Beaumont

DRAFT: Troy Beaumont – ERAS protocol: Lumbar fusions and revisions

Nov 13, 2019

STTAR Clinic

- Surgeon provides patient with educational booklet and encourages patient to attend pre-op STTAR (Surgical Testing Accelerated Recovery & Teaching) clinic
- Surgeon office calculates the Morphine Equivalent Daily Dose (MEDD) on all spine surgery patients using the ADMG Opioid Dose Calculator and includes the MEDD in the boarding case notes
- Case will be boarded with "ERAS" in case notes
- Patients phone screened at a scheduled appointment time by screening nurse. STTAR clinic appointment made at that time.
- Patients who attend STTAR clinic (ideal time is 4 weeks prior to surgery, but not over 30 days) will be instructed to start/increase physical activity using provided pedometer, use incentive spirometer at least 30x daily, focus on stress/anxiety reduction, shower with CHG 3 times before surgery (2 nights pre-op, 1 night pre-op, and morning of surgery), drink Ensure 2 hours before arrival time, and that anticipated discharge with be on POD #1.
- STTAR Clinic patients provided with: incentive spirometer, pedometer, Ensure, CHG, and education booklet.
- STTAR Clinic patients informed that they will spend 1 night in the hospital if they are having a single level fusion and 2 nights in the hospital if they are having a multi-level fusion or a revision procedure.
- Patients at STTAR clinic will have H&P with, labs drawn, pre-op ERAS order set initiated, & offered hospital tour.
- Pre-op labs sent: CBC w/ diff, CMP, PT/INR, PTT, UA w/ C&S, T&S, HbA1C, & S. Aureus Screen. Urine nicotine level on smokers (smoking within 1 year)
  – If Hgb < 10, Hgb A1C > 7.5, (endocrine consult)and/or albumin < 3.5 STTAR clinic notify surgeon and refer to PCP for pre-operative management/optimization. If UA and/or urine C&S is abnormal, notify surgeon & surgeon to determine if treatment needed pre-operatively. If S. aureus screen is positive STARR clinic to direct patient to fill Bactroban Rx provided by surgeon's office and use bid for full 5 days pre-operatively. If positive for MRSA, pre-operative antibiotics to be ordered = Vancomycin + cefazolin. (F/u with pharmacy)
- Discontinue anticoagulants before surgery and call cardiologist to monitor
- Complete MSSIC surveys
- MEDD- If > 80 mg- get pain clinic consult for pain management- Document in notes
- Follow up with PCP
- EKG (done within 12 months unless recent medication changes)
- Bladder scan

Pre-op

- Preop Bladder scan. Record volume
- Start 1 18 gauge IV in pre-op. 2nd IV if lidocaine used(follow up with pharmacy)
- Pre-op antibiotics as ordered
- Neurontin 300 mg po given – hold if patient over 70 years old, with pre-existing confusion/sedation, or with renal dysfunction
- Tranexamic acid 1 gram IVPB for multi level fusions and revisions (give at time of handoff)
  Contraindications for TXA are TIA, PE, SAH, DVT and CVA
- Acetaminophen 1000 mg po
- Famotidine 20 mg IV
- Carboxyhemoglobin if prior h/o tobacco use
- Anesthesiologist completes PONV Risk Assessment

- Minimize pre-surgical narcotics & benzodiazepines, especially in elderly patients
- Draw blood sugar on patients with HgA1C >6
- EKG within 12 months on all spine patients

Intra-op

- Lidocaine bolus 1.5mg/kg with induction followed by infusion at 2mg/min<70 kg or 3mg/min 70 kg and above until emergence (If under 50kg the lidocaine is 'dosed at 2 mg/kg/hr based on weight')
- Methadone IVP over 5 min. after induction, before incision .3mg/kg up to max 30 mg. Exclusions are: Patients already on methadone, if QTc interval > 460 msec, if patient having single level fusion or allergy to methadone. (based on ideal body weight)
- Do not order continuous PCA if methadone is given intraop.
- Ketamine 0.25mg/kg IVP at induction. Maximum dose 25mg
- Surgeon may use local anesthetic at surgical site if appropriate
- Repeat blood sugar every 90 minutes if HgA1C >6.0 in pre-op, FBS >200 or insulin administered
- Solu-Medrol 125mg
- Zofran 4 mg IV at end of case
- Administer additional antiemetics per PONV Risk Assessment
- Tranexamic acid 1 gram IVPB 3 hours after first dose for multi-level fusions and revisions or oral tranexamic acid 1950mg po given in PACU
- Follow established floor protocol for post-op dressing
- Goal directed Fluid therapy
- Goal is minimize additional narcotics administered after induction. (low dose fentanyl with induction acceptable. Anesthesia providers should discuss if additional narcotics are needed)

PACU

- EKG prior to discharge from PACU to assess QTc (if methadone given in OR)
- Call anesthesia when complete to evaluate EKG

Post-op

- Identify
  - Physician to Nurse order to indicate this is an ERAS patient
  - Non diagnosed diabetic patients with a HbA1C >6 will have an internal medicine consult
- Medications
  - Ultram 50 mg po q 6 hours prn until discharge- initiate POD 0 on floor
  - Acetaminophen 1000mg po q6 hours until discharge - 1st dose to be given 6 hours after pre-op dose
  - Neurontin 300 mg po q8 hours for 72 hours - hold if patient over 70 years old, with pre-existing confusion/sedation, or with renal dysfunction
  - Zofran 4mg IV or Reglan 10mg IV PRN
  - Roxicodone 5mg po for moderate breakthrough pain
  - Roxicodone 10mg po for severe breakthrough pain
  - 0.5mg Dilaudid IV PRN q3 for breakthrough pain (only after oral meds have been tried first)
  - IV lidocaine 2mg/kg. May continue on floor 8 hours postop for multilevel fusions
  - Solumedrol 125 mg IV q 12 hours x 3 doses
  - Robaxin 750 mg q 6 hours po ATC
  - Colace 100 mg po qd or Senna 2 tabs po bid- follow bowel regimen
  - Post-op antibiotics given per protocol

    - Diet as tolerated on DOS as appropriate at nurse discretion

- Activity
    - Patient gets out of bed on day of surgery
    - Remove Foley 24 hours POD 1
    - Physician to nurse order to SL IV when tolerating clear liquids
    - Incentive spirometry 10 x/hour when awake
    - Physical Therapy and Occupational Therapy consults
    - Ambulate in hallway as tolerated.
    - SCDs as ordered
- Labs
    - Check blood sugar if HgA1C >6 POD #1 and #2
    - Check CBC
    - Follow sliding scale per Internal Medicine if known diabetic

Discharge/Home

- Patient discharged home using ERAS discharge instructions
- Patient receives discharge phone call from floor nurse
- PT planning prior to discharge
- If patient is in research program, follow up with research nurse
- Percocet/Norco as ordered
- Ultram 50 mg po q 6 hours prn
- Acetaminophen 1000mg po q 6 hours
- Robaxin 750 mg po q 6 hours prn
- Zanaflex 4 mg po q 6-8 hrs prn (if over 65 years)
- Neurontin 300 mg po q 8 hours
- Colace 100mg po bid or senna 2 tabs po bid