

中文題目：膠囊內視鏡滯留於結腸憩室並覆蓋活動性出血

英文題目：Retained capsule endoscopy in a colon diverticulum and hidden active bleeding site

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### **Background:**

Video capsule endoscopy (VCE) has been widely accepted as a diagnostic option for obscure gastrointestinal tract (GI) bleeding. Usually, the capsule is passed in stool within 24 to 48 hours. However, capsule retention, which is defined as retained capsule in the digestive tract for more than 2 weeks, is known as a potential complication of VCE, especially in patient with bowel stricture or diverticulosis. We reported a case of retained capsule in a deep colon diverticulum with a hidden bleeding spot beneath the capsule. The purpose of the report is to share a rare case with a bleeding point covered by a retained capsule and to remind physicians the increased risk of capsule retention in colon diverticulosis.

### **Case Presentation:**

A 97-year-old man presented to the emergency department with a 3-day history of hematochezia. Physical examination showed only pallor and abdominal examination was normal. Laboratory investigations revealed the hemoglobin level of 7.4 g/dL. Esophagogastroduodenoscopy (EGD) revealed reflux esophagitis, Los Angeles grade A. Colonoscopy disclosed blood stained mucosa and multiple various size of diverticula from ascending colon to rectosigmoid colon. No active bleeding was detected. Small intestinal bleeding was then suspected. He was treated conservatively with intravenous fluids and bowel rest but passage of bloody stool and declined hemoglobin levels were still found. Technetium-99m-labeled red blood cell scan revealed active bleeding probably from ileum. To confirm the diagnosis of obscure small intestinal bleeding, the patient received video capsule endoscopy. Unfortunately, the capsule was not excreted with feces even after two weeks. Abdominal plain film showed a radiopaque lesion at the right side of abdomen (Figure 1). Computed tomography of the abdomen confirmed retention of the capsule in the ascending colon (Figure 2). Enteroscopy was then performed and several small angiodysplasia were found in small intestine, which were treated with heat probe coagulation. The retained capsule was finally discovered in a deep diverticulum of ascending colon (Figure 3A and 3B). An active oozing spot was detected just beneath the capsule (Figure 3C). The capsule was removed and heat probe was applied for stopping bleeding (Figure 3D). The patient's bloody stool gradually improved, and he was discharged. Follow-up hemoglobin level one month later returned from 7.1g/dL to 10.4 g/dL.

### **Discussion:**

VCE has emerged as a noninvasive methodology to examine obscure small intestinal bleeding. The most concerned complication of VCE is capsule retention (CR) in the digestive tract, which is usually asymptomatic but might cause symptomatic intestinal obstruction or even perforation. The risk factors of CR include inflammatory bowel disease, malignant lesions and motility disorders (1). The CR rate varies widely in the literature from 0 to 21% with small bowel to be the most common site of CR (2). The rate of CR in colon was not well established. One single-center study reported 2 of the 25 cases with CR in colon, both were caused by colonic stricture (2). Though diverticulosis is not a contraindication for VCE (3), retained capsule endoscopy in esophageal and small bowel diverticula have been reported (4-7). This indicates that diverticular disease does associate with an increased risk of CR. In our case, the capsule endoscopy was retained in a colon diverticulum and this has not been reported before. Interestingly, the site of bleeding was just beneath the capsule. Management of CR includes endoscopic and surgical capsule retrieval. Fortunately, the site of CR was colon in this case, which is easy to approach with endoscopy. Clinical physicians should be aware of the risk of CR in patients with colon diverticulosis.



Figure.1



Figure.2

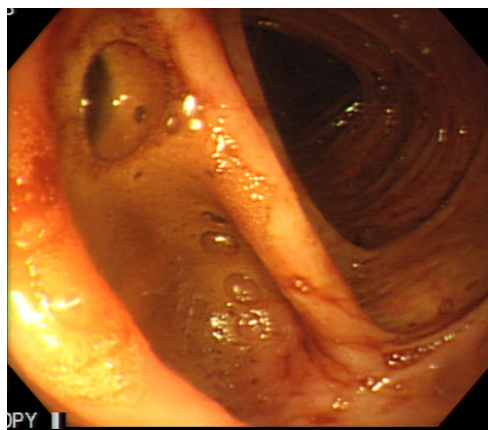


Figure.3A

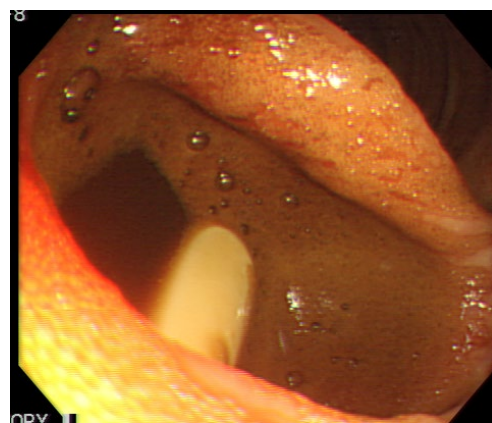


Figure.3B

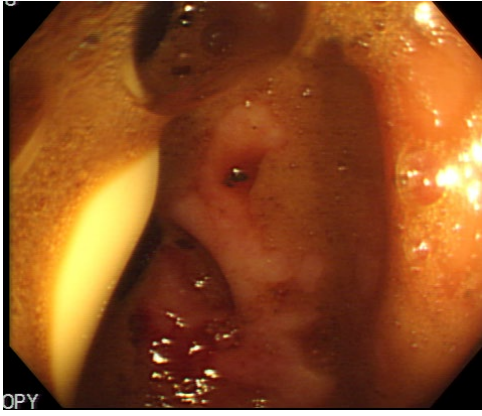


Figure.3C

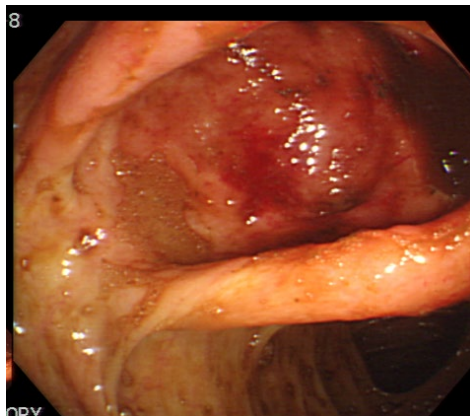


Figure.3D

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