**PREGO NO REBOA data collection tool**

Unique study ID : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Institution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Demographics**

Age (years): \_\_\_\_\_\_ Height (cm): \_\_\_\_\_\_

Pre-partum weight: \_\_\_\_\_\_\_\_\_kg Post-partum weight: \_\_\_\_\_\_\_\_\_kg BMI: \_\_\_\_\_\_\_\_

**Medical history (select all that apply)**

Chronic hypertension  Pregestational type 1 diabetes ( A1C ≤ 7  A1C > 7)

Pregestational type 2 diabetes ( A1C ≤ 7  A1C > 7)  Asthma

Previous VTE ( on prophylaxis or  therapeutic anticoagulation)  Chronic kidney disease

Antiphospholipid antibody syndrome ( on prophylaxis)  Autoimmune disease Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Disorders of collagen production (Marfan’s, Ehlers-Danlos, Loeys-Dietz)

Liver disease Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Heart disease  Bleeding disorder  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Gestational, Pregnancy and Labor data**

Gestations: \_\_\_\_\_\_\_\_\_ Pregnancy: \_\_\_\_\_\_\_\_\_\_\_\_ Abortions: \_\_\_\_\_\_\_\_\_

Multigestation  Yes  No Was labor induced?  Yes  No Was delivery pre-mature?  Yes  No

if yes, at what gestation? \_\_\_\_\_\_ Days \_\_\_\_\_\_ Weeks

**Co-morbidities during pregnancy (select all that apply)**

Pre-eclampsia/HTN ( with severe features  without severe features)

Chronic HTN  Placenta previa  Placenta accreta  Placenta percreta  HELLP syndrome

Gestational diabetes  Large for gestational age Chromosomal abnormality, diagnosis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Uterine fibroids  Prior uterine surgery (C/S or D/C)  H/o PPH  Abnormally invasive placenta

IUGR Chorioamnionitis  Polyhydramnios Maximum AFI (cm): \_\_\_\_\_\_\_\_\_  Max DVP (cm): \_\_\_\_\_\_\_\_\_\_

Amniotic fluid embolism  Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Delivery Information (tick all that apply)**

Vaginal delivery:  Spontaneous  Vacuum assisted Forceps assisted  Breech

Lacerations:  1st degree  2nd degree  3rd degree  4th degree  Sulcal  Cervical

**Trial of labor after Cesarean (TOLAC)**

Successful vaginal birth after cesarean?  Yes  No

Spontaneous  Vacuum Assisted  Forceps Assisted

Laceration degree:  1st degree  2nd degree  3rd degree  4th degree ( Sulcal  Cervical)

Non-emergent cesarean -Indication:  Arrest of dilatation  Arrest of descent  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_

Emergent Ceserean (failed TOLAC) (Arrest of dilatation  Arrest of descent  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_)

**Cesarean Delivery**

Indication:  Abnormally invasive placenta  Uterine Atony

Degree of maximum invasion:  Accreta  Increta  Percreta

Pathology confirmed?  Yes  No

List the structures involved/repaired if other than uterus: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Was C-section:  Scheduled  Emergent Prior cesarean deliveries?  Yes, #:\_\_\_\_\_\_\_\_  No

Gestation at delivery: Weeks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Days: \_\_\_\_\_\_\_\_\_\_

Placental abruption? Yes  No Premature rupture of membranes?  Yes  No

Estimated blood loss at delivery: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cc

**Hemorrhage / Demographics**

Date of delivery: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date of hemorrhage:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bleeding prior to arrival at hospital?  Yes  No Initial body temp:  <36C  36-38C  >38C  Not done

Lowest systolic blood pressure:  undetectable  <50mmHg  50-80mmHg  80-100mmHg  >100mmHg

CPR required?  Yes  No Oxygen Given?  Yes  No

Lowest O2 Saturation:  100%  90-99%  89-80%  <80%

Intubated?  Yes  No Problems w/ intubation?  Yes  No

Time to resolve hemorrhage: \_\_\_\_\_\_\_\_\_\_\_Hrs \_\_\_\_\_\_\_\_\_\_\_\_Mins Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Arterial Access (if applicable)**

**(For any arterial line, sheath or catheter placement WITHOUT AORTIC OCCLUSION. If the balloon was inflated AT ANY TIME, please complete the REBOA data collection tool.)**

Access site (select one):  Femoral  Brachial/Axillary  Other, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Femoral access performed (location):  ER  L&D  OR Side:  Right  Left

Technique utilized to achieve CFA access:

Ultrasound guided  Fluoroscopic guided

Percutaneous using external landmarks/palpation  Cutdown

Initial diameter of CFA access [prior to upsizing]:

4 French  5 French  Other: \_\_\_\_\_\_\_\_ French

Was initial arterial line catheter upsized?  Yes  No

If catheter placed for arterial blood pressure monitoring initially, how long was the catheter in place prior to upsizing? \_\_\_\_\_\_\_\_\_\_\_\_ mins

Final sheath diameter for balloon occlusion (select one):

4 French  5 French  7 French  8 French  11 French  12 French

Was the arterial access ultimately identified as being in the CFA (if confirmed)?  Yes  No

If not, location of arteriotomy:  SFA  Profunda  Extra-luminal  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Type of balloon catheter device (select one):

ER-REBOA plus  p REBOA PRO  COBRA-OS  NEURESCUE  Tokai 7 French

ER-REBOA  CODA  CODA Stat  Reliant  Other: \_\_\_\_\_\_\_\_\_\_

Number of attempts to place balloon catheter:  1  2-3  >3

Location of device confirmation:

Formal Angiography Suite

Hybrid Operating (See REBOA sheet)

Operating Room

ED

LND

Method used to confirm positioning of balloon for AO (select one):

Intra-abdominal/manual palpation through. If yes, choose incision: (  ex-lap incision or  Fannesteil)

Ultrasound  X-ray  C-arm fluoroscopy  None, blind insertion using external landmarks only\*

\*if no confirmation give reason (ie: ongoing CPR, none available, etc)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Who was the PRIMARY performer (SENIOR member directly involved in hands-on conduct) Select one:

Trauma / Acute Care Surgery attending  Trauma/ Acute Care Surgery Fellow

Vascular surgery attending  Vascular surgery fellow

Interventional Radiology Attending  Interventional Radiology Fellow

Surgery Resident (PGY\_\_\_\_\_\_\_\_)  Emergency Medicine Attending

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Confirmation of extremity perfusion (if applicable)**

Pulse exam PRIOR to sheath removal:

R \_\_\_\_\_ Palpable \_\_\_\_\_ doppler signals  L \_\_\_\_\_ Palpable \_\_\_\_\_\_ doppler signals

Was an angiogram performed PRIOR to sheath removal?  Yes  No

If so, why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Pulse exam AFTER to sheath removal:

R \_\_\_\_\_ Palpable \_\_\_\_\_ doppler signals  L \_\_\_\_\_ Palpable \_\_\_\_\_\_ doppler signals

Was an angiogram performed AFTER sheath removal?  Yes  No

If so, why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Resuscitative products prior to definitive hemostatic procedure**

PRBC (Units):\_\_\_\_\_ Fresh frozen plasma (Units):\_\_\_\_\_Platelets (Total packs, i.e. one six pack = 6) :\_\_\_\_\_

Cryoprecipitate (Units) :\_\_\_\_\_Total crystalloids in 1st 24 hours (Liters) :\_\_\_\_\_ Albumin:\_\_\_\_\_ cc

Hetastarch:\_\_\_\_\_cc

Cell saver units:\_\_\_\_\_ mL Vasopressors in 1st 24 hours?  Yes  No Factor VIIa given?  Yes  No

Tranexamic acid (TXA) given?  Yes  No

Lowest Hgb: \_\_\_\_\_\_\_\_\_mg/dL Highest INR: \_\_\_\_\_\_\_\_\_Lowest base deficit: - / +\_\_\_\_\_\_\_\_\_\_

Jehovah’s witness blood refusal:  Yes  No Lowest PH: \_\_\_\_\_\_\_\_ Highest lactate: \_\_\_\_\_\_\_\_\_mg/dL

Fibrinogen: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Hemorrhage Control and Procedural Adjuncts Occurring During Index Procedure**

Pitocin (oxytocin), # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ Units

Methergine (methylergonovine) # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ total mcg given

Hemabate (Carboprost, 15-methyl-PGF2-alpha) # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ total mcg given

Synometrine (oxytocin/ergotamine) # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ total mcg given

Cytotec (misoprostol) # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ total mcg given

Tranexamic acid (give total dose in grams): \_\_\_\_\_\_\_\_ total given in grams

Fibrinogen concentrate: Total dose in units: \_\_\_\_\_\_\_

KCentra (4-factor concentrate): Total dose in units: \_\_\_\_\_\_\_

Recombinant Factor VIIa # of doses: \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_ total mcg given

Intrauterine balloon tamponade  Yes  No

Ligation of the IP ligament ( Left  Right  Bilateral )

Hysterectomy (Was hysterectomy done with ABO in place?  Yes  No )

Uterine balloon  Uterine massage

Uterine artery ligation ( Left  Right  Bilateral )

Uterine compression sutures(  Box Sutures  B-Lynch)

Exploratory laparotomy  Embolization of the pelvis  Hysterectomy  Pelvic packing

Extremity angiogram  Arterial repair of access site Bowel resection

Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Hospital Course / Complications / Outcomes**

Additional procedures required during index procedure (check all that apply):

Arterial repair of other site related to REBOA, if Y, which artery: \_\_\_\_\_\_\_

Type of repair  Stent graft repair  Primary repair  Interposition or patch graft repair

Additional procedures required in 1st 24 hours of hospitalization (check all that apply):

Exploratory laparotomy  Embolization of the pelvis  Hysterectomy  Pelvic packing

Extremity angiogram  Arterial repair of access site  Bowel resection

Arterial repair of other site related to REBOA, if Y, which artery: \_\_\_\_\_\_\_\_  
 Type of repair:  Stent graft repair  Primary repair  Interposition or patch graft repair

**Lab Values in 1st 24 hours**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lab Values in 1st 24 hours | | | | | | | | | | | | |
| Hgb | Hct | Platelets | Base deficit | Ph | INR | PTT | PT | Lactate | D-Dimer | Fibrinogen | Cord blood ABG | Creatinine |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

TEG, LY30: \_\_\_\_\_\_\_ MA: \_\_\_\_\_\_\_

**Resuscitative products in 1st 24 hours post-op/post-procedure (definitive hemostatic procedure)**

PRBC(Units):\_\_\_\_\_ Fresh frozen plasma (Units):\_\_\_\_\_Platelets (Total packs, i.e. one six pack = 6) :\_\_\_\_\_

Cryoprecipitate (Units) :\_\_\_\_\_Total crystalloids in 1st 24 hours (Liters) :\_\_\_\_\_

Albumin:\_\_\_\_\_ ml Hetastarch:\_\_\_\_\_mL Cell saver units:\_\_\_\_\_ mL

Vasopressors in 1st 24 hours?  Yes  No Factor VIIa given?  Yes  No

Tranexamic acid (TXA) given?  Yes  No Lowest Hgb: \_\_\_\_\_\_\_\_\_mg/dL Highest INR: \_\_\_\_\_\_\_\_\_

Lowest base deficit: - / +\_\_\_\_\_\_\_\_\_\_ Jehovah’s witness blood refusal:  Yes  No

Lowest PH: \_\_\_\_\_\_\_\_ Highest lactate: \_\_\_\_\_\_\_\_\_mg/dL Fibrinogen: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Fetal variables and Outcomes**

Apgar scores: 1 min \_\_\_\_\_\_ 5 mins \_\_\_\_\_\_\_\_\_ Newborn disposition:

Nursery  NICU Newborn additional life support required: Ventilator ECMO

**Maternal complications (check all that apply)**

Acute kidney injury requiring dialysis Acute kidney injury NOT requiring dialysis

ALI or ARDS Bacteremia  Pneumonia  Sepsis or septic shock  Stroke/CVA  Paraplegia

Neuro deficit secondary to spinal cord ischemia  Myocardial infarction  Multi-organ dysfunction / MODS

HELLP

DVT, if yes, location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, therapy: \_\_\_\_\_\_\_\_\_\_\_ start date: \_\_\_\_\_\_\_\_\_\_\_ IVC filter?  Yes  No

Start date for chemical prophylaxis: \_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_\_

Name of chemical prophylaxis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Access site complications (tick all that apply)**

Hematoma  Pseudoaneurysm  Arteriovenous fistula  Seroma  CFA stenosis

Infection requiring antibiotics only  Infection requiring surgical intervention

Thrombosis, site :(  Aorta  Common iliac  External iliac  Internal iliac  Popliteal  Tibial)

Distal thromboembolism requiring anti-coagulation only  Distal thromboembolism requiring open thrombectomy

Distal thromboembolism requiring mechanical and/or pharmacologic thrombolysis

Amputation (BKA  AKA)

**Maternal Outcomes**

Ventilator (Days):\_\_\_\_\_\_\_\_\_\_\_ ICU LOS (Days): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hospital LOS (Days): \_\_\_\_\_\_\_\_\_\_\_\_

Discharge disposition:  Rehab/nursing facility  Home

Limb ischemia ­- On side of access? ( Y  N)

Gluteal necrosis Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Maternal Mortality**

In-hospital mortality:  Yes  No If yes, mortality hospital day: \_\_\_\_\_\_\_\_\_\_

If in-hospital mortality occurred, where (select one):  ER  L&D OR  Gen OR  Delivery suite  Ward/floor

Interventional radiology Intensive care unit

Cause of death:  Hemorrhage  MODS  Other, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_