Retrieval of dislodged AmplifEYE using balloon dilator during colonoscopy

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Abstract

AmplifEYE can increase the detection rate of adenomatous polyps and stabilize the mucosa for easy biopsy and polypectomy. But it can also become a foreign body when it is dislodged during the procedure. We report a case of dislodged AmplifEYE during colonoscopy that was successfully retrieved using a balloon dilator.

Key words: colonoscopy, AmplifEYE, foreign-body retrieval, balloon dilator

Introduction

The AmplifEYE (Medivators Inc., Minneapolis, MN) is a product to increase the rate of adenomatous polyp detection. It has flexible arms that can separate folds and gently stretch the mucosa to provide a clear view of the lumen, bringing polyps, including those behind the folds, into view. A dislodged AmplifEYE as a foreign body within the colon may be passed automatically with a bowel movement. But it may also raise speculation and cause complications as a retained medical device.

Case presentation

A 54-year-old female patient was referred by a primary care physician for colonoscopy. She had chronic diarrhea and was found to have positive occult blood in stools. She also had a family history of colon polyps. Colonoscopy was performed under sedation with monitored anesthesia care. The AmplifEYE was placed over the tip of the scope before the procedure. The insertion was smooth. Withdrawal of the scope was also otherwise uneventful, but the AmplifEYE dislodged within the sigmoid colon. The site was at 25 cm marked by the scope. Retrieval was attempted with different approaches. Biopsy forceps were tried, which were able to hold the edge at the back of the AmplifEYE, but fell off immediately when pulled. The strength of the forceps was not able to overcome the resistance from the colon mucosa. We then attempted to flip the AmplifEYE to let the detection arms face downward for easy grab by the forceps. Different spots on the arms were tried by the forceps, but again it fell immediately when pulled (Figure 1). Attempts to hold the body by snares also failed. The arm was able to be held by the snare but, because of its tapering by design, it slipped off easily. When held tighter on the snare, it only cut through and amputated the arm. A basket was our next plan, but we did not have the appropriate size. Finally, a 20-mm esophageal balloon dilator was introduced within a gastroscope. It was passed through the lumen of the AmplifEYE and was inflated to hold the AmplifEYE towards the scope. They were then successfully removed as a unit (Figure 2).

Discussion

There are no data at the present time in the literature specific to the AmplifEYE, but a similar product, the Endocuff (ARC Medical, England), has been reported to increase the polyp detection rate by 14%, increase the number of polyps detected by
63% per patient and increase the number of adenoma detection by 86% per patient in a randomized prospective trial of 498 patients [1].

The AmplifEYE is supplied in two sizes. The small size fits a scope diameter of 11.0–12.5 mm and the large size fits a scope diameter of 12.5–13.8 mm. It is very important to use the appropriate size for different scopes. We realized after it had dislodged that a large AmplifEYE had been placed over a pediatric scope.

The manifestation of a gastrointestinal foreign body varies with the type of object and location, as well as the management. The spontaneous pass rate of AmplifEYE is not known, but approximately one-third of patients with gastrointestinal foreign bodies need surgical or endoscopic procedures in a report of 7480 pediatric patients [2]. In a review of 93 cases of colorectal foreign bodies, bedside extraction was successful in 74%. In the rest of the group, 55% of patients presenting with a foreign body in the sigmoid colon required operative intervention vs 24% of patients with objects in their rectum [3]. Since this patient had a relatively narrow sigmoid colon, we decide to retrieve it to avoid speculation and the potential complication of a retained medical device.

Retrieval of a dislodged AmplifEYE follows the general principles of foreign-body removal under endoscopy. We believe that the endoscopic basket is a good tool but, because of its shape, resistance by the mucosa during removal is to be expected. We recommend using a balloon dilator that aligns and holds the balloon, the AmplifEYE and the scope together, and they can be removed smoothly as a unit.

Conflict of interest statement: none declared.

References

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