**APPENDIX A**

**Definitions of complications for bowel surgery**

**INTRAOPERATIVE SIGNIFICANT COMPLICATIONS1**

* *Clinically significant hemorrhage:* intraoperativebleeding requiring transfusion of packed red blood cells (PRBC) during surgery or within 24 hours after surgery
* *Bowel injury:*injury of the small or large bowel requiring intraoperative repair or additional resection.
* *Urinary tract injury:* injury of the ureter or bladder requiring intraoperative repair
* *Vascular injury:*injury of any major vessel (e.g. iliac artery or vein) requiring intraoperative repair
* *Cardiac or respiratory complications:*any cardiovascular (e.g. cardiac arrhythmia, myocardial infarction) or respiratory (e.g. pneumothorax) complication occurring during surgery.
* *Aspiration of gastric content:*intraoperative pulmonary aspiration of gastric content
* *Other:*any intraoperative injury to other viscera (e.g. spleen, vagina)

**POSTOPERATIVE COMPLICATIONS**

**MEDICAL**

**Cardiovascular**

* *Heart failure:* clinical or radiological signs of congestive heart failure and specific treatment initiated.2
* *Acute myocardial infarction****:*** increase in cardiac biomarker values or characteristic ECG changes or imaging evidence of new loss of viable myocardium or new regional wall motion abnormality.3
* *Cardiac arrhythmia:*ECG diagnosis of new arrhythmia requiring at least a pharmacologic intervention.4
* *Cardiac arrest:*cardiopulmonary resuscitation performed.
* *Deep vein thrombosis:*radiological confirmation of deep vein thrombosis or anticoagulation started due to clinical findings.
* *Pulmonary embolism:*radiological evidence of pulmonary embolism.
* *Cerebrovascular accident:*new focal or global neurologic deficit of cerebrovascular cause that persists beyond 24 h or is interrupted by death within 24 h.5

**Respiratory**

* *Pneumonia:* Hospital acquired pneumonia, defined as presence of lung infiltrate at chest x-ray accompanied with signs of infection and initiation of antibiotic treatment. 6
* *Lobar atelectasis:* radiological finding of at least one lobar collapse.4
* *Pleural fluid:* pleural effusion requiring drainage of the pleural cavity.
* *Respiratory failure:* delayed extubation > 24 hours after primary surgery, or reintubation at any time for ventilatory support.4
* *Pulmonary edema:* clinical signs and radiological confirmation.7

**Other medical**

* *Acute Kidney Injury:* increase in serum creatinine ×2 from baseline or reduction of glomerular filtration rate greater than 50%.8
* *Urinary retention:* Reinsertion of indwelling urinary catheter after removal attempt or patient discharged with urinary drainage (excluding patients with permanent indwelling urinary catheter).
* *Anemia:* low serum hemoglobin requiring transfusion of PRBC, unrelated to any identified source of bleeding.
* *Hepatic dysfunction:* Increased serum bilirubin concentration > 34 µmol/l (2 mg/dl) compared to preoperative value AND elevated liver enzymes AND has NOT undergone a pancreaticobiliary procedure.4
* *Acute Pancreatitis:* diagnosis requires 2 of the following: upper abdominal pain of acute onset often radiating through to the back; increase in serum amylase or lypase (x3 normal value); cross‐sectional abdominal imaging consistent with acute pancreatitis.9
* *Other gastrointestinal complications:* any other complication of the gastrointestinal tract requiring treatment (e.g. blood per rectum, diarrhea, high stoma output).
* *Neurological complications:* any neurological complication excluding cerebrovascular events or anesthesia-related injuries (e.g. epileptic seizure)
* *Psychiatric complications:* new psychiatric symptoms including delirium and depression, requiring pharmacological treatment.

**INFECTIOUS**

* *UTI:* upper or lower urinary symptoms and urine culture with no more than two species of organisms, at least one of which is a bacteria of ≥105 CFU/ml.10
* *Wound infection:* Purulent drainage, with or without positive culture, from the superficial incision or any sign or symptom of infection (e.g. pain or tenderness, localized swelling, redness) and superficial incision is deliberately opened by the surgeon or attending physician. Not included if part of intra-peritoneal abscess.11
* *Intra-**or retroperitoneal abscess:* Radiologic finding of deep collection of pus associated with systemic signs of infection or finding during reoperation.
* *Sepsis*: at least two SIRS criteria positive and a documented or suspected infection. SIRS criteria are the following: Temperature < 36 or >38 °C; heart rate >90 beats per minute, respiratory frequency >20 breath per minute, leukocytosis (WBC>12) or leukopenia (WBC<4) AND documented or suspected infection.12
* *Other infectious complications:*any other documented infectious complication (e.g. Clostridium difficile colitis).

**Surgical**

* *Anastomotic leak: d*ocumentation at reoperation OR documentation by imaging technique (e.g. radiologically, endoscopically) of leakage from the surgical connection between the two bowel ends into the abdomen or pelvis with either spillage and/or fluid collection around the anastomotic site or extravasation through a wound, drain site, or anus.13 In the case of rectal surgery, a pelvic abscess close to the anastomosis is also considered as anastomotic leakage.14
* *Bowel perforation:* documentation at reoperation OR radiologically of perforation of small or large bowel.7
* *Mechanical bowel obstruction:* documentation atreoperation OR radiologically of mechanical small or large bowel obstruction.
* *Wound dehiscence:* separation of the abdominal wall muscle fascia large enough to necessitate operative closure of the wound OR incisional hernia diagnosed after primary discharge.7
* *Bleeding:* any postoperative bleeding (e.g. intra-abdominal, gastrointestinal) requiring transfusion of at least 2 PRBC after surgery.15
* *Ileus (primary postoperative ileus):* abdominal distention OR vomiting associated withintolerance of solid food intake or inability to pass gas or stool beyond POD3 (target day for discharge), unrelated to any other ongoing complication.
* *Other surgical complications:*any other surgical complication necessitating treatment or delaying discharge (e.g. abdominal wall hematoma).

**ANESTHESIA-RELATED**

* *Post-dural puncture headache:* persistent headache requiring immobilization, related to puncture of the dura mater during epidural catheter placement
* *Epidural hematoma or abscess:* radiologically confirmed epidural hematoma or abscess
* *Other anesthesia-related complications:* any other anesthesia-related complication occurring after surgery (e.g. peripheral nerve injuries).

**SYMPTOMS DELAYING DISCHARGE**

* *Pain:* uncontrolled pain requiring prolonged treatment delaying discharge, unrelated to any other complication.

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