Same Day Discharge in MIS Minor Liver Resections- A Proposed Protocol

Katlin Mallette[1], Jad Abou Khalil[1]

[1]Department of Surgery, University of Ottawa/The Ottawa Hospital, Ottawa, Canada

Département de chirurgie
Department of Surgery

Introduction & Aim

MIS techniques and implementation of ERAS protocols has led to successful implementation of same day discharge (SDD) programs amongst MIS colectomies and hysterectomies. Despite increasing uptake of MIS techniques in liver surgery, SDD remains a rare phenomenon. Same Day Discharge After Hepatectomy (SDD-Hep)is feasible but is only described in a single-institution case series.

In this publication we describe our institution's SDD program for MIS minor liver resections. To be a candidate for SDD-Hep, patients must meet pre-operative, intraoperative and postoperative criteria. Minor hepatectomy defined as bisegmentectomy, single segment resection or multiple wedge resections.

Pre-operative Criteria

- **Inclusion criteria**
  - Age <80
  - Reside < 1 hour from the hospital
  - No preoperative anemia
  - ECOG 0
  - Able to actively participate in a virtual care with remote automated monitoring(VRAS) program.
  - Caregiver to drive them home and remain with them during their recovery.

- **Exclusion criteria**
  - uncontrolled cardiac (CHF, arrhythmia)
  - respiratory comorbidities (sleep apnea, COPD)
  - liver cirrhosis
  - chronic opioid use
  - contraindications to NSAIDs.

Intra-operative Criteria

- Uncomplicated foley catheter insertion/removal
- Extraction site <8cm in length
  - Pfannenstiel preferred
- All patients will receive either:
  - TAP blocks
  - Rectus sheath blocks at the surgeon's discretion
- Surgeon must be satisfied with hemostasis
  - Valsalva maneuver
  - Trocar sites must be assessed for bleeding
- EBL must be <400ml
- Total case length must be <200 minutes.
- Must be the first case of the day, with a focus on an opioid and volume sparing anesthetic.

Post-operative Criteria

- **Discharge Criteria**
  - Normal vital signs
  - Stable hemoglobin at 3 hours
  - Pain well controlled with oral analgesia
  - Able to void
  - Ambulate independently
- Patients will be assessed by a member of the surgery team prior to discharge
  - must not have evidence of port site hematoma.
- Patients must be accompanied at discharge.

Implementation & Conclusions

Patients are followed by a Virtual Recovery program consisting of a nurse and a physician post-operatively for 5 days, with twice daily vital signs measurement, video interviews, and escalation protocols to the treating surgeon if needed. The primary outcome is proportion of enrolled patients who are discharged, with a target of 80%. Secondary outcomes include readmission and pain scores. We describe our SDD protocol for patients undergoing minor hepatectomy.