

Endoscopy in Treatment of Obesity and Bariatric Surgery

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Learning Objectives

- Bariatrics in Alberta
- Preoperative endoscopy in bariatrics
- Postoperative endoscopy in bariatrics
- Possible future directions

Obesity in Canada

- BMI > 35 in Canada
 - > 830 000 people
 - 67% have co-morbidities
- Well documented health consequences
 - 1 in 10 premature deaths

CIHI (2014) Bariatric Surgery in Canada

Why bariatric surgery?

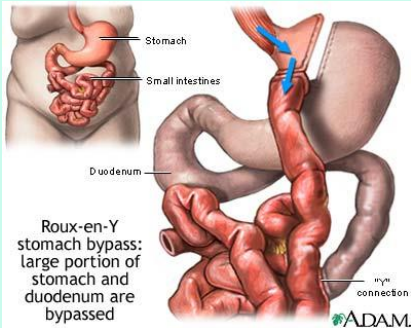
- ~ 60% excess weight loss
- Resolution of weight related co-morbidities
CIHI (2014)

- Alterations in gut neuroendocrine signaling to brain, pancreas, liver, adipose and muscle tissue
Abu Dayyeh & Thompson (2011)

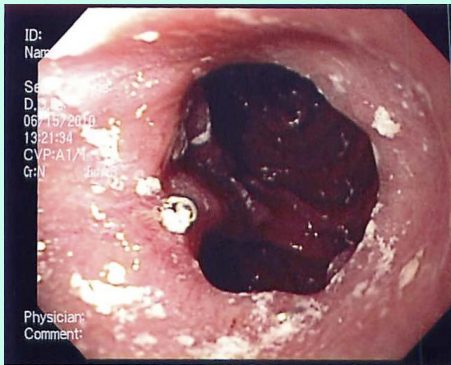
Who should have bariatric surgery?

- Appropriate patients
 - Able to make change
 - Stable mental health
 - Prepared for lifelong maintenance
 - Inappropriate patients
 - Active psychosis
 - Addictions
 - Personality or eating disorders
 - Suicidal ideation or history of attempts
- CIHI (2014)

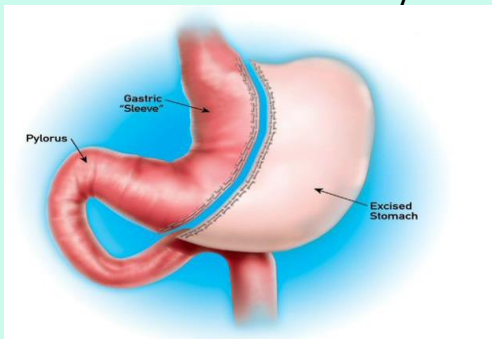
Gastric Bypass



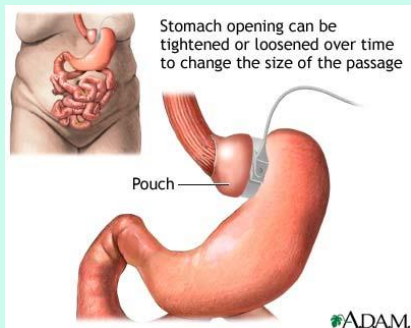
Normal Gastric Bypass



Sleeve Gastrectomy



Adjustable Gastric Band



Bariatric Surgery in Alberta

Bariatric surgery offered at 5 specialty clinics with interdisciplinary care teams:

- Red Deer, Calgary, Edmonton, Medicine Hat, Grande Prairie
- 514 procedures in 2012-2013
 - 45% gastric bypass,
 - 42% sleeve gastrectomy,
 - 13% gastric banding

CIHI (2014)

Preoperative endoscopy in bariatrics

- No consensus in guidelines re: need for gastroscopy prior to surgery
- Discovery of upper GI abnormalities prior to surgery may impact surgical plan

Singhal, Le, Duddempudi, & Anand (2012)
De Palma & Forestieri (2014)

Preoperative Endoscopy: Surgical Planning

Hiatus hernia



Preoperative Endoscopy: Surgical Planning

Esophagitis
& Barrett's
Esophagus



Preoperative Endoscopy: Surgical Planning

To treat or not
to treat?



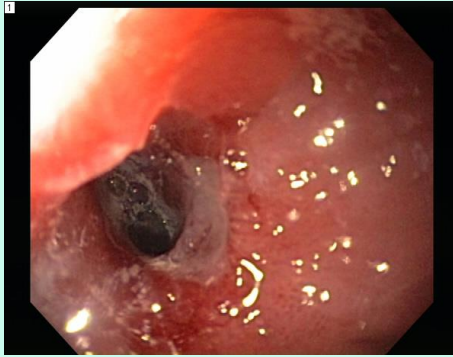
H. pylori

Post operative endoscopy

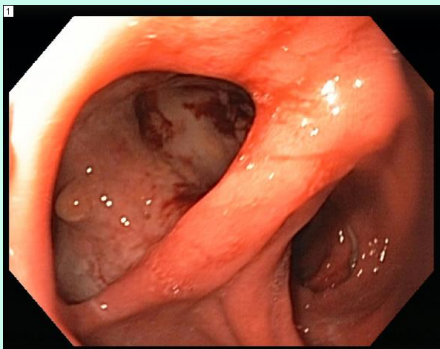
- Post operative complications:
 - Leaks
 - Strictures
- Assessment of long term complications
 - Mechanical failure
 - Band complications
 - Weight regain

De Palma & Forestieri (2014)

Stricture & ulcer at the gastrojejunostomy



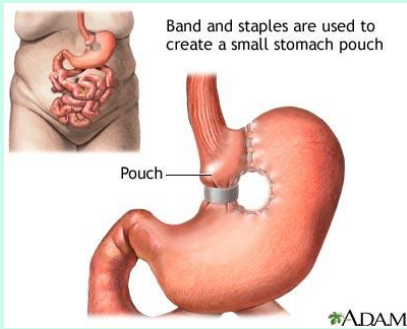
Leak from Staple line/Anastomosis



Assessment of long term complications

- Mechanical failure
- Band complications
- Weight regain

Mechanical Failure: Vertical Banded Gastroplasty



Band Complications



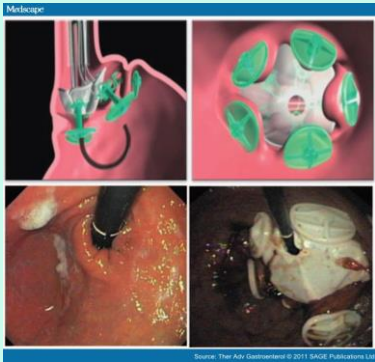
Future Directions

- Capsule endoscopy for pre op screening
Shah, et al (2013)
- Endoscopic Tx instead of revisional surgery
Buttelmann, et al (2015)
- Primary treatment for obesity
 - Intra-gastric balloons
 - Transoral gastroplasty or gastric plication
 - Endoluminal sleevesMajumder & Birk (2013)

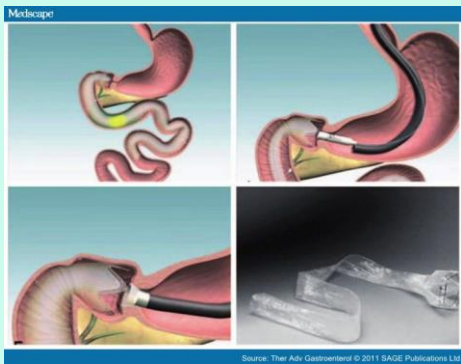
Intragastric balloons



Transoral gastroplasty or plication



Endoluminal sleeves



Conclusions

- Bariatric surgery is useful, effective, and here to stay (for now)
- Endoscopy has a role:
 - Before bariatric surgery
 - After bariatric surgery
 - Instead of bariatric surgery?
- Nurses' role
