ACUTE COLONIC PSEUDO-OBSTRUCTION MASQUERADING AS AN ACUTE AORTIC OCCLUSION

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BACKGROUND

A 71 year-old female, with a history of constipation, fibromyalgia, polypharmacy, and multiple abdominal operations for weight loss including Roux-en-Y gastric bypass and presented emergently with evidence of acute aortic occlusion (AAO) and abdominal compartment syndrome secondary to acute colonic pseudo-obstruction (ACPO).

SUMMARY

Our patient presented to an outside facility with complaints of diffuse abdominal pain associated with sudden left leg numbness and paraplegia. Initial examination was remarkable for sepsis (systolic blood pressure in the 80s with a heart rate of 110-120), severe abdominal tenderness and distention, absent bilateral pulses (femoral to pedal), bilateral lower extremity cyanosis, and left leg paralysis. Labs were pertinent for macrocytic anemia (Hb 10.6, MCV 103), metabolic acidosis (HCO3- 15), hypokalemia (K+ 3.1) hyperchloremia (Cl- 111), and hypocalcemia (Ca2+ 6.5). CT angiogram of the chest, abdomen, and pelvis revealed a markedly dilated colon (cecum 10 cm, transverse/descending colon 7 cm), multiple dilated loops of small bowel, and a moderate stool burden of the distal colon **(Figure A**). Celiac artery perfusion was absent, but reconstituted distally via superior mesenteric artery (SMA) collaterals. The distal abdominal aorta and common iliac arteries were nearly flattened with vague reconstitution of the common femoral artery (CFA) and superficial femoral artery (SFA) through collaterals (**Figure B**). The inferior vena cava (IVC) was completely collapsed (**Figure C**).

Upon arrival to our center, the patient was obtunded and required emergent intubation. Vitals were minimally responsive to crystalloid resuscitation. The patient's abdomen was rigid with absent lower extremity pulses and cyanosis from the umbilicus to the toes.

Repeat labs were remarkable for hyperkalemia (K+ 6.1), hyperglycemia (Glu 184), acute kidney injury (Cr 1.4), non-anion gap metabolic acidosis (HCO3- 16, anion gap10), and lactic acidemia (LA 2.5).

Given the concern for abdominal compartment syndrome in conjunction with AAO, the patient was emergently taken to the operating room for an exploratory laparotomy. The entire colon was markedly dilated, thin-walled, and ischemic consistent with ACPO. Given these findings, decision was made to perform a subtotal colectomy, after which pedal pulses were appreciated. However, the patient then became hemodynamically unstable requiring a maximum dose of three vasopressor agents likely due to reperfusion syndrome of the lower extremities and abdominal viscera. At this point, the patient was hypothermic (T 86º F), acidotic (pH 6.9, LA 11.6, base deficit 21), and coagulopathic, as evidenced by diffuse retroperitoneal bleeding requiring activation of the massive transfusion protocol, so the bowel was left in discontinuity and the abdomen was temporarily closed with negative-pressure dressing. Despite maximal medical therapy, the patient did not improve. She was eventually transitioned to comfort care by her family and expired shortly thereafter.

CONCLUSION

AAO is a rare vascular emergency that requires immediate surgical attention. ACPO as the etiology of AAO has never before been documented in the literature. We present a case that describes our experience with AAO due to ACPO. Indeed, this circumstance poses as both a therapeutic dilemma for surgeons and intensivists alike as the treatment may exacerbate underlying pathophysiology ultimately leading to the patient's demise. Early presentation, expedient surgical intervention, and aggressive critical care management is vital to the patient's survival.



Figure A: CT chest/abdomen/pelvis scout film demonstrating marked dilation of the entire colon with severe stool impaction and pneumatosis coli of the proximal colon.

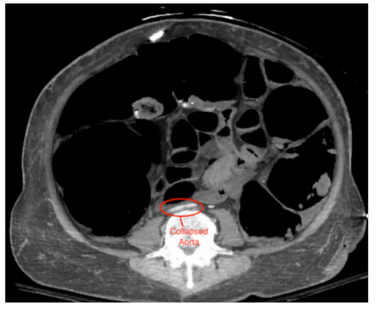


Figure B: CT chest/abdomen/ pelvis axial view demonstrating severe external compression of the abdominal aorta (red circle) by the dilated colon.

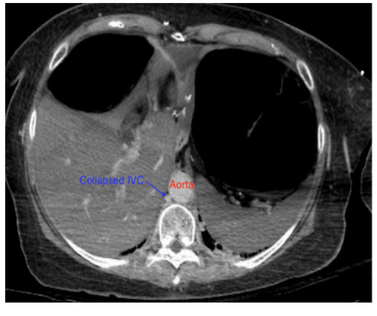


Figure C: CT chest/abdomen/ pelvis axial view demonstrating collapse of the abdominal inferior vena cava (blue arrow).