EJCRIM
European Journal
of Case Reports
in Internal Medicine

GIANT RECTAL FECALOMA TREATED WITH CARBONATED SOFT DRINK AND ARGON PLASMA COAGULATION

Philippe Attieh[1], Karam Karam[2], Elias Fiani[2], Ihab I. El Hajj[2,3]

[1] Department of Biomedical Sciences, Faculty of Medicine and Medical Sciences, University of Blamand, Beirut, Lebanon
[2] Department of Gastroenterology and Hepatology, University of Balamand, Beirut, Lebanon
[3] Department of Gastroenterology and Hepatology, Saint George University of Beirut, Beirut, Lebanon

Corresponding author's e-mail: ihabelhajj@hotmail.com

Received: 23/02/2025
Accepted: 03/03/2025
Published: 16/04/2025

Conflicts of Interests: The Authors declare that there are no competing interests.
Patient Consent: Written informed consent was obtained from the patoent for this case report.
This article is licensed under a Commons Attribution Non-Commercial 4.0 License

How to cite this article: Attieh P, Karam K, Fiani E, El Hajj II. Giant rectal fecaloma treated with carbonated soft drink and argon plasma coagulation. *EJCRIM* 2025;**12**:doi:10.12890/2025_005280

ABSTRACT

Constipation is a common gastrointestinal disorder affecting approximately 15% of the population, with a higher prevalence in women and older adults. It can be classified as primary, including functional constipation, pelvic floor dysfunction, and slow transit, or secondary, resulting from neurological, endocrine, metabolic disorders, cancer, or medications. In individuals over 75, constipation ranks as the seventh most common condition in primary care. A severe complication, fecal impaction, occurs more frequently in older adults and accounts for 0.03% of emergency department visits, with the highest risk in those over 85. In Parkinson's disease, constipation is a significant nonmotor symptom affecting up to 63% of patients and may lead to complications such as intestinal obstruction and aspiration pneumonia.

We present the case of a 94-year-old male with Parkinson's disease who developed a 5 × 5 cm rectal fecaloma, unresponsive to standard endoscopic fragmentation techniques, including retrieval tools, high-pressure water jets, and polypectomy snares. Carbonated soft drink (Coca-Cola®) injection (500 ml) was used to soften the fecaloma, followed by off-label argon plasma coagulation (APC) (30–50W, 2 l/min), which successfully facilitated further fragmentation and near-total removal. This case highlights the potential role of Coca-Cola® and APC as adjunctive therapies in managing refractory fecalomas.

KEYWORDS

Rectum, constipation, fecaloma, carbonated soft drink, APC, proctitis

LEARNING POINTS

- Standard fecaloma fragmentation methods failed necessitating the injection of a carbonated soft drink (Coca-Cola®) into the lumen of the fecaloma and pouring its surface with it followed by the off-label use of argon plasma coagulation for full breakdown of the fecaloma.
- This highlights the importance of Coca-Cola® and argon plasma coagulation as adjunctive therapies in managing refractory fecalomas, with further studies needed to propose the mechanism by which these tools can trigger fecalomas breakdown.

EFIM
European Federation of Internal Medicine

Publisher
smc media srl

INTRODUCTION

Constipation, which affects about 15% of the population, is more common in women and older adults. It can be primary (functional, pelvic floor dysfunction, or slow transit) or secondary (due to neurological, endocrine, or metabolic disorders, cancer, or medications). Among individuals over 75, it is the seventh most common condition in primary care. Fecal impaction, a severe complication, occurs more frequently in older adults and accounts for 0.03% of emergency department (ED) visits, with the highest risk in those over 85. In Parkinson's disease, constipation is a significant nonmotor symptom, often preceding motor issues, and affects up to 63% of patients. It can lead to complications like intestinal obstruction and aspiration pneumonia. Fecalomas, a subtype of fecal impaction, are diagnosed via imaging and treated with enemas, laxatives, or digital disimpaction. Surgery is rarely required but may be necessary for refractory cases[1-3]. We report a 94-year-old male with Parkinson's disease presented with abdominal pain and 3 weeks of constipation. A computed tomography (CT) scan showed a 5 × 5 cm rectal fecaloma. Colonoscopy with CO_2 insufflation, retrieval tools, Coca-Cola® injection, and polypectomy snares failed to fully break it. Off-label argon plasma coagulation (APC) (30–50W, 2 l/min) successfully softened the fecaloma, allowing fragmentation and near-total removal via a Roth net. This case report highlights the importance of carbonated soft drinks (Coca-Cola®) in facilitating the fragmentation of fecaloma after failed standard fragmentation methods and sometimes followed by the use of APC for full breakdown of the fecaloma.

CASE PRESENTATION

A 94-year-old-male with Parkinson's disease presented to the ED with abdominal pain and constipation of 3-weeks duration. CT scan showed rectal wall thickening, and large 5 × 5 cm fecaloma with internal foci of air and peripheral calcifications in the rectum *(Fig. 1)*. We performed a colonoscopy using low insufflation pressure of CO_2. We tried high pressure water jet, rat tooth and alligator tooth retrieval forceps to break some of the surface. We inserted the injection needle within the lumen of the fecaloma and injected carbonated soft drink (Coca-Cola®), and then poured it on the fecaloma surface for a total volume of 500 ml *(Fig. 2)*. We then attempted fragmentation of the fecaloma with jumbo forceps then braided polypectomy snares. The surface of the fecaloma was slippery and hard. We used (off-label) argon plasma coagulation (APC) (power 30-50W, 2 l/min), which allowed breakdown of the fecaloma *(Fig. 3)*. We finally repeated the above steps allowing further fragmentation of the fecaloma into smaller pieces, retrieved by a Roth net until near total clearance of the rectum. The underlying rectal mucosa was hyperemic in keeping with stercoral proctitis *(Fig. 4)*.

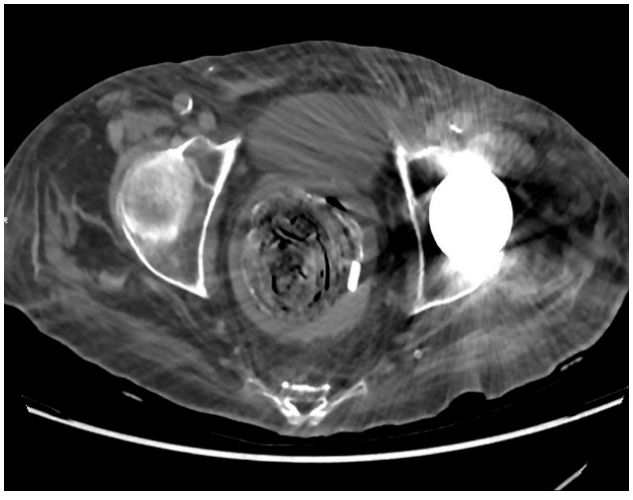


Figure 1. Computed tomography scan showing rectal wall thickening, and large 5 × 5 cm fecaloma (blue arrow) with internal foci of air and peripheral calcifications in the rectum.



Figure 2. Injection of carbonated soft drink (Coca-Cola®) within the lumen of the fecaloma, and pouring Coca-Cola® on the fecaloma surface for a total volume of 500 ml.

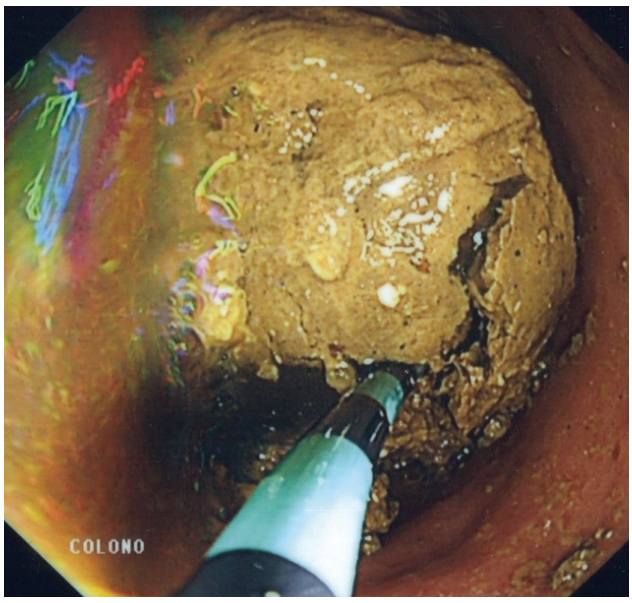


Figure 3. Breakdown of the fecaloma (blue arrows) with an off-label argon plasma coagulation (APC) (power 30-50W, 2 l/min).

DISCUSSION

Constipation is a widespread gastrointestinal disorder, particularly among older adults, characterized by infrequent bowel movements, difficulty passing stools, or a feeling of incomplete evacuation. It can be classified as primary, including functional constipation, pelvic floor dysfunction, and slow transit, or secondary, resulting from neurological, endocrine, metabolic disorders, cancer, or medication side effects[1]. It affects approximately 15% of the population, with higher prevalence in women and the elderly[4]. Among individuals aged 75 and older in primary care, constipation is the seventh most common condition. Recognizing its causes and effects is crucial for effective treatment, especially in patients with multiple health issues. Fecal impaction, defined as a large mass of compacted feces at any intestinal level that cannot be spontaneously evacuated, is a significant problem with notable morbidity potential. A recent study indicated that fecal impaction represented 0.03% of ED visits, with a higher incidence in older populations. The risk was particularly elevated among the oldest old (over 85 years), with a relative risk (RR) of 5.45, and those aged 65-84 years, with an RR of 2.95, compared to younger individuals[5].

Systematic evaluation for constipation should be conducted in ED patients with Parkinson's disease, as it is a significant and disabling nonmotor symptom of the condition. Constipation often develops before motor symptoms appear. In Parkinson's disease, the causes of constipation may include slowed colonic transit or dyssynergic defecation. Additionally, the use of antiparkinsonian, analgesic, and antidepressant medications, combined with dehydration (which is frequently due to dysphagia), can worsen the condition. The prevalence of constipation in patients with Parkinson's disease as in our case ranges from 20 to 63%, with a median of 50%. Intestinal obstruction is a common complication in these patients, often requiring ED admission and urgent colorectal surgery. Parkinson's disease patients tend to experience higher morbidity and mortality rates compared to the general population. Early diagnosis and treatment of occlusive symptoms are essential to prevent further complications, such as sigmoid volvulus, vomiting, and aspiration pneumonia, which can occur due to concurrent dysphagia[1,2,6].

Fecal impaction is considered a fecaloma when a smooth large mass that is not attached to the bowel wall in the distal colon and rectum is identified usually on plain X-rays, barium enema, or abdominal CT scan and digital rectal examination[3,7-9]. Fecalomas are usually easily treated with conservative management using enemas, laxatives, digital disimpaction, and endoscopic evacuation. Surgery is rarely needed to correct this condition but may be necessary in extreme cases refractory to conservative management[10].

The use of a carbonated soft drink (Coca-Cola®) by injecting it into the fecaloma or pouring it all over the fecaloma to facilitate its fragmentation and breakdown has been reported in 3 cases although the exact mechanism of this process not being well established yet. Lee et al. (2015)[7] reported a case of a 41-year-old woman with chronic constipation and incomplete evacuation for 3 months had a 4.7 cm hard fecal mass in the sigmoid colon. Standard fragmentation methods failed. Coca-Cola® was injected into the mass, softening it enough for partial removal. The patient expelled the remaining mass naturally. A follow-up colonoscopy showed no recurrence or complications[7]. Another case report by Ontanilla Clavijo et al. (2017)[8] describes a 58-year-old woman with hypertension and dyslipidemia who presented with 6 days of constipation, nausea, vomiting, and colicky abdominal pain. Blood tests showed leukocytosis, and imaging revealed a large fecal mass in the sigmoid colon with colonic dilation. Standard treatments, including enemas and lactulose, failed. Given prior success with Coca-Cola® for gastric phytobezoars, a colonoscopy was performed, injecting and washing the fecaloma with 500 ml of Coca-Cola®. The softened mass was fragmented and removed. A colonic ulcer from ischemic injury was noted. The patient's bowel transit normalized, and she was discharged without complications 24 hours post-procedure[8]. In a similar case reported by Kang et al. (2014)[9] a 40-year-old man experienced persistent right lower quadrant pain for 8 days. Colonoscopy revealed a hard fecaloma impacted in the cecal diverticulum, but initial removal attempts failed due to its size and slipperiness. Days later, he was admitted with worsening pain, and CT confirmed a 2.7 cm fecaloma with mild inflammation. Antibiotics provided minimal relief, so Coca-Cola® was injected into the fecaloma, successfully softening and removing it. The patient's pain resolved completely without complications[9].

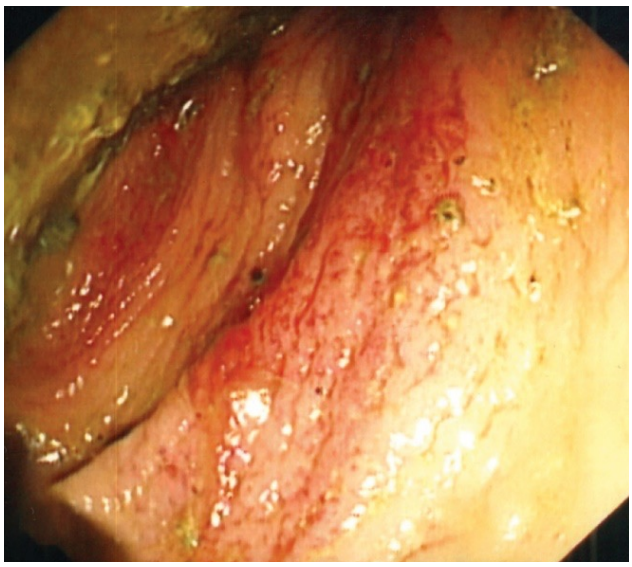


Figure 4. Hyperemic rectal mucosa post fecaloma fragmentation.

No literature is available on the role of APC in facilitating fecaloma fragmentation. This agent is a noncontact, high-frequency monopolar current therapy used primarily in therapeutic endoscopy for treating vascular gastrointestinal lesions like angiodysplasias and chronic radiation proctopathy. It has also been effective as an ablation therapy for nonvascular gastrointestinal lesions, including anal high-grade squamous intraepithelial lesions, which are linked to

human papilloma virus. In addition, it is used in dermatologic procedures for common warts, senile hemangiomas, actinic keratosis and anal condolymas[11].

To the best of our knowledge our case is the fourth reported case that describes colonic fecaloma fragmentation with use of a carbonated soft drink (Coca-Cola®) after failed standard fragmentation methods but in our case, use of Coca-Cola® was followed by off-label use of APC to facilitate the breakdown of the slippery and hard fecaloma.

CONCLUSION

This case highlights the importance of Coca-Cola® and APC as adjunctive therapies in managing refractory fecalomas. Further studies are needed to investigate the mechanism by which these tools can trigger fecaloma breakdown.

REFERENCES

1. Salvi F, Petrino R, Conroy SP, Liperoti R, Paoletti L, Beccacece A, et al. Constipation: a neglected condition in older emergency department patients. *Intern Emerg Med* 2024;**19**:1977–1986.
2. Leite Silva ABR, Gonçalves De Oliveira RW, Diógenes GP, De Castro Aguiar MF, Sallem CC, Lima MPP, et al. Premotor, nonmotor and motor symptoms of Parkinson's Disease: A new clinical state of the art. *Ageing Res Rev* 2023;**84**:101834.
3. Falconer R, Munro EN, Jamieson RW. Suprascapular artery pseudoaneurysm. *ANZ J Surg* 2019;**89**:425–426.
4. Barberio B, Judge C, Savarino EV, Ford AC. Global prevalence of functional constipation according to the Rome criteria: a systematic review and meta-analysis. *Lancet Gastroenterol Hepatol* 2021;**6**:638–648.
5. Corban C, Sommers T, Sengupta N, Jones M, Cheng V, Friedlander E, et al. Fecal Impaction in the Emergency Department: An Analysis of Frequency and Associated Charges in 2011. *J Clin Gastroenterol* 2016;**50**:572–577.
6. Stocchi F, Torti M. Constipation in Parkinson's Disease. Int Rev Neurobiol. Elsevier; 2017 [cited 2025 Feb 17]. p. 811–26. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0074774217300971
7. Lee JJ, Kim JW. Successful Removal of Hard Sigmoid Fecaloma Using Endoscopic Cola Injection. *Korean J Gastroenterol* 2015;**66**:46.
8. Ontanilla Clavijo G, León Montañés R, Sánchez Torrijos Y, López Ruiz T, Bozada García JM. Colonic obstruction secondary to sigmoid fecaloma endoscopically resolved with Coca-Cola®. *Rev Esp Enferm Dig* 2017;**109**:306–308.
9. Kang JH, Lim YJ. Can Fecaloma be Dissolved by Cola Injection in a Similar Way to Bezoars? *Intest Res* 2014;**12**:333.
10. Gidwaney NG, Bajpai M, Chokhavatia SS. Gastrointestinal Dysmotility in the Elderly. *J Clin Gastroenterol* 2016;**50**:819–827.
11. Albuquerque A. Argon Plasma Coagulation as Treatment for Anal Condylomas: A Narrative Review. *J Low Genit Tract Dis* 2024;**28**:198–201.