

Management Tips for Short Gut or High Output Ostomies

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Case

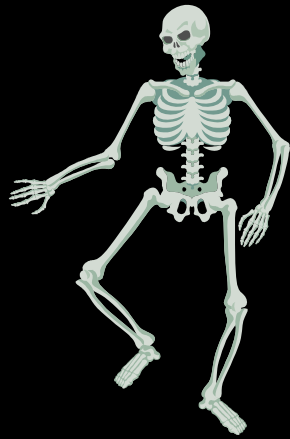
- 68 year old female came into GI nutrition clinic with SBS and failure to thrive
- Medical/surgical history: colon cancer with resection followed by radiation and chemotherapy.
 - Multiple small bowel obstructions until she required an extensive small bowel resection
- Medications: questran, lomotil, tincture of opium, centrum silver, potassium, vitamin C, nexium, metamucil

Case cont.

- Ht - 5'0"
- Weight history:
 - 128# (2/07)
 - 107# (5/07)
 - 83# (9/08)
- Diet: Regular, limited sweets, low fat, 6 small meals
- Liquids: 10 glasses of water /day
- 24 hour urine & ostomy output: 875 mL & 1440 mL
- Labs: albumin = 4.5; B12 & Vitamin D deficient

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If your patient looks
like this,



asking for albumin or
prealbumin is like
asking for a torch to
see the sun...



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Case cont.

- Where do we start?

What is Short Gut?

There is not enough bowel (or working bowel) left to support the nutrient and fluid needs for *an individual* consuming what should be normal amounts of food and fluids.

The Consequences of SBS

- Dehydration
- Loss of electrolytes
- Metabolic acidosis
- Nutrient malabsorption
- Osteoporosis
- Medication malabsorption
- Quality of life issues

Goals of Management

- 1) Provide nutrients, water and electrolytes to maintain health and/or growth
- 2) Reduce the severity of intestinal failure and maximize absorptive capacity of remaining bowel.
- 3) Prevent and treat complications
- 4) Maximize quality of life

Data Collection

- Patients anatomy?
- Past medical/surgical history
- Serial weights
 - Need to gain, lose, maintain weight?
- Current medications
 - Which ones
 - Dosing
 - Frequency

Data cont.

- Diet/ usual intake including:
 - Types of fluids
 - Use of supplements
 - Ensure, Boost, etc.
 - Herbals, protein powders, probiotics
 - Vitamins and minerals

Data cont.

- Chief “complaints” *AND* goals?
 - ➔ If you don’t tell, your health care provider won’t know...
 - Loss of sleep?
 - Hassles of TPN/ infections
 - Run time of TPN, etc.
 - Emptying ostomy bag too often

Nutrition Therapy - General

- Smaller, frequent meals
- Chew foods well
- Avoid concentrated sweets
- Limit lactose ?
 - Found in milk & milk products
- Medium chain triglycerides (MCT oil) ?
- Limit or avoid enteral stimulants such as alcohol and caffeine

Nutrition Therapy - Specific

- No Colon
 - Higher fat (30-40% calories)
 - Lower carbohydrate (40-50 % calories)
 - Isotonic fluids/oral rehydration therapy
 - More salt
- Colon Segment Present
 - Lower fat (20-30% total calories)
 - Higher carbohydrate (50-60% of total calories)
 - Some fiber (soluble)
 - Avoid oxalates

Signs of Dehydration

- Thirst!
- Feeling tired all the time
- Rapid weight loss
- Urine looks dark in color
- Decrease in urination
 - Urine output is < five cups
 - Note: 1 cup = 8 ounces
 - = 40 ounces or 1200mL per day

Dehydration cont.

- *Dry mouth*, sticky or thick saliva
- Stool output that is more than the total amount of fluid you drink
- Kidney stones
- Worsening kidney function
- Poorly controlled diabetes mellitus

Common Causes of Increased Stool Output

- Clostridium difficile (“C. Diff.”) infection or other GI infection
- Initiation of a new medication
- Sudden discontinuation of an important medication that helps decrease stool losses
 - “My prescription ran out...”
- Drinking too much fluid in some patients



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Data cont.

- Baseline 24 hour urine/stool output



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Hydrating

- Avoid hypotonic/hypertonic fluids such as:
 - Water, tea, coffee, fruit juices/drinks, alcohol, sport drinks, sodas
- Separate solids from liquids
- Trial of nighttime nutrition or ORT by feeding tube
- Addition of IV fluids as last resort

Oral Rehydration Therapy (ORT)

- A solution of that contains *both* sugar and salt in the proper amounts.
 - Too little or too much of either salt or sugar can be ineffective & worsen diarrhea.
- It is not a magic bullet...

Commercial ORT Solutions

<u>Products</u>	<u>Cost/L</u>
■ Pedialyte	\$5.49
■ Wal-Mart (Parent's Choice)	\$3.50
■ Target (Pedia Electrolyte)	\$3.54
■ WHO formula	\$0.55
○ Jianas Brother's (carton of 100)	
■ Ceralyte (if buy case of 260)	\$2.60
■ CVS (Pediatric Electrolyte Oral Maintenance Solution)	\$4.49

Sip Instead of Gulp

- Sipping is always better than gulping
 - Think, “how can I give the food and fluid I consume the best chance to be absorbed?”
- A vicious cycle results otherwise
 - → excess intake of liquids due to thirst
 - → increases stool output
 - You become more thirsty, then drink more
 - More out, and deeper into dehydration you go.

Summary Guidelines

- One intervention at a time, then observe
- It is *ALL* about the details
 - Don't assume anything...

More Resources

- ***NEW*** →

Patient's Guide to Managing a Short Bowel

- <http://www.shortbowelsupport.com/default.htm>

Resources

- University of Virginia Health System GI Nutrition Webpage:

www.ginutrition.virginia.edu

Parrish CR. The Clinician's Guide to Short Bowel Syndrome. Pract Gastroenterol 2005;XXIX(9):67.

- Oley Foundation

www.oley.org or 800/776-6539

- Oxalate and Hyperoxaluria Foundation

www.ohf.org/diet.html

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