Liver Resection ERAS Protocol

Exclusions: Patients on daily opiates for >2 months (opiate tolerant)
Abnormal LFTs
Abnormal coags
Abnormal creatinine

Pre-Operative:
Lines:
Place IV in forearm, NOT on the wrist (place largest IV possible)

Intraoperative:
Place arterial line and second IV Line after induction

Ultimately the size of the venous lines should be:
• 2 #14G peripheral lines are optimal OR
• 1 #14G peripheral line and 1 #16 G line (inform surgeon) OR
• 1 #14G peripheral line and double lumen central line (2 x 14G lumens) OR
• 1 #9.5 Fr central line (Cordis) and triple lumen catheter

Fluid goals:
• Induction: 2 ml/kg/hr of LR. Give additional 500 mL LR bolus during first 30 min
• Maintenance: 2 ml/kg/hr of LR
• Blood loss: Replace blood loss 1:1 with 5% Albumin up to 1500 ml. If blood loss is >1500 ml notify Attending Anesthesiologist, send ABG and Emergency Hemostasis Panel.
• Urine output goal: 0.3-0.5 mL/kg/hr. Mannitol gtt up to 50 mL/h should be used to maintain UOP. Avoid vasopressin bolus and/or infusion.
• For hypotension: Consider initiating phenylephrine up to 0.8 mcg/kg/min

Pain Treatments:
• 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/POD 0:
• Initiate Hydromorphone PCA at 0.2 mg bolus, 6 min lockout, no continuous infusion or 4 hour limit
• For breakthrough pain, adjust PCA first as needed.
• Limit 0.2% Ropivicaine infusions through TAP catheters to a maximum of 15 ml/hr.
POD 1:
- Continue TAP catheter infusions and Hydromorphone PCA
- Add Acetaminophen 650 mg PO q6 hours if tolerating at least clear liquid diet and T.Bili <2.5 and AST/ALT < 3x normal
- Add ketorolac 15 mg IV q6 hours if coags and creatine are normal

POD 2:
- Discontinue TAP infusion at 0600 if tolerating regular diet
- Discontinue ketoralac/start ibuprofen 600 mg PO q6 h
- Transition from PCA to PO narcotic pain medications after lunch
- Surgical team to remove TAP catheters by mid-afternoon