**Back to Case**

- 55 y/o F with fatigue/diarrhea/malabsorption?
- PMH:
  - 2000 - Roux en y gastric bypass surgery
  - 2002 – Adhesions - LOA surgery
  - 2007 – 2013 – Multiple SBO’s – both surgically and medically managed
  - 2014 - Partial colectomy
  - Iron deficiency anemia
- Meds included:
  - 2000 units Vitamin D, 2 lomotil capsules BID, 2 imodium capsules BID, synthroid, iron infusions q 2 months

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**Case cont.**

- Ht: 154cm (5’1”) Wt: 62kg (138#) UBW: 63kg (140#)
- Diet: Regular—eats constantly
- Labs:
  - B12 – 6569 pmol/L (891)
  - Methylmalonic acid – 1.12 (nl = < 0.40)
  - 25-OH Vit D, Vit A & Vit E - WNL
  - Ferritin – ↓↓
  - 48 hour fecal fat collection results:
    - Per day out: 1800mL; 72 g fat (120g fat/day ingested)

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**Bilroth II w/ Long Roux Limb**

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**Case cont.**

- At risk for, or already has:
  - Gastroparesis
  - Hypochlorhydria
  - SBO
  - Loss of surface area due to longer roux limb
  - Intestinal hurry
  - Pancreato-biliary to nutrient “mismatch”

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**What are her potential barriers to nutrition repletion?**

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**Recommendations**

1) Goal weight = 63kg (140#)
2) Diet changes:
   - Reduce fat to 60 grams per day; increase complex CHO.
   - Limit fruit to 3, 1/3 cup portions per day
   - No sugar alcohols, no fruit juice or dried fruits.
3) Medication changes:
   - Start Viokace – 10,400unit tabs, 4 tabs w/ meals & 2 w/ snacks.
   - 4mg imodium tablets, crushed, q 6 hours, 30-60 minutes before meals and bedtime.
   - Possible empiric treatment for SBO if above fails
Recommendations cont.

4) DXA scan
   - If osteoporotic, refer to endocrinology.
5) Supplement changes:
   - Start therapeutic vitamin/mineral daily
   - Start 1000mcg B12 SQ shots monthly
   - Try 1.0mL Fer in Sol (Fe sulfate) drops, 15mg elemental iron/mL BID
   - Add to one tablespoon of applesauce, etc.
   - One 60mg Vitamin C chewable concurrent with above
6) Recheck 25-OH vitamin D & ferritin in 2 months

Case 2

- 55 y/o M w/ difficulty gaining wt, diarrhea, dehydration
- Wheelchair bound pretty much
- PMH/PSH:
  - 6/95 - Lap Nissen's fundoplication x severe GERD
  - 7/1998 - slipped/revised c/b – gastroesophageal reflux
  - 10/98 – TIA/CVA/HTN
  - 6/12/00 – Near total gastrectomy w/ roux en y & surgical j placed
  - Osteoporosis (5 vertebral fx)
  - Autonomic dysfunction/syncope episodes
  - 7/03 – ventral hernia repair; followed by multiple hernia repairs
  - 10/05 - Hickman for supplemental TPN
  - 5/08 – narcotic bowel syndrome – weaned off

Case 2 cont.

- Ht. 5’5” Wt. 134# UBW: 160# IBW: – 140#
- Goal wt = 140-150#
- Diet: NPO
- TF: Peptamen 1.5, FS @ 80 mL q hr during day via 8 Fr non-latex tube x 5 cans q night (1875 kcal) via j-tube
- Hydration: Pedialyte @ 100 mL/hr x 1 liter+/day
- Nutritional supplements: 1000mcg B12 q month, calcium, calciferol
- Meds: noroxin, Carafate, forteo, calciferol, calcium

Case cont.

- Stool: diarrhea
- UOP: admitted for hydration periodically
- 72 hour fecal fat – 39 g out/day

Potential Barriers

1) Pancreatobiliary mismatch due to his anatomy w/ inadequate pancreatic enzyme replacement
2) Potential acid production if gastric remnant present w/ potential denaturing of any exogenous enzymes started.
3) Relative short gut due to jejunal tube placed below roux limb to prevent regurg of his pancreato-biliary secretions.
4) Probable chronic SBBO
5) Consider component of ileal braking from malabsorption perceived as nausea.
Recommendations

1) Obtain 25-OH vit D, HgbAsC, Vit A, E, MMA, ferritin, Folate
2) Change TF to Perative, FS @ 80 mL / hour initially x 6 cans - use full strength at first, but may trial ½ in future if we can’t get the rate up.
3) Add ½ teaspoon of Viokase powder to each can of tube feeding infused—first put it in 25 mL of lukewarm water to mix it up before adding to the bag of tube feeding.
4) Change water & Gatorade to Ceralyte – 1500 mL/day as med and water flushes.
5) Liquid Imodium – ½ dose BID
6) Expect pt will need to continue cycled treatment for SBBO.

Follow Up

- 2 weeks later:
  - “The diarrhea has improved significantly--the best in over a year. I have put on a couple of pounds. Also the dumping episodes in the morning have improved. For the first time in a year the stools are almost formed. The foul odor also has improved.”
  - One month later: wt = 137#
  - 2 months later: wt = 140# (on less kcal than originally)
    - Wt plateau—TF increased to 6 cans/day
  - 5 months later: wt = 145#
  - 7 months later: wt = 150#

Summary

- Recognize pts with GI alterations
- Identify all barriers
  - Nutrient delivery/absorption
  - Inadequate medication dosing
  - Social/financial issues, etc.
- Set goals
- Treat
- Reevaluate