Fetal Intrauterine Transfusion/Percutaneous Fetal Blood Sampling

Labor and Delivery Nursing Guidelines

Staff:

- Circulator nurse (scrub not necessary, but nice if available)
- Scrub available in setting of fetus > 23 weeks EGA and there is the potential for cesarean delivery in the setting of fetal bradycardia
- Faculty MFM; physician for sonography; physician as assistant
- OB Anesthesia
- Lab point of care staff for cell count (please call POC at 4-1416 upon admission to alert them that case will be happening and give estimated time)

Purpose:

- percutaneous sampling of fetal blood with fetal transfusion if necessary

Indications: suspected severe fetal anemia

- Red cell alloimmunization with suspected fetal anemia – hemolytic disease of the fetus
- Fetal hydrops
- Fetal hemoglobinopathy
- Fetal infection
- Suspected fetal thrombocytopenia/suspected neonatal alloimmune thrombocytopenia (NAIT)

Pre-op in PACU

- Pt remains outpatient unless delivery or inpatient evaluation needed. Please complete triage navigator tab, NST as appropriate for gestational age, full set of vitals (including pain).
- Place 18g IV

Pre-op evaluation: ideally 48 hours prior to procedure

- Maternal CBC and type and screen and second ABO/Rh sample
- Set up blood for fetal transfusion – contact transfusion medicine
- Antenatal corticosteroids as indicated
- Arrange point of care testing for date and time of transfusion – 4-1416 (UNC POC)
- Obtain EFW by US within 5 days of IUT

Equipment list in OR: please review with providers and scrub what equipment they need you to obtain

- GE US machine from triage – please power down US before unplugging
- Please pull up perinatology.com - intravascular Fetal Transfusion
- Probe cover and US sterile drape with sterile and non-sterile conduction gel
- Blood tubing:
- Sterile IV extension tubing (x 3)
- Three way stop-cock
- 10 cc syringe (luer lock tip) x 1

- 20- or 22-gauge spinal needle/ Echotip needle 12 cm (9cm spinal) based on placental position and maternal BMI
- 1 cc syringe x 12 – slip tip (not leur lock)
- Sterile labels/sterile marker
- Cesarean drape
- Table cover
- Raytec pack x 1
- Bandage
- Sequential compression device

Medications:

- O negative, leukocyte-reduced, CMV negative RBC's (transfusion medicine) - Blood for fetal will be obtained by nursing from transfusion medicine
- Heparin flush
- Sterile saline
- If no epidural anesthesia – 0.25% Marcaine for use on sterile field
- Fetal meds available for MFM administration
  - Vecuronium – 0.1 mg/kg fetal weight
  - Pancuronium -0.1-0.3 mg/kg fetal weight

Procedure:

- **Pre-op abx:** 2 gram cefazolin prior to procedure
- **Anesthesia:** spinal vs local with sedation – OB anesthesia and MFM to confer
- **Prep/positioning:**
  - Supine position with left lateral tilt (bovie pad not needed)
  - Place foley after spinal – confer with attending and may elect not to place foley if anticipate short case
  - Cesarean prep and drape
  - SCD's in place
  - Have perinatology.com calculator pulled up on computer in OR
- **Charting:**
  - In pt's chart, access the notes page and type '.fetalprocedures' please follow prompts to chart FHR, HCT and amount transfused where indicate. Please fill out the rest of the phrase.

Specimen:

- Fetal opening and closing blood to lab for CBC
- Possible fetal blood for:
  - Karyotype, array, DNA extract and hold
  - PCR for parvo, CMV, toxo
  - Hemoglobin electrophoresis
  - Fetal blood type and rh/antigen testing
  - May have amniotic fluid for karyotype, array, save cells, fetal electrolyte testing (review with MFM)

Post procedure – recovery – discharge:

- Q 15 minute vitals, advanced diet as tolerated
- Meds: may give Indocin 50 mg po prior to discharge and then 25 mg po q 8 hours x 24-48 hours
- If plan is for cesarean/delivery for abnormal fetal monitoring, place on fetal monitor post procedure. Review with MFM regarding fetal monitoring needed for individual case.
- Discharge in consultation with MFM when tolerating PO, void without comps, appropriate pain symptoms, spinal resolved.
- Will need follow up in US unit in 5-7 days.