

Colon

Case 1

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.



A 58-year-old woman with underlying cancer of the descending colon (T3N0M0) stage II previously had undergone left half hemicolectomy and chemotherapy for 3 years; underwent periodic colonoscopy for colon cancer surveillance. This is the finding in the ascending colon.



Colonoscopy revealed a 1.5 cm. **carpet like sessile polyp located behind the semilunar fold** of the ascending colon (some of the views are shown with intelligent enhancement system station 4, Fujinon, Saitama, Japan). Diluted epinephrine was injected posteriorly to the fold and this brought the polyp to be enfaced to the endoscopic view. Then polyp was removed en-bloc by endoscopic mucosal resection (EMR) technique with a snare polypectomy. The muscularis propia was visualized as shown, and then 2 hemoclips were finally applied to close the defect.

Discussion:

The location and shape of polyp have significant impact on the success of endoscopic polypectomy¹. Flat lesions are considerably the most difficult lesions to be completely removed and right-sided colon is associated with a higher risk of perforation due to its thin wall. In addition, the polyp that located behind the fold is one of the most difficult polyps to tackle. Variety of methods, including hot biopsy, cold biopsy, snaring are introduced to remove these polyps. Endoscopic mucosal resection (EMR) techniques can be applied successfully to remove the large sessile and flat colorectal lesions². Enbloc removal of the polyps is one of the desirable goals as it is associated with a lower recurrence rate when compared to the piecemeal technique and aid to an evaluation of a complete resection. However, en-bloc EMR technique has some limitations. When the size of the polyp is larger than 1.5-2.0 cm. these all at once

removals may not be possible². The current EMR techniques³ are following: submucosal injection; strip biopsy EMR; cap-assisted EMR or suck-and-ligate techniques. Submucosal injection technique is widely used in the removal of the large sessile polyp because it is safer and easier¹. To create a fluid cushion, normal saline with epinephrine, 50% glucose, a mixture of 10% glycerol and 5% fructose and hyaluronic acid have been used³. Another important technique for injection is to start injection posteriorly to the polyp since this will bring the polyp to become enfacing the endoscopic view.

Submucosal injection can also predict malignant lesion. If the lesion is not elevated after fluid injection, there is a possibility of locally submucosal infiltration by cancer¹. We call this situation as “non-lifting sign”. The sensitivity and specificity of this sign are 100% and 99% respectively (without a previous history of polypectomy)³.

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Case 2

Sunthorn Treesaranuwattana, MD.

Naruemon Klaikeaw, MD.

Rungsun Rerknimitr, MD.

An 82-year-old man known case of diabetes mellitus, hypertension and dyslipidemia developed colicky abdominal pain followed by five episodes of hematochezia about 16 hours before admission. A physical examinations including abdominal examination were unremarkable. His hematocrit dropped from 42% to 33%. His white blood cell count was 13,870/mm.³ with predominant of polymorphonuclear cell (92%). A colonoscopy revealed bluish mucosa with significant congestion (white arrow) in the sigmoid colon. The transverse colon and other proximal area appeared unremarkable. Multiple biopsies were done. Histology demonstrated focal hemorrhagic necrotic colitis with pseudo-membranous formation (green arrow). The diagnosis was **ischemic colitis of the sigmoid colon**.



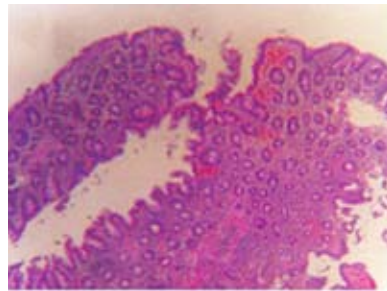


Fig.1

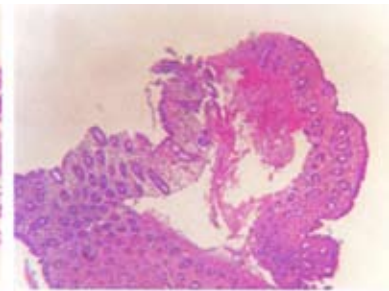


Fig.2

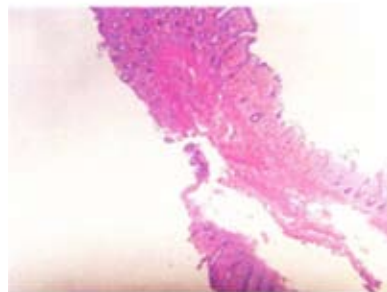


Fig.3

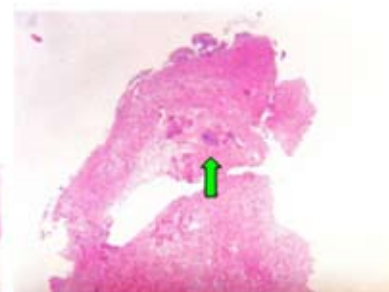


Fig.4

Discussion:

The risk of ischemic colitis is high in patient with arteriosclerotic disease¹. Ischemic colitis is characterized by a demarcation zone of colonic infarction. The affected mucosa usually appears in bluish color with necrosis surface². Histology sometimes is required to confirm the diagnosis. Pseudo-membrane represents necrotic mucosa and this is usually surrounded by acute inflammatory cells and ulcers³.

References

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Case 3

Sunthorn Treesaranuwattana, MD.

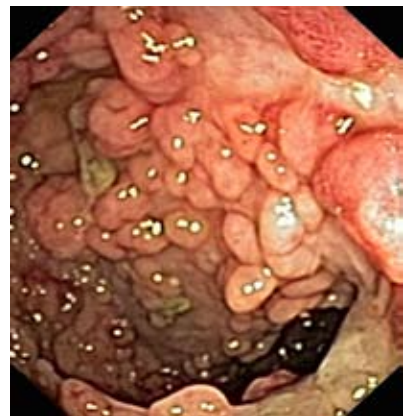
Taweesak Deekajorn, MD.

Naruemon Klaikeaw, MD.

Rungsun Rerknimitr, MD.

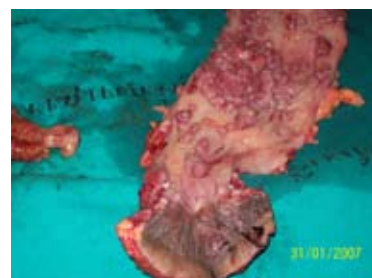
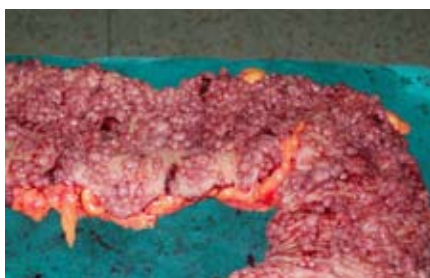
A 42-year-old man had had chronic mucous diarrhea for 6 months and over the last month his stool became mucous bloody. Colonoscopy showed a carpet of polyps through the colon that compatible with *polyposis coli*. There was an ulcerative mass in the transverse colon (green arrow). Duodenoscopy showed an

enlargement of ampulla of Vater. Total colectomy was performed. Histology confirmed the diagnosis of multiple polyposis coli with malignant transformation. Later patient underwent an endoscopic ampullectomy and the histology of the ampulla was compatible with adenoma without adenocarcinoma progression.

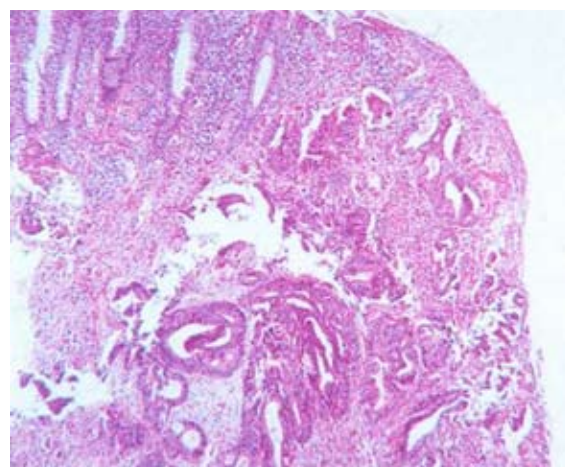




Colonoscopic findings



Surgical colectomy specimen



Duodenoscopic finding

Diagnosis:

Familial polyposis coli with malignant transformation and ampullary adenoma of duodenum.

Discussion:

Colorectal cancer occurs in the familial cancer syndromes in about 3%. One of the major genetic syndromes is familial adenomatous polyposis (FAP). All FAP patients increase risk for duodenal cancer whereas colorectal cancer is largely prevented by prophylactic colectomy. Duodenal cancer has been observed in about 5% of FAP patients¹. Therefore, duodenoscopic surveillance for possible ampullectomy is warranted. Recently, it has been reported that, a

high resolution endoscopy with chromoendoscopy has raised the sensitivity for adenoma detection during surveillance endoscopy².

References

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Case 4

Sunthorn Treesaranuwattana, MD.

Rungsun Rerknimitr, MD.

A 52-year-old man developed four episodes of hematochezia one day before he came to the hospital. He had no significant co-morbidity. Physical examination demonstrated a normal blood pressure level without evidence of orthostasis. Colonoscopy showed a large dark-red adherent clot on normal rectal mucosa without an ulcer just above the dentate line. The diagnosis of **Dieulafoy's lesion of the rectum** was entertained. Later, band ligation was deployed to control the bleeding. Patient reported no further bleeding since.





Discussion:

Dieulafoy's lesions have been reported to locate mainly in the upper GI tract and the world literatures have reviewed only less than 30 cases of rectal Dieulafoy lesion¹⁻³. Traditionally, surgical resection of the specimen was the standard treatment. However, endoscopic means to control bleeding including band ligation, hemoclipping, and coaptation have become more popular. Band ligation may be very appropriate for the lesion that is not too deep from the natural orifices like rectum and esophagus^{4, 5}. However, recurrent bleeding has been reported due to ulcer formation and premature band slipping⁴.

References

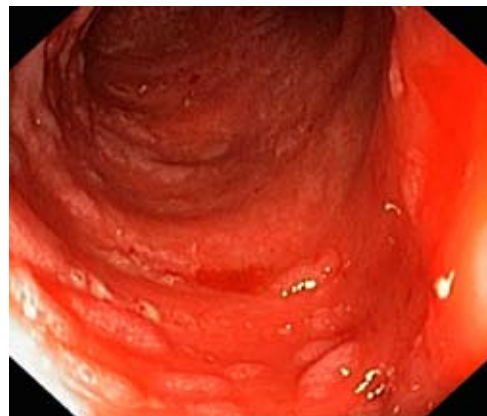
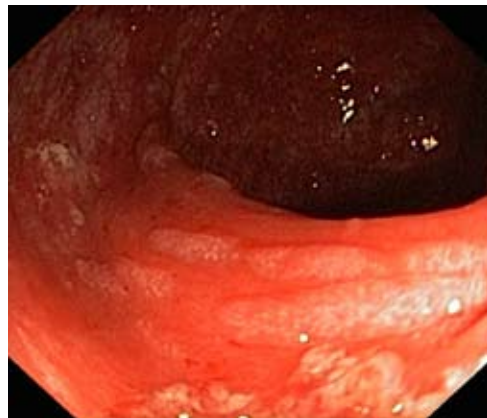
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Case 5

Chatchai Kriengkirakul, MD.

Rungsun Rerknimitr, MD.

A 55-year-old male, known case of myelodysplastic syndrome with blast transformation had been admitted electively for the second allogeneic bone marrow transplantation (BMT). After transplantation, he developed watery diarrhea and erupted new skin lesions on day 16th. A colonoscopy was done and the results are shown as figures.



In this case, colonoscopy showed diffuse inflammation and edema of colonic mucosa with the loss of normal colonic haustration. Many areas were covered by pseudomembrane. The pathology demonstrated graft versus host disease (GVHD) grade II-III.

Diagnosis:

Acute GVHD grade II-III.

Discussion:

Acute GVHD is defined as GVHD that occurring within the first 100 days after allogeneic BMT. Despite prophylaxis with high dose chemoradiation therapy, 18-70% of patients undergoing allogeneic BMT will develop acute GVHD. Predisposing factors for the development of acute GVHD include HLA disparity, sex mismatching, multiple donor, pregnancies, age, and intensity of the conditioning regimen. The symptoms of GI tract GVHD include anorexia, nausea, vomiting, watery diarrhea (typically secretory), abdominal pain, and GI bleeding. The major target organs of involvement are the skin, liver, and GI tract, and disease of the GI tract often parallels that of the skin and liver. Endoscopy with tissue biopsy is usually required to establish the diagnosis of acute GVHD. Normal endoscopic examinations have been reported in up to 21% of patients who had histology confirmed as acute GVHD. Endoscopic features that may suggest the presence of GVHD include hyperemia, gastroduodenitis, and diffuse mucosal loss. Mucosal edema seems to be a common

endoscopic finding but is nonspecific, whereas sloughing of the mucosa is infrequent but highly specific. The cardinal diagnostic criterion is the presence of epithelial singlecell necrosis (apoptosis), which may or may not be accompanied by increased inflammation and reactive epithelial changes or loss. Importantly, this same pattern of mucosal damage can be observed in the immediate posttransplant period (<20 days) because of the toxic effects on the gut epithelium by the pretransplant conditioning regimen.¹ Modification of the system for colonic GVHD described by Lerner is most common as follows: grade 1 GVHD, isolated apoptotic epithelial cells, without crypt loss; grade 2, loss of isolated crypts, without loss of contiguous crypts; grade 3, loss of 2 or more contiguous crypts; and grade 4, extensive crypt loss with mucosal denudation.² Grade I histology of GI GVHD in general does not correlate with endoscopic findings or with clinical features.

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Case 6

Phonthep Angsuwatcharakon, MD.

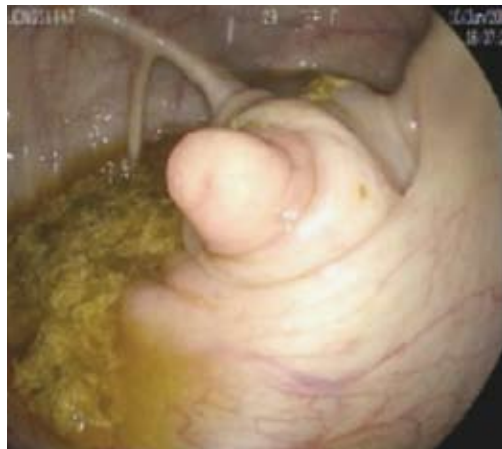
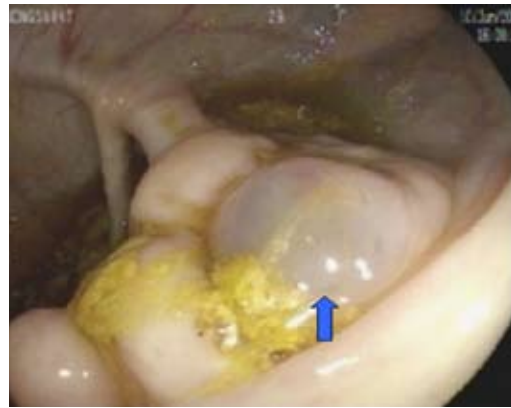
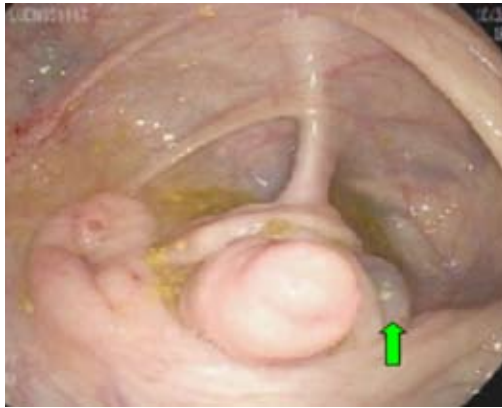
Yudhtana Sattawatthamrong, MD.

Rungsun Rerknimitr, MD.



A 29-year-old woman complained with lower abdominal pain and diarrhea for 4 weeks. She noticed that usually the pain develops during her menstruation periods. Physical examination revealed right lower quadrant tenderness. CT scan of the whole abdomen followed by colonoscopy was done.

Figures 1-2 Topoaxial and coronal sections revealed thickened wall of terminal ileum and matted bowel mass involved medial wall of the cecum (green arrow).



Figures 3-5 Colonoscopy revealed invagination of the appendix with bluish nodule at cecum (blue arrow) She underwent right hemicolectomy with ileal resection.



Figures 6, 7 The surgical specimen revealed endometriotic tissues involving muscular wall and serosa of the cecum and terminal ileum.

Diagnosis:

Colonic and ileal (extrapelvic) endometriosis.

Discussion:

Extrapelvic endometriosis can involve every organ in the body¹. Gastrointestinal (GI) tract is the most common site of extrapelvic endometriosis and accounting from 5-40% of women with pelvic endometriosis. Prevalence of gastrointestinal tract involvement according to segment is 76-96% in the rectosigmoid colon, 5-20% in the appendix, 5-16% in the ileum, and 5-6% in the cecum. Like pelvic endometriosis, the age of affected person is usually in the third decade. Most patients are asymptomatic. However, for the symptomatic one, the symptoms include crampy abdominal pain, dyschezia, tenesmus, abdominal distension, vomiting, diarrhea, constipation,

melena, and hematochezia. Only 40% of patients present in cyclic of symptoms. Medical therapies include danazol, medroxyprogesterone, and GNRH analogues. These are advised for mild to moderate symptoms. In case that presented with bowel obstruction, the bowel resection is mandatory.

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Case 7

Phonthep Angsuwatcharakon, MD.

Yudhtana Sattawatthamrong, MD.

Thiridchai Supasit, MD.

Naruemon Klaikeaw, MD.

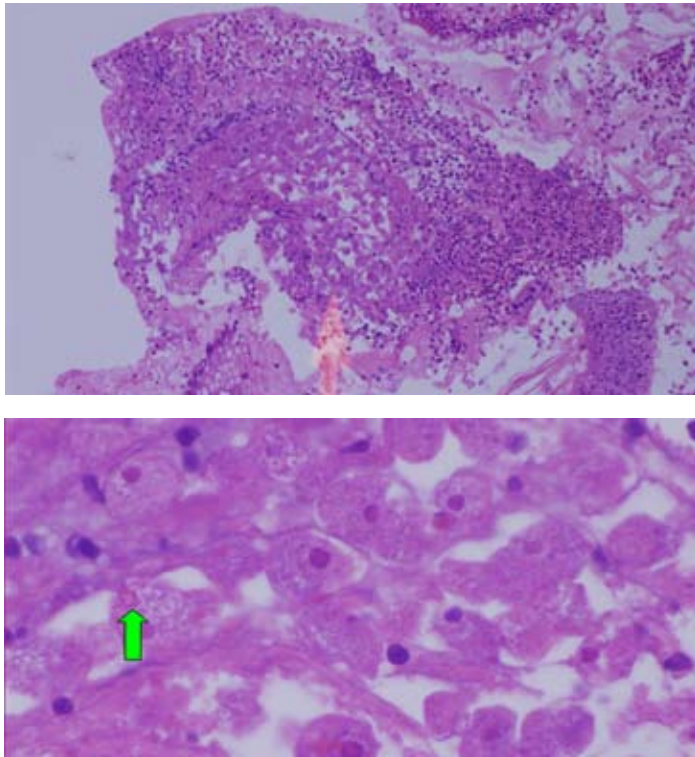
Rungsun Rerknimitr, MD.

A 49- year-old man presented with a history of lower abdominal pain and mucus-bloody diarrhea for 1 month. He had lost 5 kgs in 1 month. He did not have fever. Physical

examination revealed moderately pale conjunctiva. His abdomen showed no tenderness. Colonoscopy was done as figures 1-4.



Figures 1-4 Colonoscopy revealed multiple variable size exudative edematous ulcers. These ulcers were diffusely distributed in the cecum, ascending colon, sigmoid colon and the rectum. Biopsy specimens were taken from the ulcers.



Figures 5, 6 Histology revealed colonic ulceration, infiltrated with mononuclear inflammatory cells. There were numerous round shape organisms and some of them had evidence of erythroid phagocytosis (green arrow).

Diagnosis:

Amoebic colitis

Discussion:

The pathogen responsible for amoebic colitis is *Entamoeba histolytica*. There are two other species of *Entamoeba*, *E. dispar* and *E. moshkovskii*, which are morphologically identical to *E. histolytica* but not pathogenic¹. The infestation is transmitted by ingestion of infectious cysts of *E. histolytica* in fecal-contaminated food. Less than 10% of the infections are symptomatic. Symptomatic patients

may experience dysentery or present with extra-intestinal infestation e.g. liver and lungs abscesses. The pathogen invades colonic mucosa especially right-sided colon and causes cramping, weight loss, watery or mucous/ bloody diarrhea^{1, 2}. Colonoscopic findings typically show small, punctuating ulcers of the colon³ but hemorrhage or stricture may be presented¹. Pathological findings of intestinal amoebiasis range from mucosal thickening, skip lesion of discreted ulcers, necrosis to perforation of intestinal wall⁴. The classic flask-shape ulcer is caused by lateral extension of the infestation into submucosal tissue⁴. Metronidazole 750 milligram orally and trice a day for 5-10 days is usually effective and commonly used as tissue amebicides¹.

References

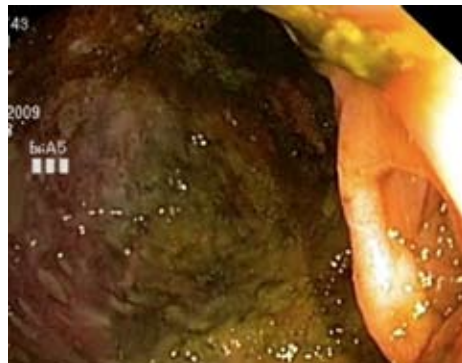
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Case 8

Phonthep Angsuwatcharakon, MD.

Rungsun Rerknimitr, MD.

A 58-year-old man, presented with acute diarrhea, fever and passing hematochezia. Colonoscopy was done. (Figures 1-3)



Colonoscopy revealed multiple, varying in size, oval shape and raised ulcers. The ulcers scattered from the cecum to sigmoid colon and intervened with erythematous mucosa. The terminal ileum, IC valve were normal. Pathology of the ulcer revealed acute colitis without crypt distortion. The stool culture resulted as *Salmonella* specie. The bleeding spontaneously ceased. A follow up colonoscopy after broad spectrum antibiotic treatment revealed disappearance of the ulcers.

Diagnosis:

Salmonella colitis with terminal ileal sparing

Discussion:

Lower gastrointestinal hemorrhage (LGIH) can complicate patients with salmonellosis. In the largest series of endoscopic examination of patients with typhoid fever complicated with LGIH revealed mucosal damage of the ileum as 100%, ileocecal valve as 57%, ascending colon as 43% and transverse colon as 29% respectively¹. On the other hand, the left side colon sometimes was not involved¹. Most patients responded well to antibiotic, and endoscopic hemostasis was infrequently needed¹. Endoscopic findings of salmonellosis are punch-out ulcer with elevated margin and they are varying in size. These findings are non-specific and may mimic inflammatory bowel disease because of the diffuse distributions². The diagnostic role of tissue culture from endoscopic biopsy specimen is controversy^{3, 4} and colonoscopy is not routinely used for that purpose.

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Case 9

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An 89-year-old man, presented with a history of abdominal distension, decreased amount of stool and significant weight loss for 2 months. Colonoscopy was done and revealed

mass in the rectosigmoid colon obstructing normal caliber for stool passage. Pathology result of the mass revealed adenocarcinoma.



Figure 1

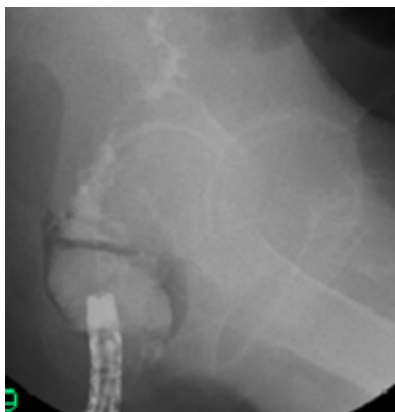


Figure 2



Figure 3

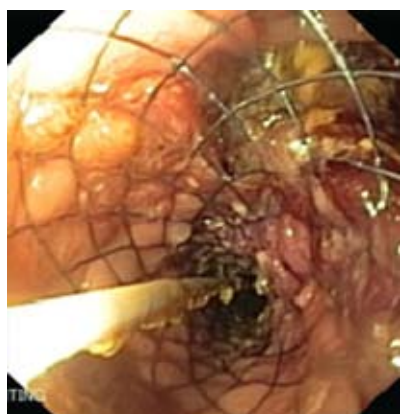


Figure 4



Figure 5

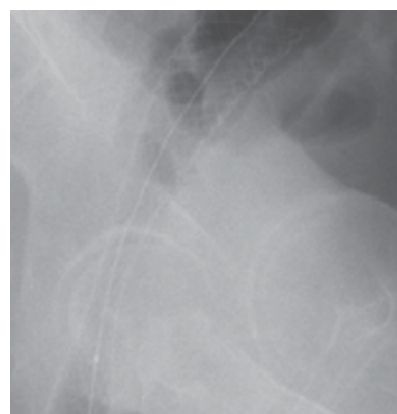


Figure 6

Colonoscopy revealed exophytic, fungating mass causing luminal narrowing, at 12 cm. from the anal verge (Figure 1). After contrast injection through the scope, it revealed a 6-cm.-long colonic stricture (Figure 2). A 120x25 mm. colonic Wallflex stent (Boston Scientific Corporation, USA) was inserted through the scope as the measure for palliative relieving of the obstruction (Figures 3-6).

Diagnosis:

Partial colonic obstruction from colon cancer.

Discussion:

Colonic stenting has been used for palliative treatment or bridging to scheduled surgery in patients with obstructive symptoms from malignant obstruction of the colon, the emergency surgery can be avoided with the stenting¹. The success rate of

stent insertion and initial colonic decompression rate are over 90%^{1, 2}. Long-term complications of colonic stent including migration, obstruction, perforation, tenesmus, and fistula to adjacent organ can occur up to 50% and these in turn limit the efficacy of colonic stenting^{1, 2}.

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Case 10

Rapat Pittayanon, MD.

Yudhtana Sattawatthamrong, MD.

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A 25-year-old Arabic man presented with bleeding per rectum and anal pain for several months. The abdominal sign was unremarkable. Blood for anti-HIV was reactive. Proctoscopy showed proctitis and contact bleeding. Colonoscopy revealed inflamed mucosa with papillomatosis (verrucous formation) of the anal canal.

Surgical removal of condyloma was performed and pus was also sent for culture.

Pus culture: *Neisseria gonorrhoeae*

Pathological report: Condyloma accuminata of the anal canal



Diagnosis:

Condyloma Accuminata of the anal canal with *Neisseria gonorrhoeae* infection on top

Discussion:

Up to 24.9% of HIV positive individuals have anal condyloma which is caused by Human papilloma virus (HPV)¹. Most patients commonly present with verrucous lesions in the perianal and intra-anal locations. It seems to be relatively asymptomatic whereas others may complain of bleeding, itching, or discomfort. Significant rectal pain is unusual and should prompt a search for other concurrent etiologies, such as anal ulcers, fissures, malignancy, or abscesses². Thus, sending pus for gram's stain and culture on selective media such as Thayer-Martin (for *Neisseria gonorrhea*) is recommended³. In this case, *Neisseria gonorrhea*, which is the most common bacterial STD affecting the anorectum,⁴ grew from the standard culture media even without Thayer-Martin media. The classic finding of anorectal gonococcal involvement is a thick purulent discharge that is compressed from the anal crypts in response to external anal pressure. Nonspecific findings of mucosal erythema, edema, friability, and pus are also

noted in patients with proctitis from rectal infection³. For the case with external anal condyloma, an anoscopic examination should be always promptly performed, because up to 78% of such patients will have internal lesions as well⁵.

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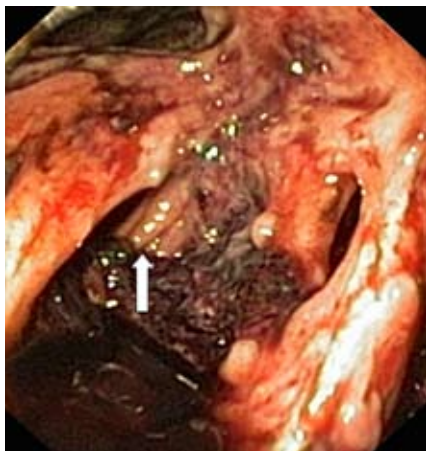
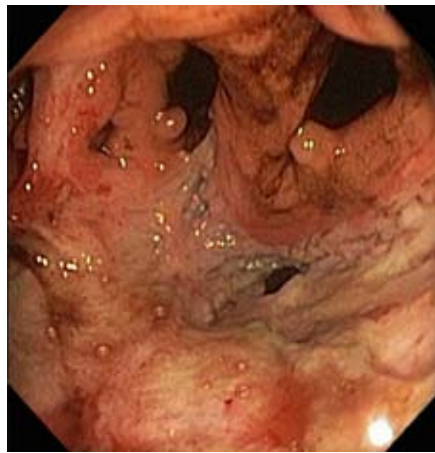
Case 11

Salyavit Chittmittrapap, MD.

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.

An 18-year-old male teenager with underlying of Crohn's disease presented with feculent vomiting. He later was proved to have duodenocolic fistula. He also had UGIB. EGD findings are shown in the figures, demonstrating blood clot and necrotic tissue at duodenocolic fistula (white arrow)



Diagnosis:

Crohn's disease with duodenocolic fistula

Discussion:

Crohn's disease in Thailand is rare. About 20-40% of Crohn's disease patients will develop fistula in their lifetime. Perianal fistula is the most common (54%). The second most common is enteroenteric fistula (24%). Internal fistula involve upper GI tract may presented with weight loss, abdominal pain, and diarrhea. Fecal vomiting is one of the typical presentations (seen in one third of gastrocolic and only 2% of duodenocolic fistulas)².

In this patient ischemic process was suspected as a cause of bleeding and adrenaline injection was done to achieve hemostasis. He later received 3 doses of infliximab though his abdominal pain persisted and improvement in nutritional status was not very impressive. Subsequent EGD 5 months after the initial EGD showed a smaller size of duodenocolic fistula.

Many international multicenter studies demonstrated benefit of biologic therapy such as monoclonal antibody against tumor necrotic factor (TNF)-alpha in treating fistulizing Crohn's disease³. In the ACCENT II trial, 5 mg/kg Infliximab induction at week 0, 2 and 6 followed by infliximab 5 mg/kg every 8 weeks showed that 69% responded to

induction and those who responded will have significantly reduced rate for hospitalizations, surgeries, and procedures if maintenance doses were given. Only 2% of responder needed major surgery compared with 11% of non-responder group⁴. Patients with enteroenteric fistula carry worse outcome than patients with external fistula (eg. perianal)⁵. Moreover, enteroenteric fistula comprised of about 10% of trial and surgery is usually required for enteroenteric fistula despite aggressive medical treatment⁶.

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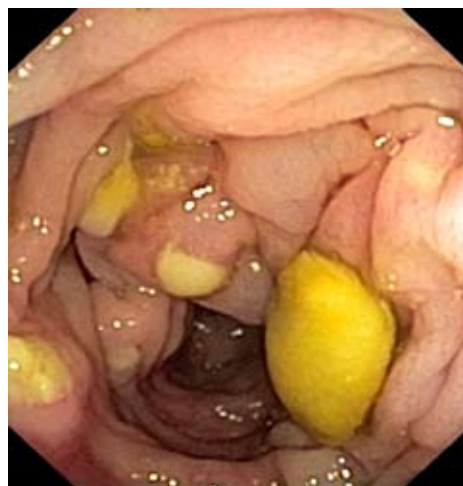


Case 12

Satimai Aniwan, MD.

Rungsun Rerknimitr, MD.

A 60-year-old-Thai man was admitted to the hospital because of acute diarrhea and ascites for 6 days. Approximately 3 months earlier, he had started a 14-day course of a third-generation cephalosporin for Salmonellosis and course of amphotericin B for disseminated cryptococcosis. The results of laboratory tests showed leukocytosis and azotemia. A stool specimen contained many WBC. Abdominal ultrasound showed moderate amount of ascites. Abdominal fluid analysis showed WBC 850 cell/mm.³ (neutrophil 95%), low serum-ascitic albumin gradient (0.5 mg/dl), and total protein 3.7g/dl. Colonoscopy showed multiple, discrete yellow plaques of purulent exudate on the mucosal surface of rectum and colon (Figures A and B).



Figures A and B *Colonic mucosal with ulcers and pseudomembrane*

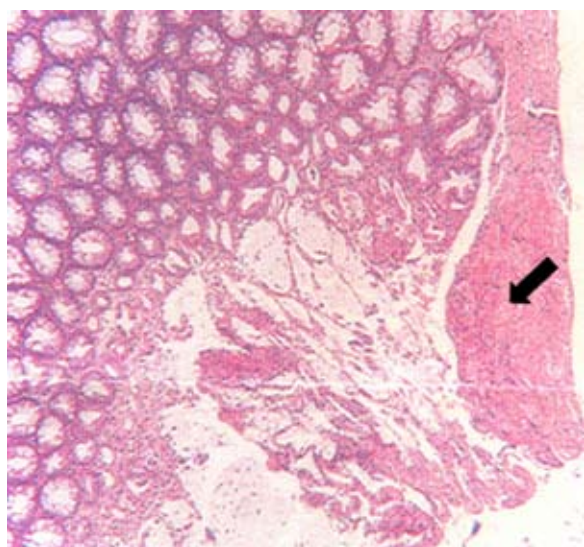


Figure 3 *Pseudomembrane on top of the colonic ulcer (black arrow)*

Colonic biopsy (Figure C) revealed mild hyperplasia of the surface epithelium, focal mucosal explosion covered with fibrin (arrow) admixed with acute inflammatory cells was detected.

The results of a cytotoxic assay of stool for *Clostridium difficile* toxin A and B confirmed the diagnosis.

Diagnosis:

Fulminant pseudomembranous colitis

Discussion:

Clostridium difficile colitis is one of the most common nosocomial infections and a frequent cause of morbidity and mortality among hospitalized patients. *C. difficile* colonizes the

human intestinal tract after the normal gut flora has been altered by antibiotic therapy. Enterotoxin A and cytotoxin B, produced by *C. difficile*, induce an inflammatory process. Pseudomembranes are raised yellow or off-white plaques, up to 2 cm. in diameter, which are randomly scattered over the colorectal mucosa with normal intervening mucosa, and that cannot be removed by water lavage. Colonoscopy may identify pseudomembranes that are pathognomonic for *C. difficile* colitis. However only 31% patients were found with pseudomembranes by only sigmoidoscopy, but there could be found in 85% of who underwent colonoscopy¹. An unusual manifestation of *C. difficile* colitis was reported that *C. difficile* infection develop manifestations of protein-losing enteropathy, including ascites, peripheral edema, and hypoalbuminemia. Most of these patients had fulminant pseudomembranous colitis. Ascites in fulminant PMC was sterile, had modest-to-marked increase in polymorphonuclear count, and

may have low SAAG, indicative of an exudative process. There was no evidence for inflammatory malignant or infectious processes. Pathogenesis of ascites is unclear but there are three possible mechanisms. First ascites developed after severe hypoalbuminemia. Second, transmural colonic inflammation with microperforation and infectious peritonitis are possibilities. Third, *C. difficile* toxin induces generation of inflammatory cytokines, which may in turn enhance vascular permeability². The treatment for *C. difficile* colitis usually starts with stopping antibiotics. Oral vancomycin is the preferred treatment in severe disease and has a response rate of 90–100%³.

Our patient was treated with oral vancomycin for 2 weeks. Colitis resolved and ascites disappeared.

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Case 13

Rapat Pittayanon, MD.

Yudhtana Sattawatthamrong, MD.

Rungsun Rerknimitr, MD.

A 44-year-old Myanmar woman, presented with abdominal pain and significant weight loss (22lbs) in 8 weeks. Physical examination showed moderately pale conjunctivae and ill-defined tenderness mass at right lower quadrant of the abdomen. The blood test for anti HIV was positive.

The CT scan of abdomen revealed

diffuse colonic wall thickening extending from cecum to 1/3 of right transverse colon with a 3.5x4.7 cm. superior mesenteric lymph node enlargement. There were multiple paraaortic, superior mesenteric artery, common iliac, and internal iliac lymphadenopathy ranging from 6 mm. to 18 mm. in diameter and a 14 mm. aorto-caval lymph node enlargement without definite bowel obstruction (Figure 1).

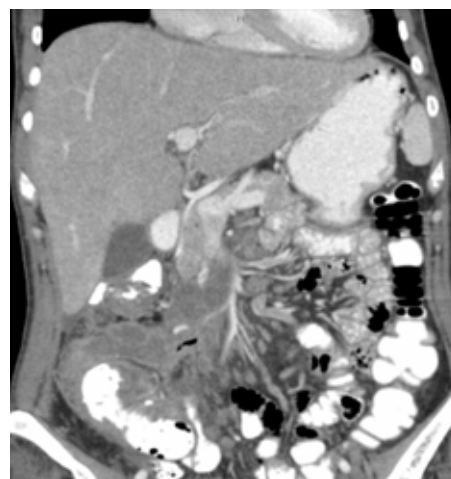


Figure 1

The colonoscopy was performed and revealed swollen of the mucosa of the ascending colon up to the cecum with ulcer and multiple yellowish spot. (Figure 2) Biopsy was done.



Figure 2

The pathology revealed extensive caseating granuloma. Acid fast bacilli organism was identified (pink arrow). (Figure 3)

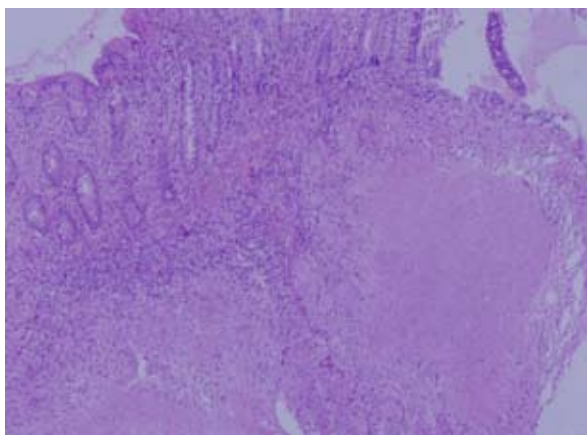
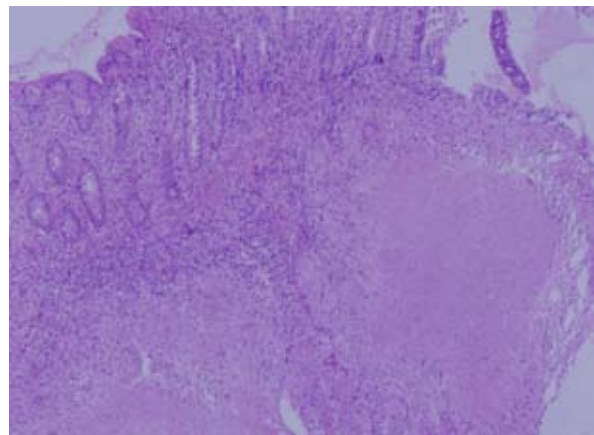
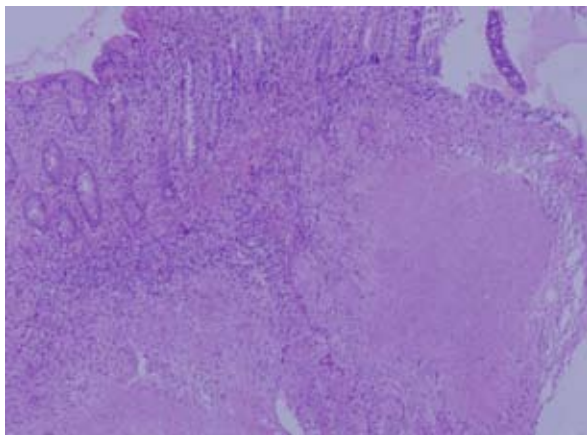


Figure 3

Diagnosis:

TB colitis and lymphadenopathy in HIV infected patient.

Discussion:

Mycoplasma tuberculosis (TB) in the gastrointestinal tract is common especially in immunocompromised host. Contrast-enhanced CT abdomen can help the physician to get a closer diagnosis. Pattern of abdominal lymphadenopathy in TB are rim enhancement and multilocular appearance¹. In contrast, “sun-rising” sign or “sandwich” sign is the clue that more specific to lymphoma that involved the para-aortic nodes². Endoscopic finding “multiple ulcers at both side of ileo-cecal valve” is very helpful for diagnosis³. Pathologic finding in TB lymphadenitis usually demonstrates caseation or liquefactive substances at the center of the enlarged lymph nodes with a low attenuation, whereas other peripheral inflammatory lymphatic tissues have a higher attenuation on enhanced CT that resulted from the preserved blood supply¹.

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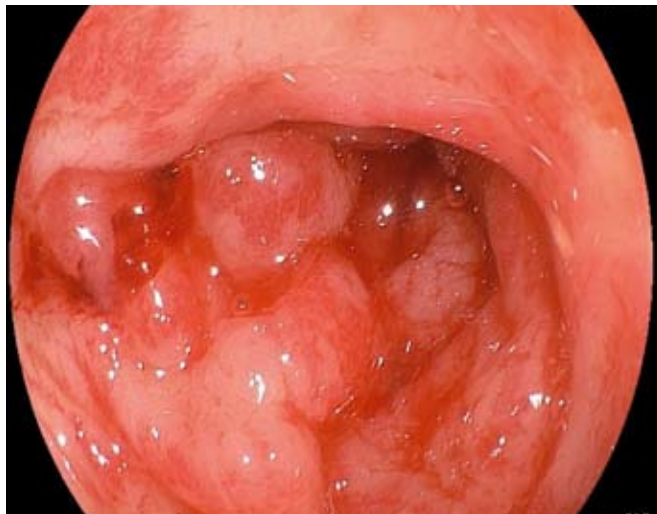


Case 14

Chatchai Kriengkirakul, MD.

Rungsun Rerknimitr, MD.

A 73-year-old-female, known case of cervical cancer stage II with post radiation therapy. She presented with hematochezia. Colonoscopy was done and showed as figures.



In this case, colonoscopy showed diffuse vascular ectasia found at 5 to 30 cm. from the anal verge with bloody stain mucosa. Argon plasma coagulation (APC) was applied to the abnormal vascular lesions.

Diagnosis:

Radiation proctitis

Discussion:

Radiation therapy of cancers in the pelvic region may lead to radiation proctitis. Radiation injury to the rectal wall eventually causes connective tissue fibrosis and obliterative endarteritis with subsequent local tissue ischemia. Patients with radiation proctitis may be minimally ill and heal spontaneously over some months. However, symptoms of proctitis may persist, and the disease progresses to diarrhea, chronic bleeding and/or stricture and fistula formation¹. Severe hemorrhagic radiation proctitis may require repeated blood transfusions and is difficult to treat with conventional medical therapy. Argon plasma coagulation (APC) is a noncontact thermal coagulation technique which can be applied endoscopically. A probe passed through the scope can deliver a field of argon gas to the mucosal surface where it is ionized by a high voltage filament, resulting in superficial mucosal heating and coagulation of friable blood vessels.

The technique reduces rectal bleeding in 80-90% of cases². Other techniques have been made in endoscopic therapy, including formalin, neodymium/yttrium aluminum garnet, argon and potassium titanyl, and phosphate laser treatments. Argon plasma coagulation presents an effective, efficient, inexpensive, and reasonably safe noncontact method for destruction of radiation telangiectasias³.

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Case 15

Salyavit Chittmittrapap, MD.
Surachai Amornsawadwattana, MD.
Rungsun Rerknimitr, MD.



Figure 1 Diverticuli without stigmata of recent bleeding

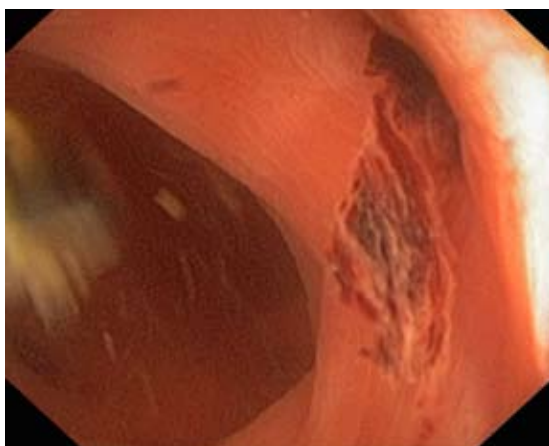


Figure 2 Blood clot was seen near diverticula. Closer look revealed active blood oozing, which was confirming it as a cause of hematochezia.

A 63-year-old male had undergone emergency colonoscopy after passing a large amount of red blood in his stool. Blood stain in colonic mucosa and multiple diverticuli were seen, none of which showed active oozing (Figure 1). He was admitted for observation. Three days later, he had recurrent hematochezia so that a second colonoscopy was warranted. Bleeding from one of the diverticuli was identified (Figure 2), Hemostasis was achieved by diluted adrenaline injection and the application of hemoclips (Figures 3 & 4).

Diagnosis:

Bleeding colonic diverticulum

Discussion:

Diverticulosis of colon is commonly found especially in elderly, but only 5% of them will cause GI bleeding. Diverticular bleeding is

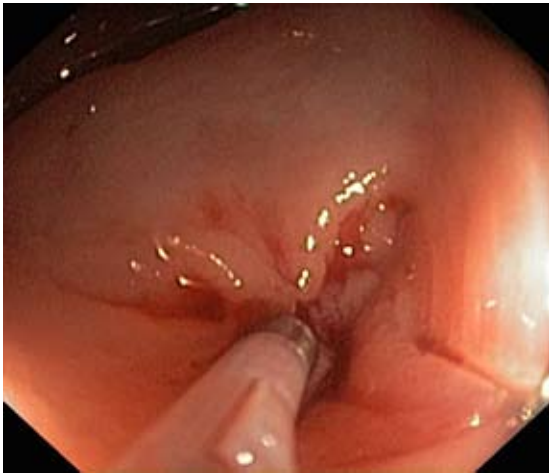


Figure 3 *Adrenaline was injected.*

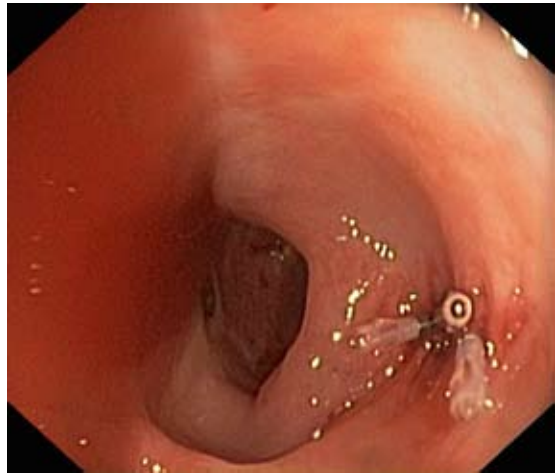


Figure 4 *Bleeding was stopped and reassured by hemoclips.*

one the lower GI bleeding (LGIB) etiologies and well documented in 29-34% of acute LGIB (43% in major LGIB subgroup)¹. Bleeding usually stops at the time of colonoscopy, about 80% of time^{2, 3}. Its nature of intermittent bleeding makes diagnosis and treatment as a challenging task such as in this case. Like upper GI bleeding hemostasis, diluted epinephrine injection, coaptation, and hemocliping are well accepted therapies when the bleeding site is confirmed.

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Case 16

Tassanee Sriprayoon, MD.
Thawatchai Akaraviputh, MD.
Atthaphron Trakransanga, MD.
Naruemon Klakeaw, MD.

A 31-year-old woman with a history of longstanding dyspepsia had a CT scan of the abdomen done and was found to have an appendiceal mass (Figure 1). She underwent a colonoscopy, which showed a normal appearing mucosa throughout the colon except for a single, 30 mm. polypoid mass in the appendiceal orifice (Figure 2). A standard polypectomy snare was used to grasp the polyp with a “deflated lumen” technique¹. The endoscopic polypectomy was performed to completely remove the lesion (Figure 3). Histologic findings of the resected specimen revealed a hyperplastic and cystically dilatation of glands containing numerous acute inflammatory cells. The glands demonstrated variation in size and shape. The epithelial lined cysts appeared columnar, cuboidal, and flattened. Scattered smooth muscle fibers were also noted and these were consistent with a juvenile (retention) polyp. A surveillance colonoscopy after a one year follow-up revealed neither a residual nor a recurrent lesion.

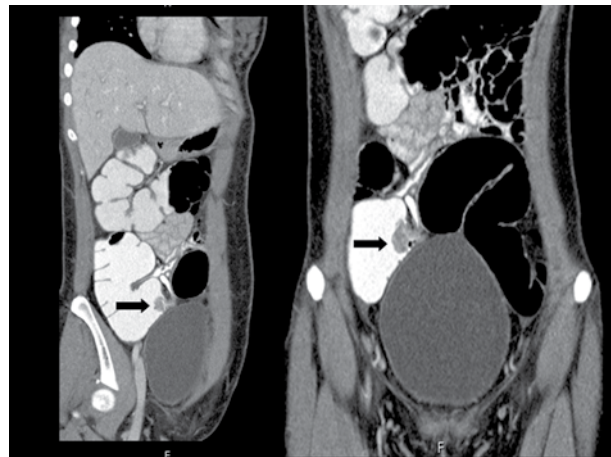


Figure 1 CT scan of the abdomen showed a large appendiceal proliferative mass (black arrow) protruding into the cecum.

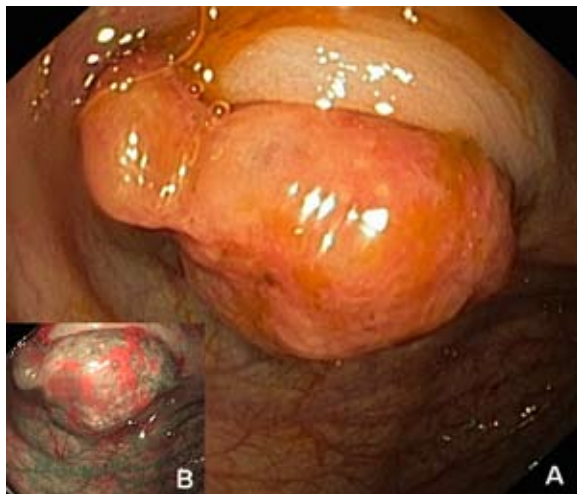


Figure 2 Colonoscopy showed large appendiceal polyp at the orifice (A) with NBI finding that suspected for a precancerous lesion (B).



Figure 3 Endoscopic view after polypectomy with snare (A) showing no evidence of the residual tissue (B).

Diagnosis:

Juvenile polyp of the appendix

Discussion:

Juvenile polyp of the appendix is not quite often seen in adulthood^{2, 3}. Endoscopic resection should be considered even when a macroscopic appearance of the polyp is not suspicious for malignancy⁴. In case of adenomatous change and extends to margin of the lesion, laparoscopic cecectomy or appendectomy was recommended⁵. The endoscopic polypectomy should be done first to avoid unnecessary right hemicolectomy in this situation.

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Case 17

Surachai Amornsawadwattana, MD.

Naruemon Klaikeaw, MD.

Rungsun Rerknimitr, MD.

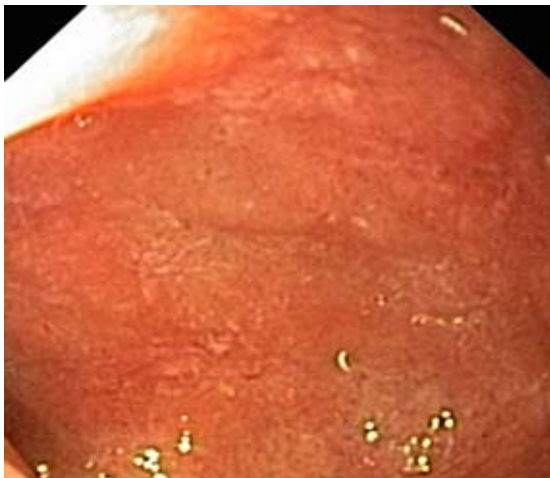


Figures 1A and 1B *Purpura at the lower extremities*

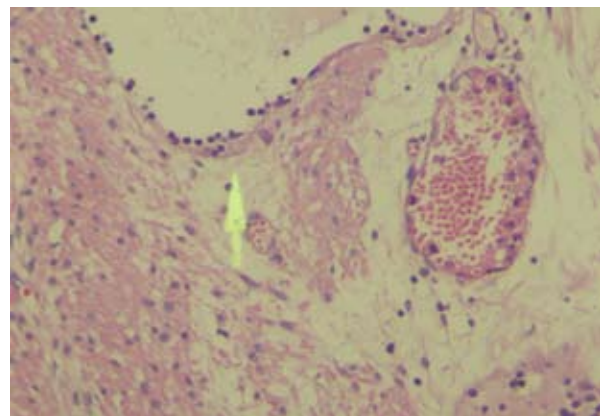
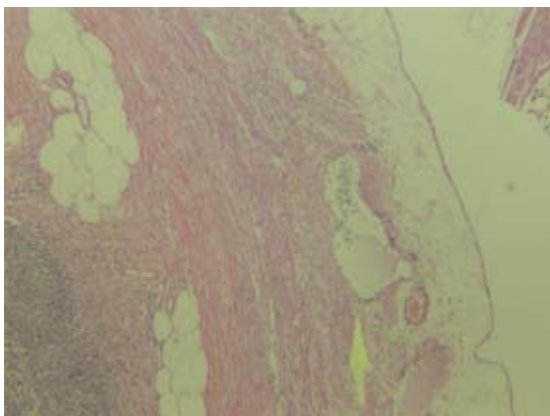
A 26-year-old male, presented with severe abdominal pain without any improvement after appendectomy. He recently developed arthritis, and unblanchable purpuric spots at both lower extremities. The pictures of skin lesions are shown as Figure 1A and 1B. During hospitalization, he developed hematochezia; subsequent colonoscopy and EGD were performed and findings were displayed as figures 2A, 2B, 3A and 3B, respectively. Histopathology of previous appendectomy was also shown as figure 4A and 4B.



Figures 2 Colonoscopic findings–**A** multiple colonic ulcers intervening with edematous, subepithelial hemorrhagic colonic mucosa **B** Swollen appendiceal stump at the cecum



Figures 3A and 3B EGD found erosions and patchy atrophic duodenal mucosa at the second part of duodenum



Figures 4A and 4B Pathology of the appendix–lymphocytic vasculitis at the serosal layer of appendix (arrow)

The final diagnosis in this patient is **Henoch-Schönlein Purpura (HSP)** that involved the GI tract and he was treated with corticosteroid. His symptom was impressively improved and he was able to be discharged from the hospital and currently he is doing well during a 6 months follow-up period.

Discussion:

HSP, the most common cause of systemic vasculitis during childhood period¹, is considerably an immune complex (IgA) small vessel vasculitis^{1, 2}. GI manifestation of HSP is a colickytype abdominal pain which is usually located at periumbilical and epigastric area. This is usually associated with nausea, vomiting or GI bleeding¹. Intussusception and bowel perforation were also reported². GI features of HSP may be caused by edema and intramural bleeding². Small intestine is the most common site of involvement because it is at risk for ischemia. Petechiae, hyperemia, ecchymosis and aphthoid ulcer can be found in the colon, whereas esophageal involvement is exceptionally rare¹. The diagnosis of HSP requires palpable purpura (a mandatory criterion) plus at least one condition of the following: 1) diffuse

abdominal pain 2) arthritis or arthralgia 3) renal involvement¹. Endoscopic findings of HSP are redness, swelling, petechiae, submucosal hemorrhage, purpura, erosions and ulcers¹. There is no specific radiologic finding in this condition, but multiple bowel walls thickening with unaffected area were also described². The prognosis is quite well; more than 80% of patients will improve within 2 weeks. HSP in adulthood is mainly associated with kidney disease¹.

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Case 18

Salyavit Chittmittrapap, MD.

Rungsun Rerknimitr, MD.

A 30-year-old male who had a history of relapsed Hodgkin disease (nodular sclerosis) was admitted for bone marrow transplantation. He received allogenic stem cell transplantation from his HLA-matched sister. After transplantation, acute watery diarrhea took place and persisted for 14 days despite empirical broad spectrum antibiotics. Colonoscopy showed markedly edematous mucosa along entire colon with some

segmental multiple clean base small erosions and ulcers (Figures 1-3). No hemorrhagic spot was seen. He had undetectable CMV viral load, normal liver function test, and normal skin examination. Pathology from colonic biopsy showed patchy glandular loss with acute inflammation, compatible with graft versus host disease (GVHD). Although, the findings were not pathognomonic, he was treated as GVHD and reported to have an improving results.

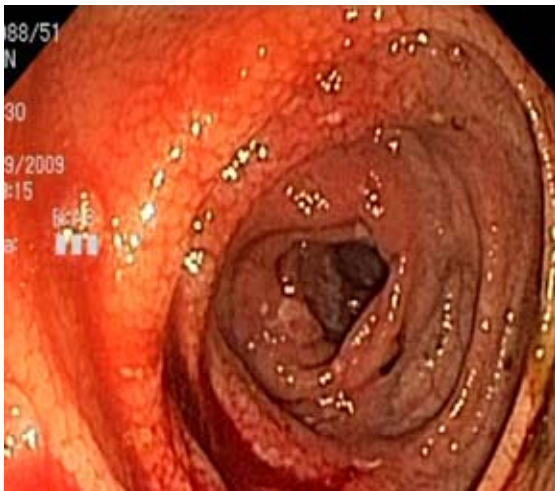


Figure 1 Colonoscopy showed edematous colon without ulcer

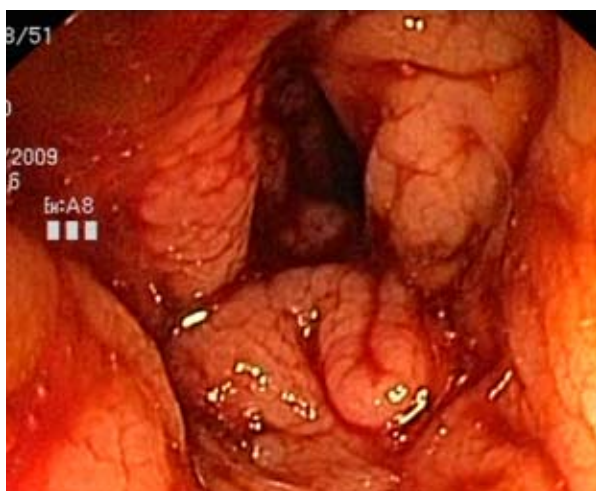


Figure 2 Ileoscopy showed edematous terminal ileum



Figure 3 A closer look colonoscopy demonstrated small erosions with exudate on top of inflamed colonic wall

Diagnosis:

GVHD involving the colon

Discussion:

Diarrhea in post-transplantation patients can be attributed to chemoradiation toxicity, medication side effects, or a variety of bacterial, fungal, viral infections. There is no specific endoscopic finding but edema, erythema, sloughing mucosa, erosions^{1,2} can be found.

Acute GVHD usually involves liver and skin, although GVHD limited to the intestine has been reported³

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Case 19

Salyavit Chittmittrapap, MD.

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.

A 69-year-old male underwent colonoscopy due to his bowel habit change. Several purple lesions clustering in sigmoid colon were detected. Most of them were tubular-shaped lesions and some were round-shaped lesions.

Their purple color, clustering in group with tubular shape suggested vascular in nature. **Phlebectasia (vascular ectasia) was the most likely diagnosis.**

Discussion:

Many vascular lesions or malformations can be presented in the colon, such as hemangioma, arteriovenous malformation, telangiectasia, colonic varices, Dieulafoy's lesion, Kaposi's sarcoma, spider angioma, portal hypertensive colopathy, and vascular ectasia (phlebectasia)¹.



Phlebectasias are markedly dilated and tortuous, submucosal veins. They consist of normal endothelium and scant connective tissue stroma². They usually appear in cluster. They are not associated with portal hypertension, unlike colonic varices. Colonoscopic findings of phlebectasia are dark bluish-gray, small, soft, compressible, and blanch with pressure. Other than colon, phlebectasias in esophagus, jejunum and cecum have been reported^{3, 4}.

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Case 20

Patcharin Amornvipas, MD.

Voranush Chongsrisawat, MD.



A 12-year-old girl, presented with recurrent non-bilious vomiting and hematochezia since infancy for one year. Her underlying disease is Down's syndrome. Upper gastrointestinal study reveals duodenal stenosis. Colonoscopic finding are shown as figures 1 & 2:

Operative finding is shown as figure 3:



Figures 1 & 2 Multiple mucosal protuberances simulating polypoid lesions I covered with thin wall normal mucosa throughout the whole colon



Figure 3 Multiple intramural air-filled cysts along the small intestine and colon.

Diagnosis:

Pneumatosis cystoides intestinalis

Intervention:

Duodenoduodenostomy

Discussion:

Pneumatosis cystoides intestinalis is defined as an abnormal location of gas within bowel wall. There are two forms of pneumatosis intestinalis: primary idiopathic pneumatosis which affects colon and secondary pneumatosis which is more common and associated with other diseases such as necrotizing enterocolitis, inflammatory bowel disease and obstructive pyloric-duodenal disease. Various provoking mechanisms have been suggested: (1) the mechanical theory causing by intraluminal gas enters the bowel wall under pressure through a defect or potential defect in the intestinal mucosa. The mucosal defect may result from direct trauma or increased intraluminal pressure, (2) the bacterial theory which causing by the cystic gas collections which are the by-products of bacterial specially those produce hydrogen¹. Computed tomography is the most sensitive technique for detecting pneumatosis

intestinalis such as gas in the portal venous system, also called portal pneumatosis. On CT scan, two types of pneumatosis intestinalis are cystic and linear type². Cystic type is typically benign whereas linear is associated with severe underlying pathology. The natural history of pneumatosis intestinalis is spontaneous regression in up to 50% of case. Treatment of underlying diseases leads to resolution of bowel wall gas. There is no specific treatment in asymptomatic primary idiopathic case. Treatment combination of antibiotic and elemental diet has been proposed. Colonic resection is reserved for those with complications such as intestinal obstruction and massive bleeding.

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Case 21

Rapeeporn Lorchatchawankul, MD.

Voranush Chongsrisawat, MD.

A 9-year-old boy presents with anemia, weight loss, polyarthralgia, chronic mucous bloody diarrhea and recurrent fistula in ano for one year. Physical examination revealed perianal fistulas and abscesses (Figure 1). Laboratory study demonstrates anemia and elevated erythrocyte sedimentation rate (ESR).



Figure 1 Perianal area shows fistulas and abscesses with multiple hypertrophic scars (post fistulectomy)

Colonoscopic findings:

Multiple pseudopolyps were found in the cecum, transverse, and sigmoid colons (Figures. 2 & 3).



Figure 2



Figure 3

Diagnosis:

Fistulizing Crohn's disease

Discussion:

Crohn's disease is a disorder of uncertain etiology that is characterized by transmural inflammation of the gastrointestinal tract. Crohn's disease may involve the entire gastrointestinal tract from mouth to perianal area. Clinical manifestations of Crohn's disease in pediatric population are mouth sores, diarrhea, abdominal pain, weight loss, fever, stunt growth and delayed puberty. Patients can also have problems outside of the digestive tract, including a skin rash, joint pain, and uveitis¹.

Cobblestone mucosa and aphthous linear ulcers are common characteristic features during endoscopic examination of Crohn's disease which may involve all or just a part of colon. Other endoscopic findings that support the diagnosis of Crohn's disease, but are not specific, include the following : pseudopolyp, erosion, spontaneous

bleeding, normal rectum and normal vasculature adjacent to affected tissue^{2, 3}. This is in contrast to ulcerative colitis which always involves rectum causing mucosal friability and loss of normal vascularity^{2, 3}.

References

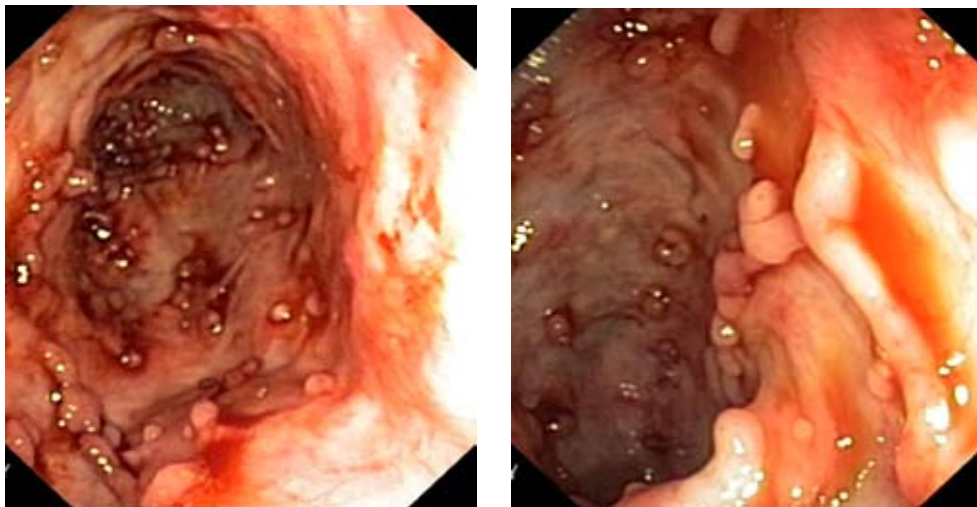
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Case 22

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.

A 25-year-old female, presented with recurrent hematochezia. Colonoscopy was performed and findings are shown as below.



Figures 1 and 2

Colonoscopic findings revealed multiple pseudopolyps and mucosal bridging intervening with atrophic colonic mucosa extended from rectum up to the cecum and loss of normal haustral appearance of the colon was also seen. No ileal involvement was detected. **The most likely diagnosis in this patient is ulcerative colitis.**

Discussion:

The endoscopic features in patients with ulcerative colitis (UC) usually show the loss of normal vascular pattern, hyperemia of mucosa, mucosal edema, friable with easily contact bleeding mucosa, wet sandpaper appearance (mucosal granularity), discrete ulcers with surrounding inflamed colonic mucosa, coalescence of small ulcers resulting in large ulcers and pseudopolyps^{1, 2} (edematous colonic mucosal islands with adjacent denuded regions). The extent of the disease can be confined only in the rectum (proctitis) or involved the entire colon² (pancolitis). These tend to involve in continuous, circumferential fashion without skip areas beginning from anorectal region and progressing to the proximal part of colon. In addition, UC usually does not involve

ileum, besides backwash ileitis¹ (microscopic patchy inflammation without ulcer extending a few centimeters into the terminal ileum). Moreover, loss of haustral fold, luminal narrowing, and shortening of colon are also noted.

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Case 23

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.

A 47-year-old woman, known case of Crohn's disease complicated with perianal fistula, had a follow up colonoscopy after azathioprine and antibiotic therapies for evaluating the treatment response. Findings are shown as figures 1, 2 and 3.

Colonoscopic findings revealed the external and internal opening of perianal fistula. Multiple discrete serpiginous and aphthous ulcers intervening with normal appearing colonic mucosa are scattered along the entire colon. Ileal involvement is also noted in this patient. These are typically endoscopic findings of Crohn's disease.

Diagnosis:

Crohn's disease with perianal fistula

Discussion:

There are no pathognomonic endoscopic findings in Crohn's disease, but some features



A



B

Figure 1 Perianal fistula (White arrows): A) the external openings of fistula are seen around the anus B) internal openings of fistula are located in the rectum (white arrow)



Figure 2 Endoscopic findings of Crohn's disease: A) Serpiginous ulcers B) Aphthous ulcers



Figure 3 Ileal involvement of Crohn's disease: A) patent IC valve with pseudopolyp B) Pseudopolyp and ileal ulcers

are considerably characteristic¹. The classic endoscopic appearances of Crohn's disease are the presence of skip involvement, aphthous ulcer, cobblestone appearance of colonic mucosa, linear or serpiginous ulcers. Crohn's disease usually has an ileal involvement, and often spares the rectum. In developing countries, Inflammatory bowel disease is quite uncommon. It is important to differentiate Crohn's disease from tuberculous enterocolitis (TB) which is quite prevalent in this area. Lee *et al* mentioned that the endoscopic features of anorectal involvement, longitudinal ulcers, aphthous ulcers, and cobblestone appearance are in favor of Crohn's disease more than TB².

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Case 24

Salyavit Chittmittrapap, MD.

Phonthep Angsuwatcharakon, MD.

Rungsun Rerknimitr, MD.

A 30-year-old HIV-infected male was admitted due to profound edema and watery diarrhea for 1 month. He had been diagnosed with pneumocystis carinii pneumonia 6 weeks ago and have not yet started antiretroviral therapy. He lost 10 kgs and passed 6 stools/day in the previous 1 month. Initial work up showed no proteinuria, no parasite in stool, no infectious organism was found. He was too sick to undergo a test to confirm protein losing enteropathy. Colonoscopy revealed swollen and mosaic mucosal pattern with small ulcers. Colonoscopic biopsy result revealed cells with inclusion body and edematous colonic mucosa, as well as small ulcers. This was compatible with CMV colitis.

Diagnosis:

CMV enterocolitis presented with protein losing enteropathy





Discussion:

Cytomegalovirus, as hinted by its name, had viral cytopathic effect such as enlargement of infected cell, development of inclusion body. Those findings are quite specific, not yet sensitive for the diagnosis of CMV colitis. CMV culture, immunohistochemistry staining, CMV serology (IgM seroconversion) and CMV viral load assay are therefore, sometimes helpful¹.

Characteristic endoscopic finding of CMV colitis are subepithelial hemorrhage and mucosal ulceration. Ulcerations (ranging from small aphthous like to large serpiginous ulcer) and colitis are more commonly encountered. Pseudomembranous colitis is a rare manifestation. CMV colitis presenting with protein losing enteropathy has been scarcely reported²⁻⁴. The mechanism for this protein loss is still uncertain.

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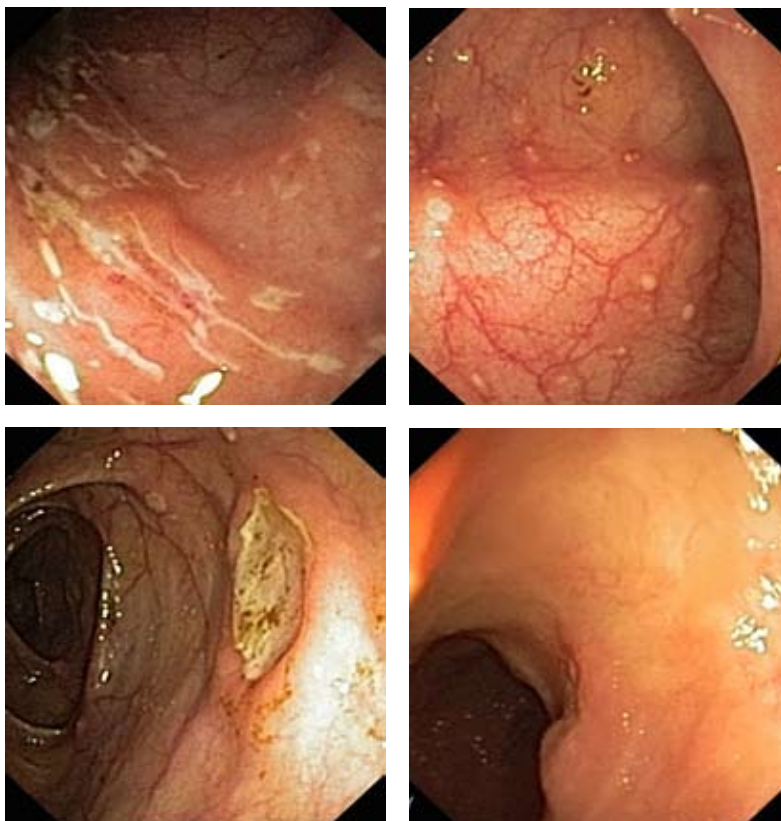
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Case 25

Surachai Amornsawadwattana, MD.

Rungsun Rerknimitr, MD.

A 66-year-old female, presented with hematochezia. She took non-steroidal anti-inflammatory drug (NSAID) and clopidogrel due to her underlying medical conditions; spinal stenosis and ischemic stroke. EGD was initially done and showed only gastritis. Then colonoscopy was performed. The findings are shown as below.



Colonoscopy revealed multiple discrete clean base ulcers scattering in the entire colon and terminal ileum. Biopsy of the lesion was not performed due to the current use of clopidogrel. The most likely diagnosis in this patient is **NSAID-induced colonic ulcerations**.

Discussion:

The effects of NSAIDs on large intestine have been increasingly reported in the literatures and these can be manifested by colitis, ulcerations, and stricture. Kurahara et al retrospectively reviewed 14 patients with NSAID-induced colonic ulcerations during 3 years study period. The most common site of involvement was at ileocecal area and the typical colonoscopic features were single or multiple ulcers intervening with normal colonic mucosa, which were considerably much more common than colonic diaphragm-like stricture, and these lesions could be improved after drug withdrawal. The differential diagnoses in this condition are infectious colitis, TB colitis, and Crohn's disease due to the preference of

ileocecal involvement. The duration of NSAIDs uses before developing symptom ranged from less than 2 months to more than 2 years. Symptoms of these patients are rectal bleeding, epigastric pain, anemia and diarrhea. The mechanism of NSAID-induced colonic ulceration remains unidentified.

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Case 26

Pawinee Rerknimitr MD.
Bubpha Pornthisarn, MD.

A 47-year-old Thai man was admitted due to multiple cutaneous ulcers. Five months prior to the admission, he noticed a tender nodule on his left leg that rapidly evolved into pustules and then ulcerated. A month later, another ulcer was found on his left hand as well as multiple painful oral ulcers in his buccal mucosa and hard palate. These ulcers were severely painful. He denied any trauma preceding the lesions. The initial diagnosis was necrotizing fasciitis and the patient was admitted for extensive surgical debridement and had undergone left index amputation (Figure 1). Tissue cultures were performed and revealed *Pseudomonas aeruginosa* and *Corynebacterium species*. However, subsequent bacterial, mycobacterium and fungal cultures were negative for organisms and his skin lesions did not improve. He was then referred to the internal medicine department. On examination, two ulcers were found on his left foot (Figure 2) and left hand. The ulcers were sharply margined with undermined, purple edge. There were multiple shallow erythematous erosions on his hard palate and deep ulcer covered with white exudates in

his left buccal mucosa (Figure 3). Skin biopsy from the edge of the ulcer showed dermal edema and epidermal neutrophilic abscesses. No granuloma was seen. A diagnosis of pyoderma gangrenosum (PG) was entertained.



Figure 1 Post index amputation of the left hand with ulcer

A colonoscopy was performed. There were multiple aphthoid ulcers distributing thoroughly in the entire colon. This was compatible with inflammatory bowel disease (IBD) and more in favored of Crohn's disease.



Figure 2 A large ulcer found on the left foot



Figure 3 Hard palate erosions (arrow)

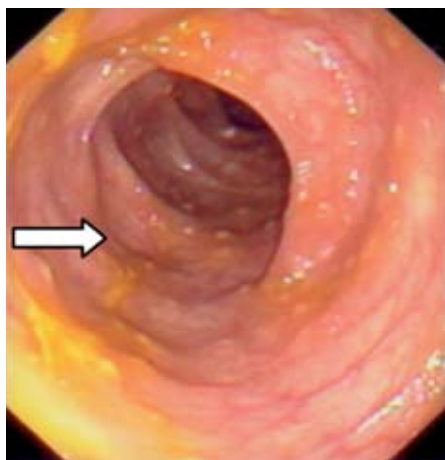


Figure 4 Multiple aphthoid lesions in the colon (arrow)

Diagnosis:

Inflammatory bowel disease (in favored of Crohn's disease) with pyoderma grangenosum.

Discussion:

Pyoderma gangrenosum (PG) is a reactive neutrophilic dermatosis. The lesion usually starts as an inflammatory papule with a surrounding erythematous halo that enlarges and then ulcerates. The fully developed lesion classically showed sharply margined undermined border with overhanging epidermis at the periphery¹. The edge of the ulcer is purple to grey. Almost fifty percent of patients with pyoderma gangrenosum have associated underlying diseases. The most common is inflammatory bowel diseases, both Crohn's and ulcerative colitis. The activity of both diseases may run parallel or have an independent course. One to five percent of IBD patients develop PG in the course of their illness. Most patients with both diseases demonstrate lesions in the colon^{2, 3}. The incidence of PG related to IBD in Thailand had been reported in only a case of ulcerative colitis³.

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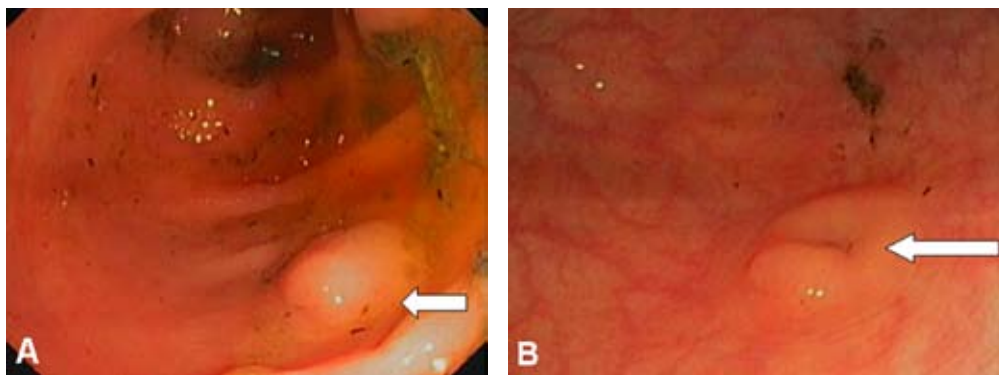
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Case 27

Patommatat Bhanthumkomol, MD.

Supot Pongprasobchai, MD.

A 79 year-old female with diabetes mellitus and hypertension had unexplained iron deficiency anemia. EGD showed atrophic gastritis. Colonoscopy was done and shown in the pictures.



Endoscopic findings:

There was a small flat wide-based intruding lesion adjacent to the prominent haustral folds. Its mucosa of the lesion looked normal. After some amount of air insufflation, this lesion became more flat and showed dimple at its center (white arrow).

Diagnosis:

Inverted colonic diverticulum

Discussion:

At colonoscopy, inverted colonic diverticula are difficult to conclusively distinguish from true colonic polyps. This differentiation is clinically important because the former lesion should be left alone due to the risks of colonic perforation with biopsy or snare removal, whereas the latter lesion routinely requires biopsy or snare polypectomy for colon cancer prevention. Features suggestive of inverted diverticulum are: closing to prominent haustral folds, smooth surface, normal mucosal color, wide base, lies within or surrounds a colonic diverticulum, spontaneously revert to everted shaped (rare). Diagnosis of this lesion is depended on the demonstration of transformation of an intraluminal colonic projection to a flat or partly everted colonic

projection by probing with closed biopsy forceps, insufflating with air, or pushing with water jet equipment.

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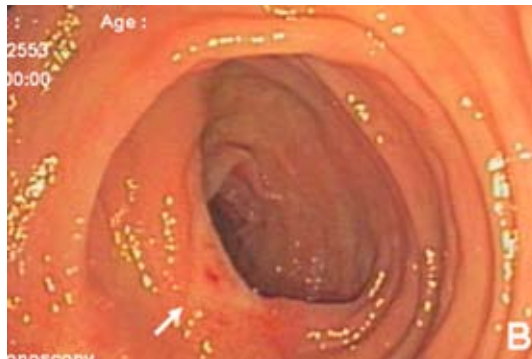


Case 28

Julajak Limsrivilai, MD.

Supot Pongprasobchai, MD.

A 70-year-old man with an underlying disease of gum cancer suffered from acute myocardial infarction with cardiogenic shock. He was successfully treated by cardiac catheterization, coronary artery stenting, and was placed on heparin and dual anti-platelet therapy. Three days after coronary intervention, he had painless hematochezia. Colonoscopy was done.



Endoscopic finding:

Two large longitudinal ulcers measuring 2-3 cm. in size were noted at splenic flexure (Figure A). The surrounding mucosa was inflamed and friable. Multiple large longitudinal ulcers covered with exudates and surrounded by friable mucosa were seen scattering throughout the transverse colon



(Figure B) and ascending colon (Figure C). The intervening mucosa, however appeared normal. The rectum was normal.

Diagnosis:

Ischemic colitis

Discussion:

The typical presentation of acute colonic ischemia includes: 1. rapid onset of mild abdominal pain 2. tenderness over the affected bowel area, usually on the left side near the splenic flexure or the rectosigmoid junction and 3. mild to moderate hematochezia beginning within 1 day of the onset of abdominal pain. The bleeding is often not profused.¹

The diagnosis requires a high index of clinical suspicion. Special attention must be paid to the presence of conditions that predispose to the disease, such as illicit drugs, thrombophilic tendency, aortic surgery or cardiac bypass, vasculitis, major cardiovascular episode accompanied by hypotension or an obstructing lesion of the colon.

Colonoscopy is the test of choice. However, with the exception of colonic gangrene, neither endoscopic nor histological findings are specific. Colonoscopy should be done within 48 hours

because the lesion may be quickly reversible. The typical colonoscopic finding is, in the early stage, hemorrhagic nodules represent bleeding into submucosa. Later segmental erythema with or without ulcerations and bleeding may be observed. A single longitudinal ulcerated or inflamed colon strip represents the characteristic “single stripe sign”. In more severe ischemia, when transmural infarction of the bowel wall occurs, the mucosa appears graygreen or black over a significant area. Pseudopolyps and pseudomembranes may also coexist.

The keys of endoscopic finding of ischemic colitis includes segmental distribution, clear delineation between affected and normal mucosa, watershed area involved more frequently, rectum sparing and rapid resolution on serial examinations.

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