CHECKLISTS IN BARIATRIC SURGERY

CHECKLIST #6

Chronic Diarrhea after Gastric Bypass/Biliopancreatic Diversion with Duodenal Switch

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If a patient experiences chronic diarrhea after undergoing a gastric bypass or biliopancreatic diversion with duodenal switch, we suggest the following diagnostic and treatment algorithm:

☑ DIFFERENTIAL DIAGNOSIS:

1. _**Dumping syndrome (osmotic)**
2. _**Malabsorption of nutrients (osmotic): distal RYGBP/BPD-DS**
3. _**New onset lactose intolerance**
4. _**Zollinger Ellison's syndrome/gastrinoma (secretory)**
5. _**Bacterial overgrowth (infectious/secretory)**
6. _**Gastrointestinal neoplasms (colon/small bowel/carcinoid); paraneoplastic.**
7. _**Crohn's disease/ulcerative colitis**
8. _**Foreign travel; parasites**
9. _**Irritable bowel syndrome**

☑ POSSIBLE DIAGNOSTIC TESTS:

1. _**Observation**
2. _**Stool for protein and fat content**
3. _**Stool cultures**
4. _**Gastrin levels**
5. _**UGI/SB series; transit time**
6. _**CT scan/colonoscopy (LB neoplasm)**
7. _**EGD/double balloon endoscopy/transremnant endoscopic ultrasound**
8. _**Capsule endoscopy (SB neoplasm)**
9. _**Sestamibi scan**

☑ DIAGNOSTIC/TREATMENT ALGORITHM:

1. _**If dumping syndrome:**
   - _ a) Consult nutritionist and review dietary habits. Avoid carbohydrates/fatty food.
   - _ b) Admit patient for strict observation. If not resolving under strict diet then proceed with next step.
   - _ c) Obtain UGI with small bowel series and CT scan of the abdomen (always rule out other possible etiologies such as GI neoplasms). Look at transit time. If abnormal (i.e., too fast), consider to advise patient to lay flat after meals for at least 30 minutes to help slow down transit time. Add pancreatic enzymes as needed (Creon). If not improving, consider conventional medical treatment for diarrhea. If not resolving, consider somatostatin. If not resolving, proceed with next step.
   - _ d) Consider placing a G-tube in a gastric bypass patient and feed through G-tube. If resolving, consider reversing the gastric bypass. In this instance, we would favor a step approach and then proceed to LSG once patient fully recovers and diarrhea is completely resolved.

2. _**If nutrient malabsorption (especially in distal RYGBP and BPDDS):**
   - _ a) First, rule out dumping syndrome and lactose intolerance and start dietary consult. Follow algorithm as in 1.
   - _ b) Perform stool analysis to asses degree of malabsorption
   - _ c) Start maximal dosage of oral pancreatic enzymes
   - _ d) Consider using loperamide
   - _ e) If no improvement and other etiologies have been ruled out, consider moving proximal the entero-entero anastomosis and lengthening the common channel.

3. _**If gastrinoma:**
   - _ a) Sestamibi scan
   - _ b) Gastrin levels
   - _ c) EGD (if recurrent marginal ulceration/stricture)
   - _ d) If normal, consider algorithms for 1 and 2
   - _ e) If abnormal and positive sestamibi scan and gastrin levels consider the following:
     - laparoscopic trans-remnant EUS and resect gastric remnant, duodenal or pancreatic mass as conventional approach.

4. _**If bacterial overgrowth:**
   - _ a) UGI/CT scan /capsule endsocopy
   - _ b) Stool cultures
   - _ c) If positive for areas of stasis and bacterial overgrowth, consider oral antibiotics as per cultures. Consider probiotics.
   - _ d) If not positive for areas of stasis and bacterial overgrowth, use algorithm as per 1, 2, 3, and 4.

5. _**Neoplasms/inflamatory bowel disease:**
   - _ a) Use conventional diagnostic methods
     - CT scan
     - Capsule endoscopy
     - Double balloon endoscopy
     - Contrasted studies/ UGI/barium enema

6. _**If post vagotomy:**
   - _ a) Consult nutritionist and review dietary habits; Advise small frequent meals.
   - _ b) Start loperamide.

7. _**If new onset lactose intolerance:**
   - _ a) Consult nutritionist and review dietary habits; Advise lactose free products.
   - _ b) Consider probiotics.

8. _**If Irritable bowel syndrome:**
   - _ a) Consult gastroenterologist
   - _ b) Dietary modifications
   - _ c) Medical management

Disclaimer: The information in this handout is for educational purposes only and should not be used as a primary source of treatment.

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