

CASE REPORT

Colonic obstruction secondary to sigmoid fecaloma endoscopically resolved with Coca-Cola®

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ABSTRACT

Background: Colonic obstruction is a relatively common condition in emergency care, with a mortality rate of up to 20%. In 90% of cases it results from colonic or rectal adenocarcinoma, volvulus, or stenosis secondary to diverticular disease. When fecal impaction is the underlying cause, the condition is usually managed conservatively, but may on occasion become complicated and even require surgical intervention. Based on the proven efficacy of Coca-Cola® to dissolve gastric phytobezoars, we report a case of colonic obstruction secondary to sigmoid fecaloma.

Case report: A 58 years old woman arrived at the Emergency Room (ER) with persistent constipation for the last six days. An abdominal CT scan showed a large fecal mass at the sigmoid colon with retrograde dilated colonic loops. Cleansing enemas and oral lactulose were administered, which failed to resolve the clinical presentation, so we then proceeded to inject Coca-Cola® within the fecaloma using a sclerosing needle, and then washed the fecaloma surface also with Coca-Cola®. After a few minutes we started to fragment the fecalith, the consistency of which had been notably decreased.

Discussion: The use of Coca-Cola® for gastric washes in the management of phytobezoars is well established. Since fecaliths are partly composed of these same substances than phytobezoars, the use of Coca-Cola® might well be warranted against them as in our patient, without surgery. Our case report is the second one published in the literature, in which Coca-Cola® helped solve colonic obstruction secondary to fecaloma.

Key words: Obstruction. Colon. Fecaloma. Coca-Cola®. Endoscopy.

INTRODUCTION

Colonic obstruction is a relatively common condition in emergency care, with a mortality rate of up to 20%. In 90% of cases it results from colonic or rectal adenocarcinoma, volvulus, or stenosis secondary to diverticular disease. When fecal impaction is the underlying cause, the condition is usually managed conservatively, but may on occasion become complicated and even require surgical

intervention. Few data are available regarding frequency, which partly results from the fact it had no code in the USA before 2010, which prevented it being recorded in emergency care databases. From an analysis of the National Emergency Department Sample (NEDS) data, it is estimated that 42,481 emergency visits (EVs) occurred in 2011 which resulted in a diagnosis with fecal impaction, with a ratio of 32 visits/100,000 EVs. This diagnosis was most common for ageing patients (> 85 years; 176.8/100,000 EVs, with a mean age of 63.6 years (63.1-64.1, 95% CI), with women slightly predominating (34.2 vs 30.2/100,000 EVs; RR 1.13; 95% CI, 1.11-1.15). The mean cost per related EV was USD 3,060.47, for an overall cost of USD 130 million in 2011. The clinical significance of the condition and its potentially related complications, together with its non-negligible frequency and resulting financial cost, make it necessary to explore novel conservative management techniques. Based on the proven efficacy of Coca-Cola® to dissolve gastric phytobezoars, we report a case of colonic obstruction secondary to sigmoid fecaloma that was resolved by endoscopic irrigation with Coca-Cola® followed by fragmentation.

CASE REPORT

A 58-year-old woman with a history of high blood pressure and dyslipidemia, who occasionally took clebopride/simethicone prescribed by her Primary Care doctor for meteorism, presented at the Emergency Room (ER) with persistent constipation for the last six days, associated with nausea and food vomiting within the last 24 hours. Starting on the third day with constipation, the patient also had diffuse, colicky abdominal pain. Upon arrival at the ER, urgent blood tests and standing abdominal x-rays were ordered. Blood tests found leukocytosis at $19,110 \times 10^9/l$ with predominant neutrophils (74.6%), and no other changes in blood cell counts, renal function, or ions. Abdominal x-rays

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revealed colonic air-fluid levels; this finding prompted an abdominal CT scan, which showed a large fecal mass at the sigmoid colon with retrograde dilated colonic loops.

The patient was then taken to the observation area, where cleansing enemas and oral lactulose were administered, which failed to resolve the clinical presentation. Attempts to facilitate fecal transit using glycerin enemas were unsuccessful. Following a joint assessment with surgery, an attempt at endoscopic fecalith removal was decided upon. Based on our experience with Coca-Cola® for the management of gastric phytobezoar, as well as the experience reported by other sites, we chose to personally purchase this drink and give it to our patient.

After carefully discussing potential risks with our patient, we performed a colonoscopy using low insufflation pressure to prevent complications, and found the fecaloma. We then proceeded to inject Coca-Cola® within the fecaloma using a sclerosing needle, and then washed the fecaloma surface also with Coca-Cola® with a total volume 500 ml (Figs. 1 and 2). After a few minutes we started to fragment the fecalith, the consistency of which had been notably decreased by the Coca-Cola®, using a polypectomy snare. Following fecalith removal and cleansing, a dilated colonic loop with hyperemic mucosa and a large fibrin-covered ulcer was seen, reflecting ischemic injury on the colonic wall (Fig. 3). Following fecal disimpaction the patient's bowel transit returned to normal, and she was discharged with no complications at 24 hours after the endoscopic procedure.

DISCUSSION

The use of Coca-Cola® for gastric washes in the management of phytobezoars is well established, with a 90% dissolution rate either alone or in combination with sub-



Fig. 2. Washing of the fecaloma surface with Coca-Cola®.

sequent endoscopic fragmentation (4). Phytobezoar composition, including cellulose, lignin, and tannins from fruit and vegetables, is particularly responsive to Coca-Cola®. Although poorly understood, the dissolving power of this drink is mediated by its acidity (5) and the mucolytic effect of NaHCO_3 , as enhanced by CO_2 bubbles (6). Since fecaliths are partly composed of these same substances, the use of Coca-Cola® might well be warranted against them. The management of fecal impaction responsible for intestinal obstruction is usually based on conservative measures. Digital fragmentation of rectal fecalomas, followed by enemas and then oral laxatives, allows most cases to be resolved. However, when such measures fail, surgery may be needed, given the potential complications (ulceration,



Fig. 1. Coca-Cola® injection using a needle.

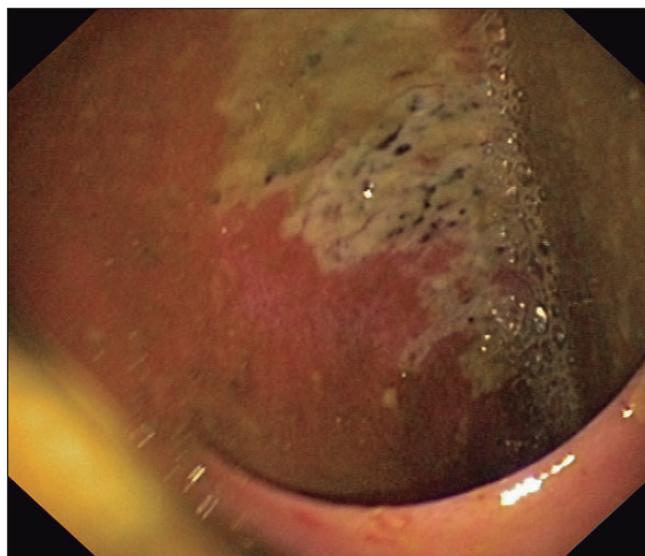


Fig. 3. Large colonic mucosal ulcer secondary to fecaloma.

bleeding, colon perforation) that may arise and their high death rates. A prior step to surgery is using endoscopy to break up the fecaloma with a polypectomy snare (7). In our case, injecting Coca-Cola® into and pouring Coca-Cola® all over the fecaloma eased endoscopic fragmentation and facilitated remission, thus avoiding a mandatory surgical procedure not exempt from serious complications. Our case and the case recently reported by Lee JJ and Kim JW (8) represent the first two reports where Coca-Cola® helped solve colonic obstruction secondary to fecaloma, and might well prompt further studies in order to research the mechanism of action and confirm our findings.

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