EMERGENCY CARE FOR THE METABOLIC BARIATRIC SURGERY PATIENT

Emergency Room Poster of IFSO-EC, Adapted from the Dutch Society for Metabolic and Bariatric Surgery

The acute metabolic bariatric surgery patient

The patient

1. Presents itself with fewer complaints, seems to have little pain, but is still very ill
2. Has fewer physiological reserves, leading to faster and deeper shock
3. Vomiting is in principle not a side effect of a bariatric procedure

Alarm symptoms

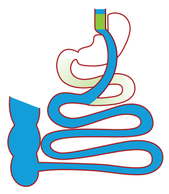
Tachycardia >120/min

≥ 38.5°C, hypoxia, hypotension

Vomiting blood or melaena

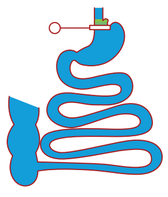
Vomiting and/or stomach ache

Most common bariatric procedures and their side effects



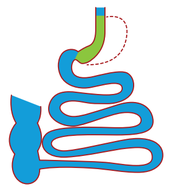
Gastric Bypass (RYGB)

- Dumping
- Poor diet/impaired absorption
- Abdominal discomfort



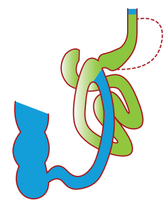
Banded Procedures (AGB; VBG; Banded Sleeve or Banded Bypass)

- Gastroesophageal reflux
- Nausea and vomiting
- Food intolerance



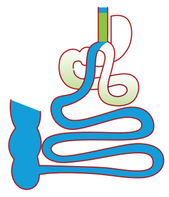
Sleeve Gastrectomy (Sleeve)

- Gastroesophageal reflux
- Poor diet
- Dyspepsia



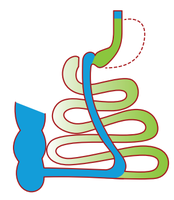
Single Anastomosis Duodenal-Ileal Bypass + Sleeve (SADI-S)

- Gastroesophageal reflux
- Poor diet/impaired absorption (proteins!)
- Diarrhea/steatorrhea



One Anastomosis Gastric Bypass (OAGB)

- Biliary reflux
- Poor diet/impaired absorption
- Diarrhea



Biliopancreatic Diversion/ Duodenal Switch (BPD/DS)

- Gastroesophageal reflux
- Dumping
- Steatorrhea/diarrhea

Endoscopic Procedures

- Nausea and vomiting
- Food retention
- Reflux

Images created and kindly granted by Dr. Arnold van de Laar (Spaarne Hospital, Hoofddorp, Netherlands)

Early postoperative complications (30 days) – always consult with (bariatric) surgeon

Bleeding

Symptoms

- Bruising on the abdominal wall
- Vomiting blood/melaena
- Collapse
- Tachycardia
- Low blood pressure

Management

- Resuscitate, transfusion (RBC) and correct coagulation
- Pay attention! Intra-abdominal bleeding is possibly an indication for leakage
- Unstable despite volume resuscitation: consider gastroscopy/laparoscopy
- CT-abdomen for stable patients only
- Pay attention! After Gastric Bypass, the remnant stomach is not accessible for gastroscopy

Leakage/Perforation

Symptoms

- "Change" in postoperative course
- Tachycardia
- Fever
- Pain

Management

- Resuscitate
- Laparoscopy
- Consider CT abdomen
- Consider percutaneous drainage
- Broad spectrum IV antibiotics

Pulmonary Embolism

Symptoms

- Chest pain
- Tachypnea

Management

- CT-angio chest/lung
- Anticoagulation

Obstruction

Management

- Obstruction can lead to leakage and/or strangulation
- No nasogastric tube. No conservative management without a definitive diagnosis!
- Gastric Band → Puncture Access Port and empty Gastric Band
- Sleeve → nil per os + swallow study/CT with oral contrast
- Gastric Bypass → CT abdomen (oral and intravenous contrast) excluding stenosis of anastomoses or internal herniation
  Negative CT with strong clinical suspicion: laparoscopy
- Pay attention! Enlarged remnant stomach + elevated liver/ pancreas values = obstruction at jejuno-jejunostomy!

Late postoperative complications

Abdominal Pain

Diagnosis & Management

Upper abdomen:

- Exclude gallstones: ultrasound
- Exclude ulcer: gastroscopy
- Exclude perforation: CT abdomen

Mid/lower abdomen:

- CT abdomen to exclude stenosis of anastomosis, or internal herniation
- IBS can develop or worsen after weight loss
- Overeating can cause abdominal pain

Obstruction

Management

- No nasogastric tube. No conservative policy without definitive diagnosis!
- Gastric Bypass → bowel strangulation (internal herniation), CT abdomen: swirl sign/laparoscopy <6h!
- Gastric Band → empty Gastric Band + swallow study
- Sleeve → nil per os + swallow study
- Negative CT with strong clinical suspicion: laparoscopy

Hypoglycaemia

- Dumping (after too many calories/carbohydrates): dizzy, "hot flush", sleepy, abdominal discomfort, tachycardia
- Tachycardia

Management

- Correct hypoglycaemia
- Dumping: dietary adjustments (consultation with bariatric dietician), medication (consultation with bariatric endocrinologist)

Malnutrition and Deficiencies

- Deficiencies can occur after each bariatric procedure: vitamin B1 (vomiting?), B12, D, Hb, Ca, Fe, Protein
- Gastric Bypass/Diversions: also vitamins A, E and K, severe protein malnutrition. Beware of "Refeeding Syndrome"!

Ulcer

Management

- Stop smoking
- Double dose PPI (+ Sucralfate)
- Severe heartburn that does not respond to PPI can mean biliary reflux: exclude internal herniation!
  Caveat: H. Pylori

Perforation

- Anastomosis
- Remnant stomach

Management

- Broad spectrum IV antibiotics
- Gold standard: laparoscopy

Gallstones

- Weight loss can cause gallstones and/or kidney stones

Management

- Pay attention! After Gastric Bypass, SADI-S and BPD/DS, the duodenum is not accessible for ERCP, consider MRCP
- CBD stones: consider PTC (possibly with duct clearance and papillotomy) or hybrid ERCP

Postoperative bariatric complications are preferably treated in the index bariatric centre or after consultation with that centre