Enhanced Recovery after Surgery (ERAS) Pathway

Radical cystectomy Feb 2017

DAY of SURGERY

Carbohydrate drink:

- Given to patient by preop screening to drink 1 hour before scheduled arrival time.

DAY of SURGERY, PREOP HOLDING

1. Preop nursing staff will
    a. IDENTIFY ERAS patient and initiate protocol
    b. DOCUMENT if CHO drink was taken and document time
2. Reinforce expectations and review education of the patient about expectations for pain and pain control.
    a. Expectation: Pain of 2-3/10 is expected and reasonable.
    b. Expectation: Pain of 5/10 would be the point to ask for additional medication (if pt were at home – they would self-treat at a 5/10)
    c. Expectation: May have 'bloated' sensation if laparoscopic procedure this is residual from insufflation – normal and resolves over 12 hours or less without treatment
    d. Education: Pt may experience referred shoulder pain due to irritation of CO2 bubble under diaphragm. Walking or changing positions will relieve this "aching pain". Inform patient this will feel like an "over-use or strain" type of an ache. This resolves again over 12 hours or less.

3. Multimodal analgesia and anti-emetics to be given by preop RNs, confirmed by Anesthesiologist

    Multimodal analgesia
    - **Tylenol** 975 mg PO (do not give in liver failure or elevated LFTs)
    - **Gabapentin** 600 mg PO (300mg for patients with decreased renal function or age>70)

    PONV prophylaxis for high-risk patients
    (one of the following - history of PONV or motion sickness, female < 50 years)
    a. **Scopolamine** patch if <75 years (do not give with narrow-angle glaucoma)
    b. **Emend** for > 75 years or history of failed scopolamine patch

INTRAOPERATIVE

1. STANDARD ASA MONITORS, ARTERIAL LINE, FOLEY CATHETER
2. MULTIMODAL ANALGESIA:

- **THORACIC EPIDURAL** at T10-T12 (can be placed in preop or in the OR)
    - Consider pre-incision epidural bolus of hydromorphone 0.4-0.6mg if not immediately starting the infusion.
    - Run epidural bupivacaine 0.0625%/hydromorphone 10mcg/ml throughout case (3-6 ml/hour) as tolerated. Consider starting after removal of the bladder
    - GOAL IS TO MINIMIZE IV OPIOIDS DURING CASE. Prefer using epidural bolus if clinically indicated. Do not administer iv opioids without first discussing with Attending Anesthesiologist.

- HOWEVER: If patient is chronic opioid user, replace baseline opioid requirement (discuss specifics with Attending Anesthesiologist).
- Ketorolac 15mg iv during closing, if ok with surgeons
- For chronic pain patients consider adding pre-incision IV ketamine 0.25-0.5mg/kg and infusion 4mcg/kg/min during surgery (ideal body weight).

3. VTE PROPHYLAXIS - Heparin 5000U SC given after induction and before incision. There is no need to wait following spinal or epidural placement according to current ASRA guidelines.

4. ANTIBIOTIC PROPHYLAXIS

	If NOT allergic	**If h/o beta-lactam anaphylaxis**
Cystectomy	**Cefazolin** 2g IV (3g if >120Kg) (re-dose every 4 hours)	**Clindamycin** 600mg IV (re-dose every 6 hours)

Give within 1 hour prior to incision.

5. LOW FLOW ANESTHESIA at flows ≤1l/min
6. GASTRIC TUBE - Orogastric tube to be removed at the end of surgery
7. PONV prophylaxis for all patients – dexamethasone 4mg IV at start of case, Zofran 4mg IV when closing
8. FLUID THERAPY-

Optimize with Goal Directed Fluid Therapy (GDFT)

- Continue LR infusion 3ml/Kg/hour
- GDFT with boluses of colloid to optimize SV/SVV using a CO monitor
- Record stroke volume (SV)
- Give a 250ml colloid bolus over <15 min (<u>can omit if SVV < 10%</u>)
  - If SV increases by >10 % repeat bolus
  - If SV increases by < 10% patient does not require a further bolus
  - Record peak value achieved
  - If still hypotensive consider phenylephrine bolus or infusion
  - Give a further colloid bolus when SV drops 10% from peak value
  - Repeat cycle

9. TRANSFUSION – Please keep surgeons informed if transfusion is needed

10. VENTILATION
    - Low-flow anesthesia at flows ≤1l/min
    - Maintain TV 6-8ml/kg (ideal body weight)
    - Minimize FiO2 30-40% to minimize atelectasis
    - Maintain PEEP as appropriate to minimize atelectasis

PACU

1. PACU RNs are being trained to preferentially treat pain with RN-administered epidural boluses from the pump (instead of using iv opioids as first-line). This is now in the epidural order-set.
2. PRN narcotics should still be ordered (RNs should use as second-line for patients with epidural)
3. For chronic pain patients, continue replacing baseline opioid requirement & consider ketamine infusion.
4. Re-dose acetaminophen at Q6 hours.
5. PONV treatment as indicated.

Revision History: Timothy Miller Date: 5/2017