

Pediatric CT Team (Approved 12 February 2008) FINAL COPY

Recommended Procedure for: Operating Room Cases in which ECMO Standby is Requested or Required

(This Recommended Procedure allows deviation according to individual patient requirements)

Setting: Main Operating Rooms, MUSC Medical Center, 4th Floor Children's Hospital, OR's 1 and 2 preferred if at all possible

Patient Population: 40kg or greater

Likely Scenarios: 1. Cesarean Section with Critically fragile Cardiac Situation
2. Anterior Mediastinal Mass with Critical Airway Compromise

Providers:

Peds CT Anesthesiologist Peds CT CRNA or Fellow

PedsCT Surgeon and assistant

Primary Surgeon and assistant Perfusionist

PedsCT Circulating and Scrub Nurses

Additional Surgical and Nursing Staff as dictated by the patient's primary surgical procedure

Anesthesia Technician

Anesthesia Type:

Surgical Procedure: General Anesthesia Preferred by CT Surgeons

Line Placement: Local and Sedation

Usual Lines:

Large Bore PIV 1 or 2 as needed

CVP/Swann as needed

Radial arterial line

ECMO Standby Lines:

6 French Cordis introducer, Place in the RIGHT femoral artery and RIGHT femoral vein

These standby lines will allow rapid percutaneous insertion of ECMO cannulae

Rationale: Right femoral cannulation for ECMO is more successful than left femoral cannulation

Who will place these lines? These lines may be placed by the attending anesthesiologist or the attending PedsCT surgeon. Discussion and Planning by these individuals will determine the person(s) performing the line placements.

These femoral lines may be utilized by anesthesia team or flushed with dilute heparin solution. If these lines are used, they will be lost if ECMO required.

Preinduction Checklist:

Prior to induction of General Anesthesia perform the following:

1. Confirm ICU Bed Reservation
2. Confirm that ECMO team nurses have been notified of case
3. Confirm availability of PRBC's and FFP. Have PRBC's in cooler in the OR
4. Consider Need for Servo Ventilator and Nitric Oxide, Obtain if needed
5. Resuscitation Drugs Ready
6. Defibrillator Ready
7. Adhesive Defibrillation/Pacing Pads Appropriately placed and connected
8. Final Strategy Meeting jointly with Attending Cardiac and Noncardiac Surgeons, Attending Anesthesiologist, Perfusionist, Nursing Staff:
 - a. Clarify priorities
 - b. Determine if both surgical teams can operate simultaneously or will primary surgeons need to move away from the patient to allow ECMO institution.
 - c. Clarify who and what will determine when or if ECMO is needed.
 - d. Have person designated to perform chest compressions when and if needed.
9. Assure ECMO Pump Ready: Perfusionist must ok
10. Assure Percutaneous Cannulae and Insertion Sets Ready: Perfusion and CT Surgeon must ok
11. Assure Surgical Instrumentation Ready: ECMO Instrument Pack must be open and checked, scrub or circulating nurse must ok
12. Dilute Heparin Flush 250ml with bulb syringe opened with surgical instrumentation. Used to flush ECMO cannulae.
13. Confirm 6 French Cordis in Right Femoral artery and vein: Anesthesiologist must ok
14. Confirm NO Heparin to be given!!!!: Anesthesiologist, CT Surgeon and Perfusionist must ok
15. Prep and Drape Patient if possible prior to induction of anesthesia
16. CT and non CT surgical teams scrubbed, gowned, and gloved. Both immediately available to commence surgical procedure
17. Proceed with anesthetic and surgery
18. If ECMO cannulae are placed, the PedsCT Surgeon MUST remember to flush with dilute heparin solution
19. Proceed