

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 for colonic pseudo-obstruction, received one week intensive treatment
- Current admit with similar presentation including abdominal pain, nausea, vomiting, 13 cm of colonic distention, and distended loops of jejunum
- Plan to repeat treatment from previous admit

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 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

Figure 1: Ileorectal anastomosis procedure

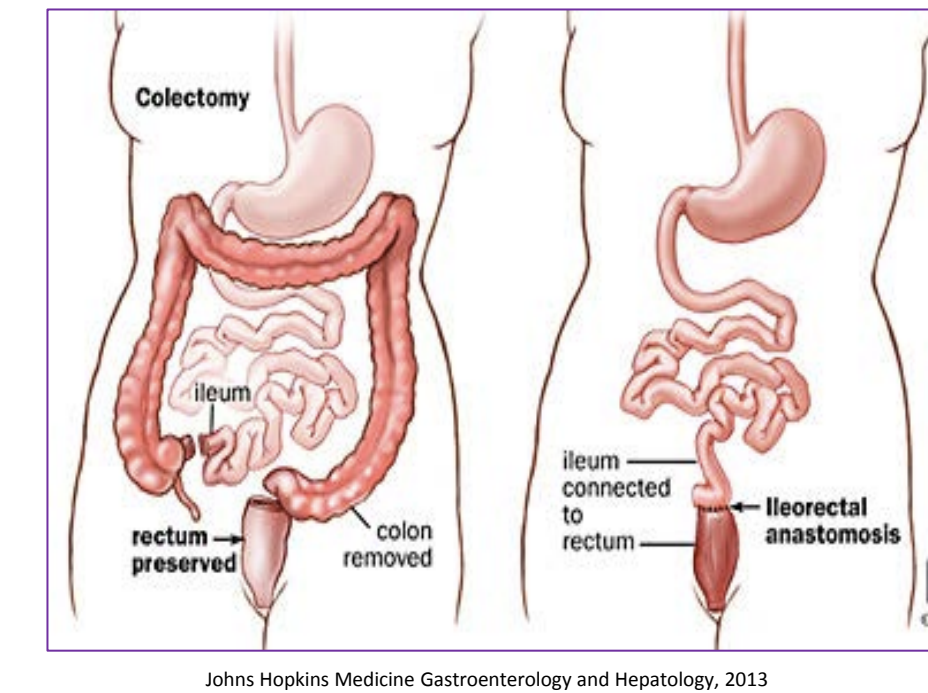


Figure 2: Patient imaging of significant colonic distention

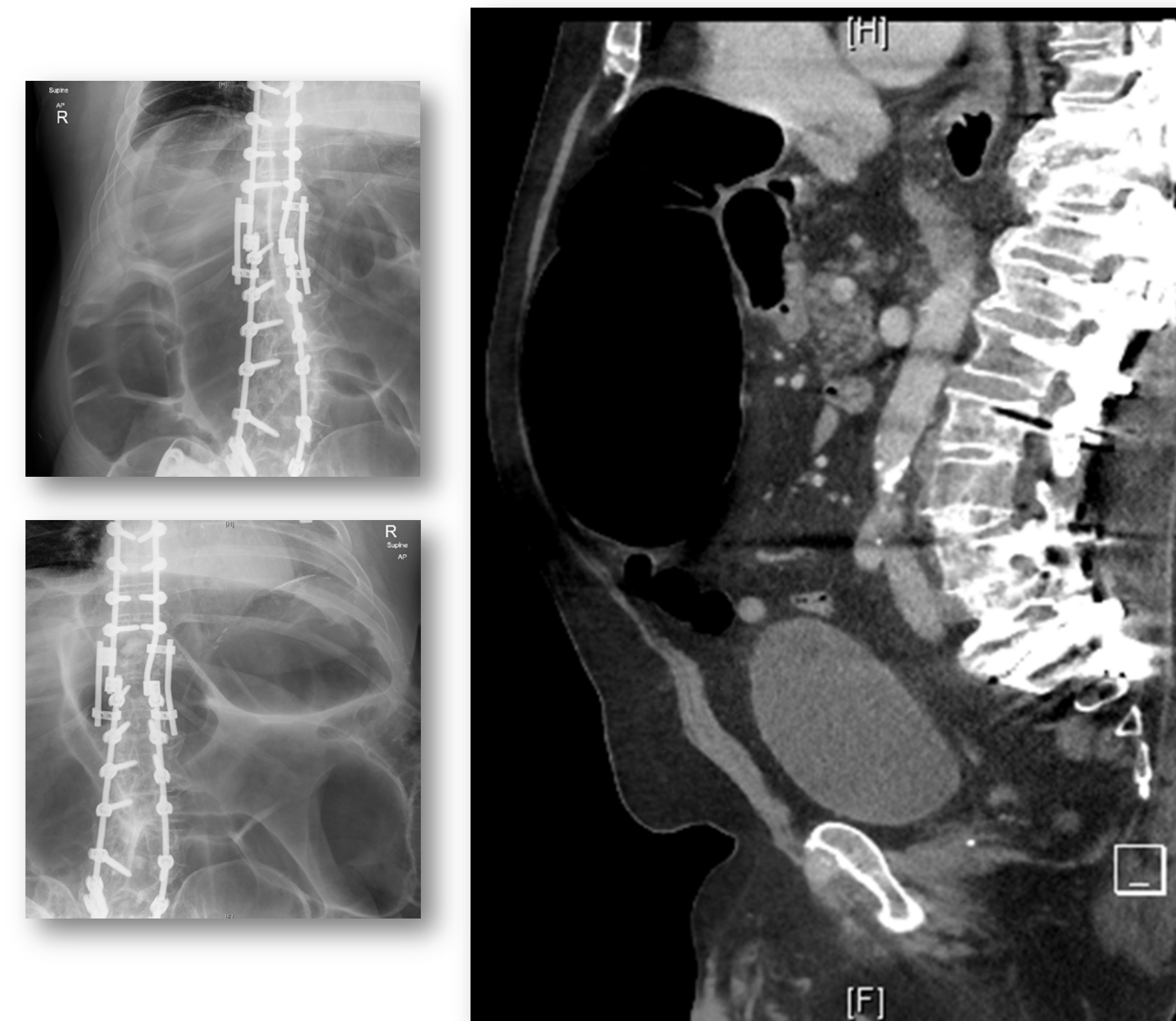
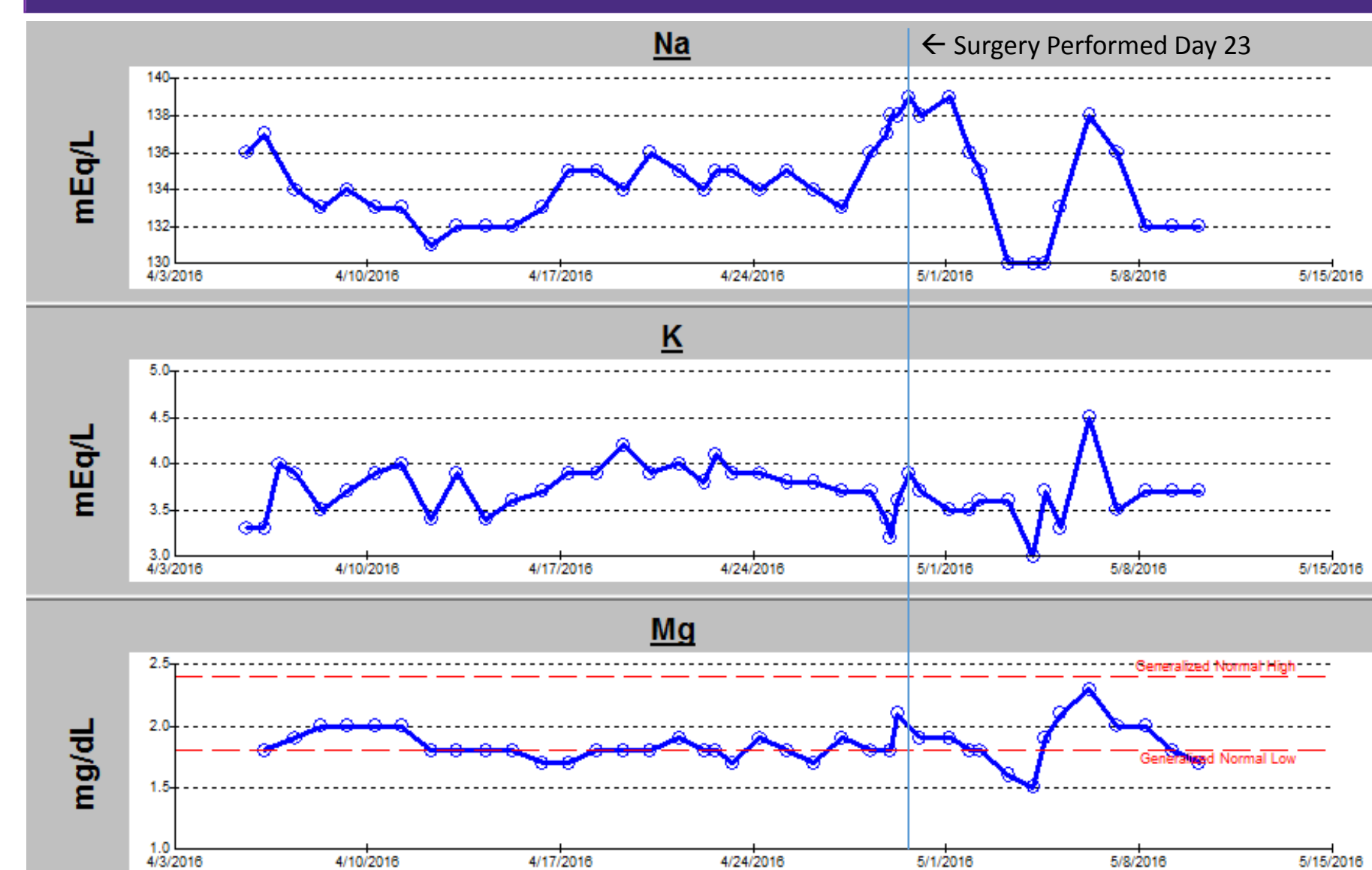


Figure 3: Electrolytes after surgery date on 4/28



Nutrition Intervention

Day -1: Last full meal before current admit

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: Variably 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 distention 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