An Unusual Case of Acute Colonic Pseudo-obstruction in an Immunocompetent Adult with Refractory Cryptosporidium Infection

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1. INTRODUCTION

- **Acute colonic pseudo-obstruction (ACPO)** is characterized by acute colonic dilatation in the absence of mechanical obstruction and carries a 15% risk of perforation.
- **Infectious agents such as VZV, Herpes virus, and CMV** have been documented to cause ACPO.
- *Cryptosporidium* is a protozoan parasite that causes self- limited diarrhea in the immunocompetent and prolonged severe diarrhea in the immunocompromised.

2. CASE REPORT

- A 58-year-old male with bipolar disorder, BMI 34
- Presented with sepsis, rhabdomyolysis, AKI, watery **diarrhea for 6 weeks**.
- **CT** showed colonic distention.
- **Stool culture** was positive for *Cryptosporidium* Ag.
- HIV, C. difficile, stool ova and parasites, *Campylobacter* and *Shiga* toxin tests were negative. Common variable immunodeficiency was ruled out.
- Diarrhea persisted despite two courses of Nitazoxanide. Repeat stool culture was positive for *Cryptosporidium.*
- Infectious Diseases (ID) suggested a prolonged course of Nitazoxanide.
- The patient was transferred to inpatient rehab, where diarrhea continued, and he had persistent hypokalemia despite scheduled potassium replacement.

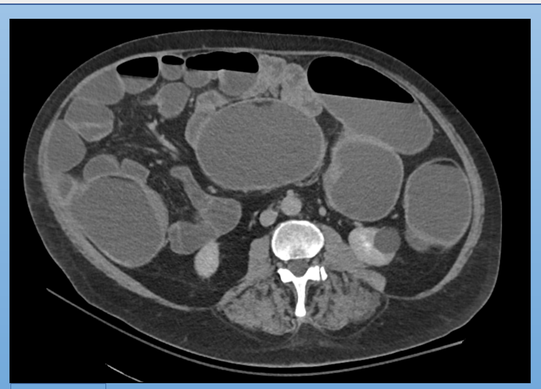

Fig A

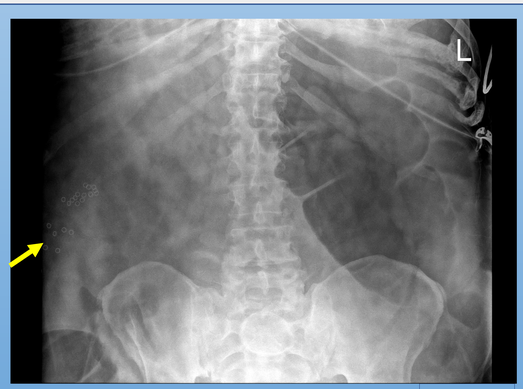

Fig B

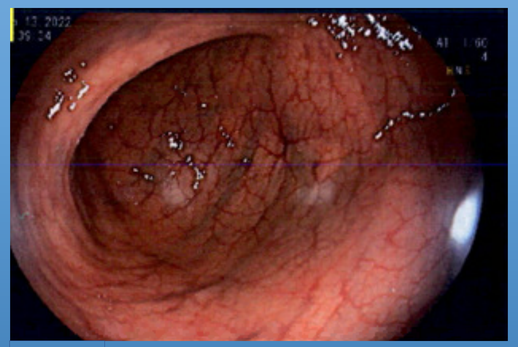

Fig C

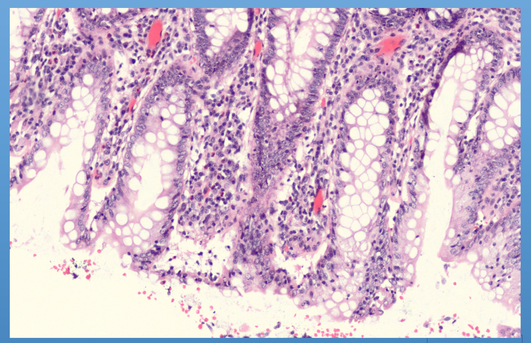

Fig D

A: CT AP on admission, that showed **diffuse dilation of colon and rectum** with gas and liquified stool, measuring up to 11 cm in diameter
B: XR abdomen showing **Sitz markers** in the right abdomen, that did not change position in 5 days (yellow arrow)
C: Colonoscopy showing **diffuse colonic dilation**. This was noted up to the level of the transverse colon;
D: Colectomy specimen showing colonic mucosa with **congestion and focal hemorrhage**.

- On rehab day 9, XR showed a transverse colon diameter of 13 cm, and patient was transferred to the ICU.
- **Sigmoidoscopic decompression** was done, with biopsies showing focal hyperplastic changes.
- NGT was placed and aggressive bowel regimen was started.
- A trial of **neostigmine** for the colonic pseudo-obstruction resulted in bradycardia.
- Repeat colonic decompression was performed: diffuse colonic dilation with large amount of stool.
- Patient declined any surgical procedures, and remained in PCU for TPN, scheduled IV potassium replacement and close monitoring of distended abdomen.
- After 1 month of attempted restimulation, patient agreed for total abdominal colectomy with end ileostomy for the chronic dilated colon, refractory to medical management. He continued to have high output from his ostomy post Sx.
- Succumbed to cardiopulmonary arrest on day 54.

3. DISCUSSION

- This is an unusual case of *Cryptosporidium* causing chronic refractory diarrhea and ACPO in an immunocompetent adult.
- Though other infectious agents have shown to cause enteric autonomic dysfunction leading to ACPO, *Cryptosporidium* induced dysmotility has not yet been documented.
- Management of such cases remains challenging with inter-disciplinary efforts between GI, Surgery, ID and Critical Care.

Contact Information

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