WHIPPLE CLINICAL PATHWAY

Activities before Surgery

Day -14 to -1
- Pre-op clinic visit
- Discuss care map with patients and set expectations
- IMPACT advanced recovery drink each day for 5 days prior
- Mobility: Aim to walk 2 miles/day prior to day of surgery
- Schedule follow-up visit for ~2 weeks post-op
- Consents signed

Day -1
- 8 oz apple juice before midnight
- NPO after midnight. Clear liquids up to 4 hours before surgery

Day 0: Pre and Peri-operative Milestones

Pre-Op
- 8 oz apple juice 2 hrs before surgery*
- Heparin 5000 Units SC
- Check blood glucose hourly, keep <140 mg/dL
- 1000mg Acetaminophen PO pre-op then IV or PO elixir Q6h scheduled until d/c
- Fluids: In Pre-op, If IV in, D5LR at 50 ml/hr
- Place portable Sequential Compression Devices (SCD) in Pre-Op area

Intra-Op
- Foley (temp-ensing)
- Start preop Abx (levofloxacin) immediately in OR
- 2 large (16 gauge) bore IV +/- arterial line
- Fluid: 2 ml/kg/hr of LR . Give 500 mL LR bolus extra during first 30 min
- Heating mattress or blanket + Bair hugger
- Check blood glucose hourly, keep <140 mg/dL
- **In case of hypotension
- No NGT

Intra-Op : Dr. Park's TAP block pts
- Administer short/long acting opiates as needed for adequate pain control
- Two TAP block catheters will be placed intraoperatively by the surgical team prior to abdominal wall closure
- Initial bolus of ropivicaine 0.2% 15 mL per catheter by surgical team; total dose not to exceed 2 mg/kg
- Initiate TAP catheter infusions with ropivicaine 0.2% at 5 mL/hr per catheter

PACU
- Foley catheter
- **Dr. Pillarisetty pts:** IV hydromorphone PCA
- Dr. Park's patients: Continue TAP infusions of Ropivicaine and start IV PCA at 0.2 mg bolus, 6 min lockout, no continuous infusion or 4 hour limit
- Fluid: D5LR at 1 ml/kg/hr
- Target UOP > 25 mL/hr
- Insulin drip protocol if BG > 140 and/or diabetic
- Labs 1 hour after PACU arrival: CBC, Chem10

Inpatient Milestones: 4SE Target Post-op LOS = 5 days

Day 0
- Chewing gum after surgery
- Pantoprazole 40 mg IV daily
- Periop beta blocker if indicated***
- Antiemetics (Ondansetron)
- IV D5LR/LR rate: 1 ml/kg/hr (modify for CHF, CRI); UOP >25mL/hr
- Mobility: encourage to sit up on edge of bed after last set of post-op VS (usually 6hrs) with orthostatic VS
- Incentive spirometer: 10x/hr while awake, daily until d/c
- Urine output + vital signs Q1h x 2; Q2h x 2; then Q4h
- Start sips of water and ice chips < 8oz in 8 hrs
- Continue Acetaminophen 650mg elixir PO Q6h scheduled until discharge
- For breakthrough pain: Adjust PCA first as needed. Limit 0.2% Ropivicaine infusions through TAP catheters to a maximum of 15 ml/hr.

Day 1
- Weigh daily until d/c
- Heparin 5000U SC Q8h
- Pantoprazole 40mg IV Daily
- Mobility: OOB for all meals. Walk 3-4 times in the hall—goal 9 laps. OOB 6 hr/day
- PT consult
- Continue TAP blocks and IV PCA. Transition to po acetaminophen after clear liquids started.
- Discuss ketorolac(15 mg q6h) or other NSAID with surgeons for pain if not contraindicated.
- IV D5LR/ LR (isotonic), rate: 0.5 mL/kg/hr (modify for CHF, CRI); UOP> 25mL/hr
- Insulin drip protocol- when patient reaches less than 1 unit/hr for 12 hrs, may change to SC insulin
- Clear liquids 8oz Q8h
- Labs: CBC, Chem10, drain & serum amylase
- OT consult

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*No exceptions for diabetics. All patients get apple juice and glucose is monitored closely.

** The goals of perioperative management is keeping the patient hemodynamically stable with restricted fluids. Hypotension intra-op: Hypotension to be treated with fluid boluses and with phenylephrine up to 0.8 mcg/kg/min. Avoid Vasopressin boluses and infusion by all means.

***Prior beta blocker use, history of arrhythmia, etc.

Last updated 11/16/15

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Inpatient Milestones: 4SE Target Post-op LOS = 5 days

Day 2

- Change from SCH to Lovenox 40mg SC Q24h* at 2100
- Pharmacy consult for Lovenox teaching, for D/C
- Remove foley catheter at 0600 on day 2. No Fill and Pull unless previous failed attempt (complete no later than 1100)
- Change Pantoprazole from IV to PO 40 mg daily until d/c
- Mobility: OOB for all meals. Walk 3-4 times in the hall—goal 18 laps. OOB 6hrs/day until discharge
- Nutrition Consult, POD2
- IV PCA
- Diabetic clear liquid diet
- IV D5LR 0.45%NS unless tachycardia or low UOP
- Advance to Whipple diet if tolerating CLs (low fat/diabetic diet)**
- Begin pancreatic enzymes ***
- Labs: CBC, Chem 10 (others as indicated)
- Start docusate 200mg PO BID and senna 17.2mg PO QHS

Day 3

- *Consider* D/C PCA on Day 3 or Day 4 after lunch
- Discontinue TAP infusion at 0600 if tolerating Whipple diet
- Discontinue ketoralac/start ibuprofen 600 mg PO q6 h
- Surgical team to remove TAP catheters by mid-afternoon
- Transition to oxycodone 5-15mg PO Q3h PRN
- HLIV
- If >5kg over preop weight, give Lasix 10mg IV if renal function adequate
- Order DME
- Whipple Diet
- Labs: CBC, Chem10, drain & serum amylase
- Discuss with SW to secure lodging arrangements
- Review PT/OT recs to assess for SNF or Home Health needs
- Discuss with nutrition and pharmacy: diabetic education as indicated for insulin regimen
- Hyperglycemic team consult if blood sugars uncontrolled or patient is new to insulin

Day 4

- Assess response to Lasix (>750mL UOP during 0600-1400; Inadequate response is <500cc UOP in 8 hrs)
- If still >5kg over preop weight, give Lasix 10 mg IV, if inadequate response, give Lasix 20mg IV
- If no bowel movement to date, suppository or enema as preferred by patient
- *Consider* removing drain if drain amylase is <3 x serum amylase or <318 (whichever is greater)
- Shower with OT
- No labs except as needed
- Organize discharge****

Day 5

- Goals for D/C are met*****
- Follow-up appt is scheduled for 1-2 weeks from now
- D/C home or local hotel if patient lives more than 2 hrs from Seattle
- Referral to outpatient dietician as needed for patients who continue to do poorly with intake or continue to lose weight
- Inpatient team communicate with outpatient team

* Consult pharmacy if renal insufficiency. Continue until 28 days after discharge (only in patients with malignancy).

** 6 small meals/day, suggest starting with cream of wheat or toast

*** If on enzymes before surgery or expected to have reduced pancreatic function: Pancreaze (21,000 units) 2 caps with each meal, 1 cap with snacks

**** 1. Prescriptions filled in evening 2. Med reconciliation 3. Follow up in 1-2 weeks 4. Inpatient discharge form (D/C instructions)

***** 1. Tolerate diet 2. Pain controlled 3. Return of bowel function 4. Ambulate safely 5. Diabetic and pharmacy education completed (if indicated)

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TRANSFORMATION OF CARE