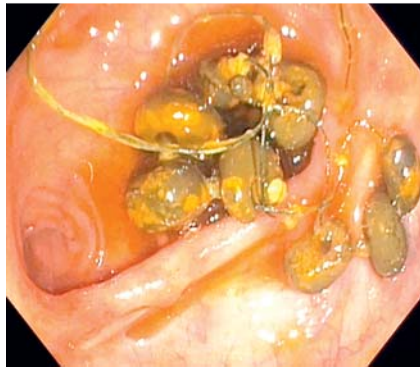


## Calcium oxalate stones in a colonic surgical suture: an uncommon endoscopic finding

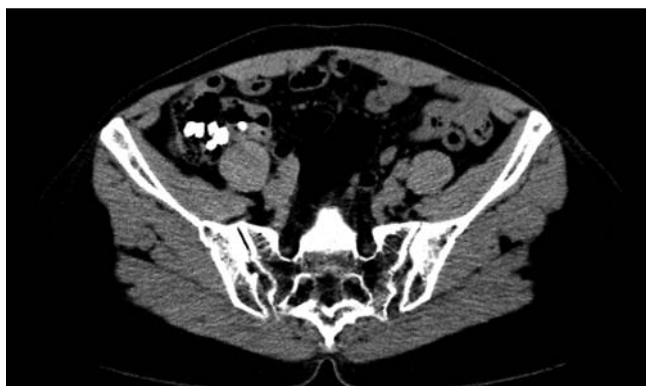
A 59-year old Brazilian woman had undergone ileocolonic resection in 2004 while in Brazil. She now presented to our department with abdominal pain and the passage of liquid stools (more than five



**Fig. 1** Endoscopic image showing the Prolene suture with multiple "rosary beads" at the ileocolonic anastomosis.



**Fig. 2** Removal with a foreign-body forceps was not possible because the Prolene suture penetrated the colonic wall.



**Fig. 3** Abdominal computed tomographic scan showing the exclusively intracolonic location of the beads.

daily). Her symptoms had begun 4 months earlier. She had no nausea, vomiting, or fever. The patient could not clarify the indication for her previous surgery and denied the long-term use of medications or a family history of colorectal cancer. The physical examination findings were unremarkable except for abdominal discomfort at the right iliac fossa.

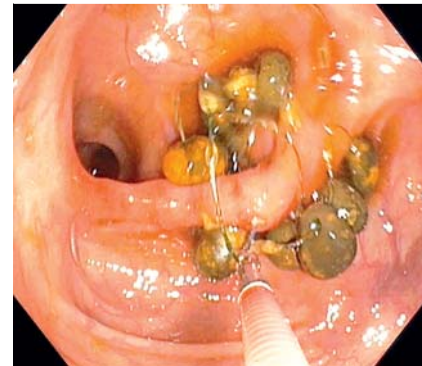
Colonoscopy showed, at the ileocolonic anastomosis, a surgical Prolene suture that threaded through several hard spherical structures, similar in appearance to rosary beads (Fig. 1, Fig. 2). To evaluate the nature and location of the structures and the possibility of endoscopic removal, abdominal computed tomography was performed, which confirmed a colonic endoluminal location (Fig. 3).

The suture was cut with endoscopic scissors (FS-3L-1; Olympus, Tokyo, Japan) at both entry points in the colonic wall (Fig. 4, Fig. 5), and the foreign body was removed with a grasping forceps (Fig. 6, Video 1). Biochemical analysis revealed that the beads were calcium oxalate stones.

Prolene sutures are synthetic, nonabsorbable fiber sutures with a very smooth surface. The fibers are biologically inert and less likely than natural fibers to cause an inflammatory response [1]. Oxalate is an organic acid present in the human body and is usually found in foods. It is absorbed in the small intestine with bile acids. When calcium is taken with foods that are high in oxalates, it binds to the oxalate in the small intestine to form a compound that is not absorbed into the bloodstream and is eliminated in the stools [2]. In our patient, calcium oxalate crystals in the

stool possibly adhered to the surgical suture, creating a nidus for subsequent stone growth [3].

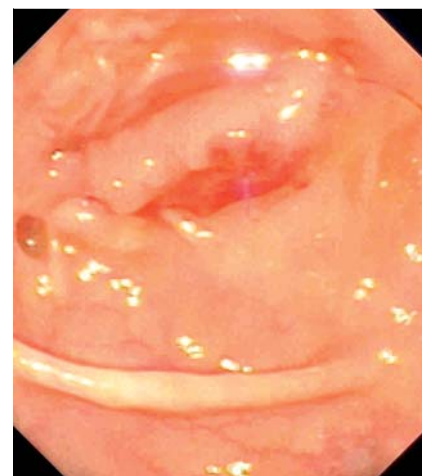
To the best of our knowledge, this is the first case report of a foreign body reaction to a Prolene suture, with the formation of multiple calcium oxalate stones.



**Fig. 4** Endoscopic image showing the Prolene suture being cut with endoscopic scissors.

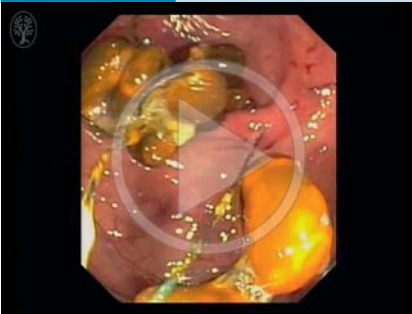


**Fig. 5** Endoscopic image showing the Prolene suture, now cut at one entry point in the colonic wall.



**Fig. 6** Endoscopic appearance of the ileocolonic anastomosis after removal of the cut Prolene suture and "rosary beads."

## Video 1



Use of an endoscopic scissors to cut a Prolene suture penetrating the colonic wall and associated with multiple calcium oxalate stones ("rosary beads"); endoscopic removal with a foreign body forceps.

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Competing interests: None

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