

# Bloodless Medicine and Surgery Program (BMSP)

## Cesarean Birth and Postpartum Hemorrhage (PPH)

### I. General Non-blood Management Principles

- A. Evaluate for critical anemia: address signs and symptoms of hypoperfusion
- B. Formulate plan of care to minimize blood loss and treat anemia.
- C. Discuss with the patient concerning non-blood alternatives (i.e. albumin, clotting factors, etc.)
- D. Low Threshold for progression of care from observation/fluid replacement to mechanical hemostasis. Consider 2<sup>nd</sup> MD, imaging studies as part of immediate evaluation, and return to OR without delay for definitive surgical intervention

### II. Peripartum Anemia Management

#### Prepartum

- A. Labs to assess: CBC, Retic Hg, Iron Sat, Ferritin
  - 1. IV Iron Replacement (First Line Treatment)
    - a. If Iron Saturation < 20%, s.Ferritin <100 , Ret.-He <26 pg then begin IV Iron replacement 500mg
  - 2. Consider with caution ESA , if acceptable to patient
    - a. Indicated only if Hg <10 Gm/dL following IV Iron supplementation.
    - b. Epoetin alfa (Procrit) 600 IU/kg x 1 per week or Darbepoetin Alfa (Aranesp) 300 mcg every 2 weeks

#### Postpartum

- A. Labs to assess as above
- B. Consider with caution ESA as above
- C. Minimize blood loss and Restrict diagnostic phlebotomy
  - 1. Limit phlebotomy to necessary diagnostic testing
  - 2. Use pediatric blood tubes/minimal blood draw to decrease volume of blood drawn

### III. Intrapartum Blood Conservation Strategies

- A. Quantitative Blood Loss Estimation preferred or best practice
- B. Minimize coagulopathy
  - 1. Keep pH > 7.2
  - 2. Keep body temperature > 35.0°C
  - 3. Keep Ionized calcium > 1 mmol/l
  - 4. Monitor coagulation factors and supplement as needed
- C. Autologous cell salvage – Recommend on stand by/available for all BMSP patients having a Cesarean Birth, if acceptable to the patient
- D. Pharmaceuticals
  - 1. Tranexamic acid (TXA) 1g/10 min –Give ASAP after bleeding onset (best given sooner than later). Repeat if bleeding uncontrolled.
  - 2. Cryoprecipitate or Fibrinogen Concentrate supplementation for fibrinogen levels <100 mg/dL or <200 mg/dL & severe perioperative bleeding, if acceptable to the patient.
  - 3. Consider with caution Factor VII, if acceptable to the patient and bleeding continues uncontrolled

ACOG (2015). *Guidance document. Patients Who Decline Blood Products*. Safe Motherhood Initiative. Retrieved 9/26/2017.

Shaylor, R., Weiniger, C., et al. (2017). *National and International guidelines for patient blood management in obstetrics: a qualitative review*. International Anesthesia Research Society. 124(1) 216-232. Retrieved 9/15/2017.

- ### IV.
- A. Postoperative Management according to EBP
  - B. Observation for additional bleeding
  - C. Consider Hematology consult

### NEED ASSISTANCE?

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