

## The acute bariatric 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

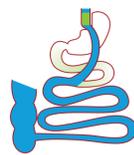


Vomiting blood  
or melaena

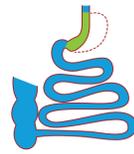


Vomiting and/or  
stomach ache

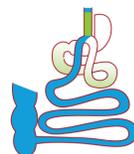
## Most common bariatric procedures and its side effects



- Gastric Bypass (RYGB)**
- Dumping
  - Poor diet/impaired absorption
  - Abdominal discomfort



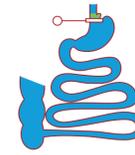
- Sleeve Gastrectomy (Sleeve)**
- Gastroesophageal reflux
  - Poor diet
  - Dyspepsia



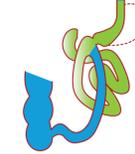
- One Anastomosis Gastric Bypass (OAGB)**
- Biliary reflux
  - Poor diet/impaired absorption
  - Diarrhea



- Endoscopic Procedures**
- Nausea and vomiting
  - Food retention
  - Reflux



- Banded Procedures (AGB; VBG; Banded Sleeve or Banded Bypass)**
- Gastroesophageal reflux
  - Nausea and vomiting
  - Food intolerance



- Single Anastomosis Duodenal-Ileal Bypass + Sleeve (SADI-S)**
- Gastroesophageal reflux
  - Poor diet/impaired absorption (proteins!)
  - Diarrhea/steatorrhea



- Biliopancreatic Diversion/ Duodenal Switch (BPD/DS)**
- Gastroesophageal reflux
  - Dumping
  - Steatorrhea/diarrhea

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
- Collaps
- 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

- Chestpain
- Tachypnea

#### Management

- CT-angio chest/lung
- Anticoagulation

### Obstruction

#### Management

- Obstruction can lead to leakage and/or strangulation
- No nasogastric tube. No conservative policy 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/Divisions: 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**