Intestinal Dysmotility Resulting in Ileorectal Anastomosis: A Nutrition Case Study
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Background
- Spinal surgery poses risk for postoperative ileus and acute colonic pseudo-obstruction
- May cause abdominal distention and tenderness, nausea, vomiting, constipation and diarrhea
- May evolve into chronic intestinal pseudo-obstruction
- Initial treatments include decompression techniques and medications
- Patient may need surgical intervention, the most invasive being colon resection
- Ileorectal anastomosis is alternative to ostomy placement, involves colectomy with ileum connected directly to rectum

Case Description
- 72 year old male
- HT 175 cm, Wt 119 kg, BMI 38.9 kg/m²
- 10 lbs weight loss in past 6 months
- Significant 5 year spinal surgical history
- Most recent spinal surgery 6 months prior to admit, resulted in prolonged ileus and colonic pseudo-obstruction
- Three weeks prior to admit hospitalized with similar presentation
- Significant 5 year spinal surgical history
- In third week total colectomy performed and ileorectal anastomosis created
- After surgery frequent loose stooling and electrolyte abnormalities
- In week four slow improvements made in oral intake, stooling volume and texture

Nutritional Implications
- Patient oral intake and weight decreased in months prior to admit
- Suboptimal oral intake in first two weeks of admit, diet order shifted between NPO, clear liquids, full liquids, and general diet
- TPN started later than recommended at day 16, patient had accumulated significant nutrient intake deficit
- Labs reflected protein calorie malnutrition with low pre-albumin of 5.9 mg/dL in setting of normal C-reactive protein at 2.5 mg/dL
- No nutritional education provided prior to surgery, unclear how patient would tolerate oral intake postoperatively
- After surgery BRAT diet (bananas, rice, applesauce, toast) recommended to help slow gastric transit time
- Yet unclear how patient will tolerate food into the future and how quality of life will be impacted

Management
- First four days treatment with nasogastric and rectal tube decompression, bowel regimen, neostigmine and methylnaltrexone gave no improvement
- Two weeks of colonic decompression and increased medication resulted in periodic decrease in distention but no resolution
- In week four slow improvements made in oral intake, stooling volume and texture

Figure 1: Ileorectal anastomosis procedure

Figure 2: Patient imaging of significant colonic distention

Figure 3: Electrolytes after surgery date on 4/28

Nutrition Intervention
Day 1: Admitted for suspected ileus vs. pseudo-obstruction, began treatment attempts with aggressive bowel regimen, methylnaltrexone and neostigmine, 10 kg wt loss in past 6 months noted
Day 4: Decompressive colonoscopy with initial improvement, followed by return of abdominal distention and inability to tolerate PO intake
Day 9: Variable on clear liquids and NPO since admit, advanced to full liquids, diagnostic colonoscopy
Day 10: Advanced to general diet, tolerated fairly well sized meals
Day 12: Abdominal distension returned, reinitiated NPO status
Day 13: Began full liquids and increased pyridostigmine, RD highly suggested TPN, began Sitz Marker study
Day 14: Sitz marker study demonstrated no progression of markers, surgery team suggested subtotal colectomy with ileorectal anastomosis
Day 16: TPN initiated
Day 17: Sitz marker study showed markers in cecum and proximal ascending colon
Day 20: Tolerated full liquid diet, poor intake, TPN for full support, planned to proceed with surgery
Day 23: Surgery performed, open total colectomy with ileorectal anastomosis
Day 24: Admitted to ICU for afib monitoring, diuresis, and electrolyte management
Day 28: Continued on TPN for full support, started clear liquids, first loose stool since surgery
Day 29: Continued on TPN for full support and clear liquids, frequent emesis and loose stool, low Na, K, Mg
Day 30: Post operative ileus, NG feeding tube placement difficult, loose stooling, and intermittent tachycardia
Day 31: Transferred out of ICU, continued TPN for full support, NPO for bowel rest, continued emesis, ND feeding tube placed
Day 35: Started low residue diet, discontinued TPN, increased PO intake with small frequent meals, improvement in stooling volume and texture

Conclusions
1) Patients can have complex medical histories and conditions that affect care
2) Intestinal dysmotility has severe implications for nutritional adequacy
3) Timeliness of nutrition therapy is essential
4) Importance must be placed on quality of life considerations in the surgical setting