TOTAL PANCREATECTOMY ISLET AUTOTRANSPLANT (TPIAT) PROTOCOL

Key Concerns:

- Chronic pancreatitis: Patients tend to have chronic pain (regional anesthesia recommended)
- Portal vein thrombosis: Islets infused into portal vein, need full heparinization intraoperatively and postoperatively (epidural contraindicated)
- Tight blood sugar control: Goal is to "rest" islets after autotransplant, each patient will have specific blood sugar goals listed on TPIAT algorithm sheet (created for each patient by TPIAT team)

Discuss:

[ ] Home pain regimen

[ ] Pain regimen that has been communicated with patient (e.g., bilateral erector spinae catheters, ketamine gtt, etc) – discuss with pain service

Preop:

[ ] Confirm preoperative pain meds given (Tylenol, gabapentin)

OR Setup:

[ ] Double transducer (CVP transducer for measuring portal vein pressures)
[ ] A-line
[ ] Hotline
[ ] Block cart
[ ] Ultrasound

Meds:

[ ] Insulin gtt
[ ] Ketamine gtt
[ ] Dexmedetomidine gtt
[ ] Phenylephrine gtt
[ ] Heparin
[ ] Zosyn (dosed every 2 hours)

Intraop:

Bilateral Erector Spinae Catheters

- Placed after induction and before incision
- Patient in lateral position
- Bolus with 0.5% ropivacaine after placement (consider ~ 15 mL through each side in a 60-kg patient)
- Bolus with 0.2% ropivacaine at end of case (consider ~ 5 mL through each side)
- Discuss postoperative dosing with pain service: PIB is not allowed for pediatric patients, alternative is a low dose continuous infusion with patient-controlled boluses every 1 hour

Key intraop events

- After pancreatectomy
    - Check blood glucose at least every 1 hour
    - Blood glucose goals on TPIAT algorithm sheet (TPIAT NP should give you a copy at beginning of case)
    - Start insulin gtt as needed
        - Insulin gtt should remain connected to patient at time of PICU transfer even if not infusing
- Islet autotransplant: Islets infused into portal vein, concern for portal vein thrombosis
    - Islets isolated from pancreas off-site, may take a few hours
    - Check portal vein pressures prior to and during islet infusion
    - Heparin dose: 35 units/kg given by anesthesiologist at time of islet infusion, 35 units/kg will be added to islets before infusion (not by anesthesiologist)
        - Confirm with surgeon prior to giving heparin
- Closure
    - Bolus erector spinae catheters and start infusion
    - Start dexmedetomidine gtt (0.4mcg/kg/hr) for “dextubation”, will turn off once extubated
    - Extubate in OR
- Transport to PICU
    - Patient to remain on ketamine gtt and insulin gtt