中文題目：內視鏡診斷無症狀早期盲腸炎

英文題目：Endoscopic Diagnosis of Early Acute Appendicitis in an Asymptomatic Patient

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Introduction: Acute appendicitis is the most common abdominal emergency. Despite recent advances in radiologic imaging, the diagnosis of early-stage acute appendicitis may be difficult. Colonoscopic diagnosis of early acute appendicitis is exceedingly rare.

Case Presentation: A 62-year-old man with medical history of (1) morbid obesity status post R-Y gastric bypass in June 2010 (2) gastroesophageal reflux disease (3) chronic obstructive pulmonary disease with 30 years smoking history (4) cardiac arrest 11 years ago, status post pacemaker placement and under warfarin, concor, rytmonorm control. (5) left bimalleolar fracture status post compressive plate and screw fixation for fracture of left distal fibula in Jan. 2018.

Due to postprandial diarrhea, general malaise, blood-tinged stool for one to two weeks, the patient went to our Gastroenterology clinic. He denied symptoms of fever, abdominal pain, nausea, vomiting. On initial evaluation, his vital signs were within normal limits, and his abdominal examination was soft, nontender, normal active bowel sound and without signs of peritonitis. A complete blood count and basic biochemical tests were unremarkable. Colonoscopy revealed swollen of appendiceal aperture and a moderate amount of fecalith and purulent discharge from the appendiceal orifice. (**Figure 1**) Further abdominal computed tomography showed swelling of appendix with perifocal fatty stranding, favor acute appendicitis (**Figure2**). He was then admitted for a laparoscopic appendectomy where her appendix and adjacent tissues appeared mildly hyperemic. (**Figure3**) The appendix was evaluated by an experienced pathologist. Grossly, the external surface of appendix is congested, with pus coating on the serosa. On section, the lumen is filled up with fecal and purulent material. No perforation is found. Microscopically, it shows a picture of acute appendicitis with marked transmural acute inflammation of appendix and peri-appendiceal fat. (**Figure4**).

Discussion:

Acute appendicitis is one of the most common abdominal surgical emergency world-wide. The lifetime risk of acute appendicitis in male and female are 8.6 percent and 6.9 percent respectively[1]. In Taiwan, the overall incidence of appendicitis was 107.76 per 100,000 per year, and those who need surgical intervention was 101.58 per 100,000 per year. Unfortunately, the perforated rate was up to 25.24%.[2]. Even through advances and accessibility of medical care, it still has significant morbidity (10 %) and mortality (1–5 %)[3]. Although advances in imaging modalities, diagnosis of acute appendicitis still has false-negative rate[4]. Endoscopy is not the standard for diagnosis and treatment of appendicitis, but there are few reported cases of silent appendicitis diagnosed at the time of colonoscopy. From-care reports in recent 2 years, we found purulent discharge[5], bulging, erythematous, edematous[6] of appendiceal orifice were rare endoscopic finding but related to appendicitis. Early diagnosis may reduce complication rate and mortality. Thus we perform colonoscopy when insert to cecum, we need to take notice of the appendiceal orifice. Recently, endoscopic retrograde appendicitis therapy (ERAT) is a novel treatment under study for management of acute uncomplicated appendicitis and is as an alternative to laparoscopic appendectomy[7]. We believe endoscopic management will play an increasing important role in acute appendicitis in the future.

Conclusion: When we perform colonoscopy and insert to cecum, we need to take notice of the appendiceal orifice. Early detection of appendicitis can improve clinical outcomes. Highly skilled endoscopic technique may take a critical role in appendicitis management.

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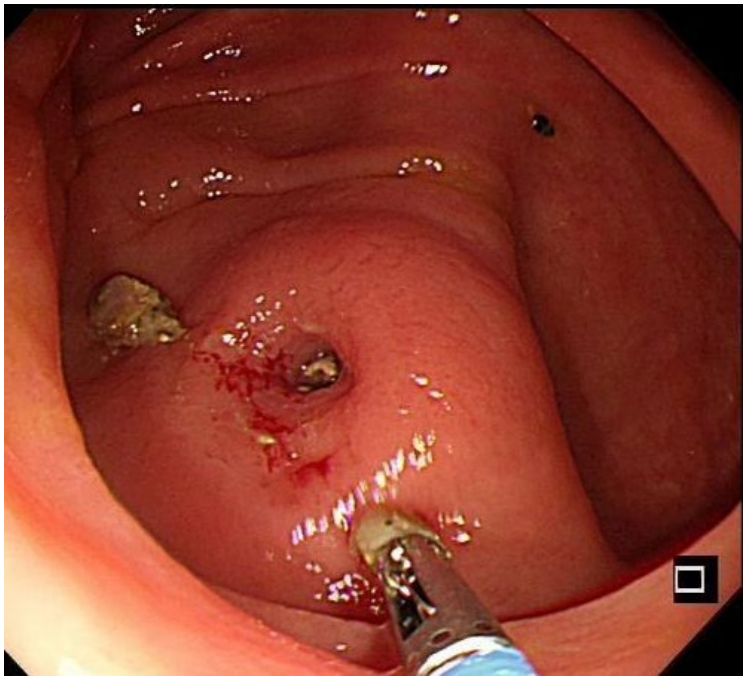

Figure 1: Swollen of appendiceal aperture was noted with fecalith and pus, status post removal by forceps

Figure 2: computed tomography scan showed swelling of appendix with perifocal fatty stranding, favor acute appendicitis

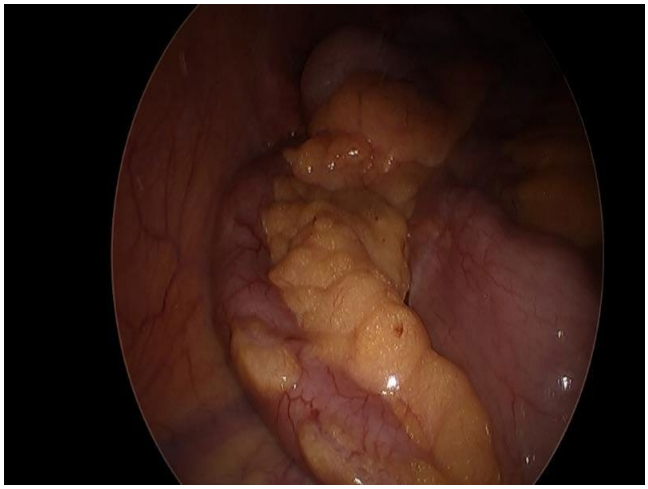

Figure 3: Under laparoscopic view, appendix hyperemic change with fecolith impaction was noted.

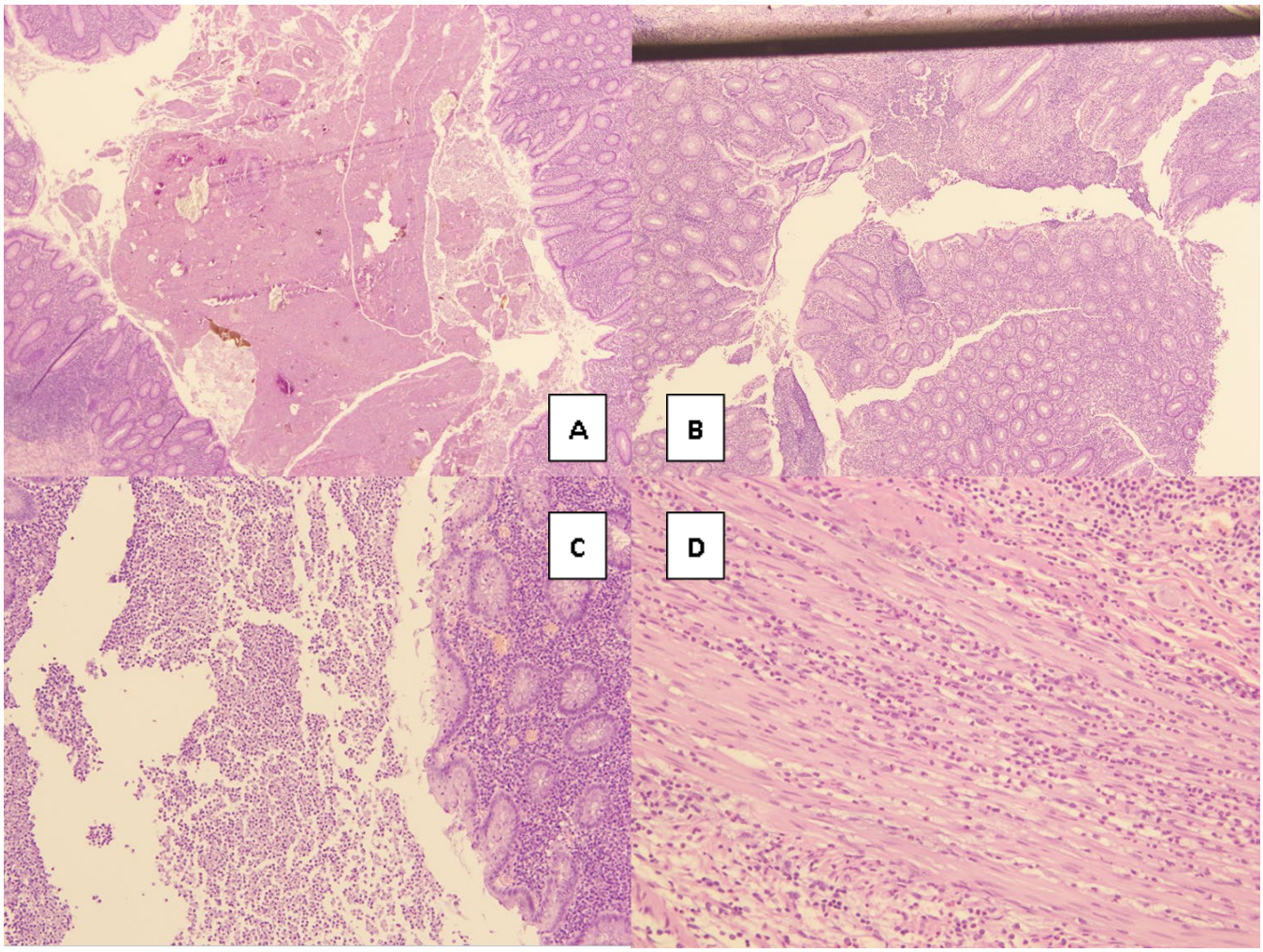

Figure 4 (H&E stain, A: 40X, B: 100X, C:200X, D:400X) Microscopically, it shows a picture of acute appendicitis with marked transmural acute inflammation of appendix and peri-appendiceal fat.