LETTERS TO THE EDITOR

Effective “Coca-Cola” Therapy for Phytobezoars

Mitsunobu Matsushita, Toshiro Fukui, Kazushige Uchida, Akiyoshi Nishio and Kazuichi Okazaki

(Inter Med 47: 1161, 2008)
(DOI: 10.2169/internalmedicine.47.1149)

To the Editor We read with interest the article by Beppu et al (1) on a patient with large phytobezoars. The patient complained of severe epigastralgia and incidences of vomiting, and a hard mass was palpable in the abdomen. After computed tomography showed two large gastric masses with honeycomb configuration, endoscopy confirmed bezoars with ulceration. The large bezoars were removed surgically, and were diagnosed as phytobezoars based on componential analysis. We believe that a non-surgical alternative may be effective for the treatment of phytobezoars.

Phytobezoars are persistent concretions or hard masses composed of plant and vegetable fibers (2, 3), which occur in patients with impaired gastric motility and low gastric acid secretion, such as diabetes, gastroparesis, outlet obstruction, or previous gastric surgery (2, 4, 5). Although phytobezoars are usually asymptomatic, some patients complain of vague and nonspecific symptoms (2, 5). Treatment options include enzymatic dissolution, endoscopic fragmentation, and surgery (2, 3). Endoscopic intervention with various accessories are effective in most patients with phytobezoars, but require a procedure of long duration and multiple sessions for complete removal (5). Moreover, the equipment required is not always available in most hospitals, and intestinal obstruction by fragmented bezoars sometimes occurs (4).

Nasogastric “Coca-Cola” lavage has been described to be effective for the dissolution of large phytobezoars (2, 4). “Coca-Cola Light”, a sugar-free product available for diabetics, is infused through a nasogastric tube, resulting in complete dissolution of phytobezoars. This simple therapy can be performed at bedside without endoscopy, and is well tolerated by the patients. Complete dissolution can be achieved in one session without complications. Endoscopic direct infusion of “Coca-Cola” into phytobezoars also is rapidly effective and safe (5). Regular drinking of “Coca-Cola” can dissolve phytobezoars after unsuccessful endoscopic fragmentation, and is recommended for the maintenance therapy (2, 5).

The mechanism of “Coca-Cola” to dissolve phytobezoars is considered to be the combined action of NaHCO3 and CO2 contained in “Coca-Cola” (2-4). NaHCO3 has a mucolytic effect, and the CO2 bubbles which penetrate the surface of bezoars digest the fibers of concretions. Acid is also important to digest fibers, and the acidity of “Coca-Cola” (pH 2.6) is close to that of normal gastric secretion (2, 5). Although Beppu et al (1) removed large phytobezoars surgically, we believe that the dissolution of large phytobezoars with “Coca-Cola” is a simple, effective, safe, inexpensive, and worldwide available method, and does not require special equipment or endoscopic skills. “Coca-Cola” therapy for phytobezoars should be considered before endoscopic fragmentation or surgery.

References