin glue (Tisseal): a glue used in surgery to help stop bleed.

Appendix C: Blood Products Refusal Form

Patient Name: _____

MRN:_____

	Accept	Decline	Not Discussed	Comments
Components of Human Blood				
Red blood cells				
Fresh Frozen Plasma				
Platelets				
Cryoprecipitate				
Albumin				
Intravenous Fluids Not Comprised of Human Blood				
Hetastarch				
Balanced Salt Solutions				
Medications which Contain a Fraction of Human Blood				
Rhogam				
Fibrinogen concentrate				
Erythropoeitin				
Human Immunoglobin				
Tisseel (Fibrin glue)				
Thrombin, optional in Floseal, Surgiflo, Gelfoam				
Prothrombin Complex Concentrate				
Techniques for Blood Conservation / Processing				
Hemodilution				
Cell Saver				
Augologous Banked Blood				
Cardiopulmonary Bypass / ECMO				
Plasmapheresis				
Hemodialysis				
Other:				

MD Name: _____

MD initials: _____