

Cartas al Director

Simultaneous failure of Pillcam Colon™ and Pillcam SB™

Palabras clave: Cápsula endoscópica. Cápsula colonoscópica. Fallos técnicos.

Key words: Capsule endoscopy. Capsule colonoscopy. Technical failures.

Dear Editor,

Since its introduction, in 2000 (1), capsule endoscopy modified completely our approach to small bowel diseases (2). In the last years, the capsule endoscope has evolved, and new frontiers are now open for remote endoscopy. A colon capsule became recently available and prospective studies are on the way to compare it with standard colonoscopy (3). Technical failures occur with all manufactured equipments, including the capsule device, but almost simultaneous failures of two different capsules must be very rare.

Clinical case

A 36-year-old woman was hospitalized because of chronic abdominal pain and diarrhea. She presented multiple similar episodes in the last six years and a history of surgery because of perianal fistula. No laboratory or radiologic abnormalities were detected. Rectosigmoidoscopy revealed a rectal ulcer. Given the strong possibility of Crohn's disease, with no suspicion of intestinal stenosis, there was an indication to endoscopic study of colon and small bowel. For that purpose and with the patient's written informed consent, a PillCam Colon™ in full active mode, after the delay period, was used. Unfortunately, shortly after ingestion, the capsule stopped transmitting images. Capsule failure was con-

firmed with real-time Rapid View™. No more colon capsules were available so, after changing all electrodes and data recorder, a PillCam SB₂™ was given to the patient. SB₂ capsule reached the cecum but there were numerous gaps in recording and no images of distal ileum were obtained. The next morning, a retrograde double-balloon enteroscopy was performed and no significant lesions were detected in the colon and distal ileum. Both devices were found together at sigmoid colon (Fig. 1) with Colon™ (Fig. 2) and SB₂™ (Fig. 3) capsules easily recognizable.



Fig. 1. SB₂™ and Colon™ capsules together in sigmoid colon.

Discussion

Capsule endoscopy was one major breakthrough for all gastroenterologists since it revolutionized our approach to small bowel pathologies (1,2). As with all endoscopic methods, it has complications, limitations and failures. Technical problems, defined as equipment malfunctions, occurred almost exclusively in the early experience with capsule endoscopy and generally not prevented/hampered capsule diagnostic capabilities (4). Gaps in recording were the most frequent but rarely clinically

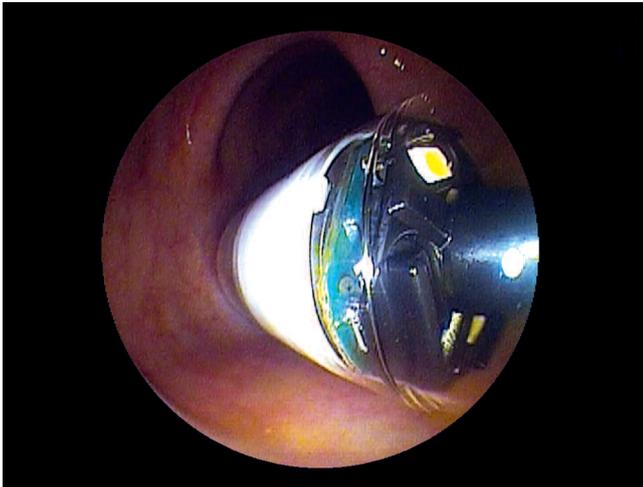


Fig. 2. A image of Colon™ capsule that was the first to fail.

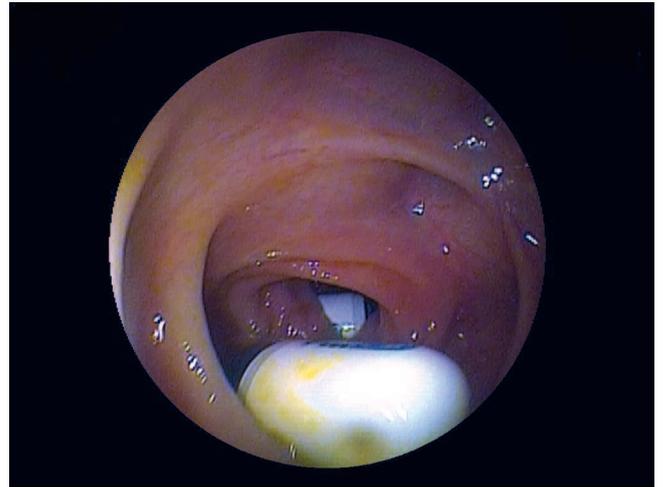


Fig. 3. A image of SB2™ capsule that had multiple failures in recording with no distal ileum images.

significant. Equipment replacement would be sufficient to resolve most of these problems but this was not enough in our case. Since the capsule has a magnetic switch (5), a magnetic field might interfere with its function and activation and could explain the failure of both capsules. However, in the patient room there were no electromagnetic devices capable of interfering with the capsules. Therefore, we found no plausible explanation for this case of simultaneous failure of two different capsule models and some speculative theories such as “human magnetism” are allowed.

N. Almeida, P. Figueiredo, P. Freire, S. Lopes, F. Portela, M. Ferreira, Hermano Gouveia and M. Correia Leitão

*Gastroenterology Department. Coimbra University Hospital.
Coimbra, Portugal*

References

1. Iddan G, Meron G, Glukhovskiy A, Swain P. Wireless capsule endoscopy. *Nature* 2000; 405: 417.
2. Rondonotti E, Villa F, Mulder CJ, Jacobs MA, de Franchis R. Small bowel capsule endoscopy in 2007: indications, risks and limitations. *World J Gastroenterol* 2007; 13: 6140-9.
3. Fireman Z, Kopelman Y. The colon – the latest terrain for capsule endoscopy. *Dig Liv Dis* 2007; 39: 895-9.
4. Rondonotti E, Herreras JM, Pennazio M, Caunedo A, Mascarenhas-Saraiva M, de Franchis R. Complications, limitations, and failures of capsule endoscopy: a review of 733 cases. *Gastrointest Endosc* 2005; 62: 712-6.
5. Gerber J, Bergwerk A, Fleischer D. A capsule endoscopy guide for the practicing clinician: technology and troubleshooting. *Gastrointest Endosc* 2007; 66: 1188-94.