

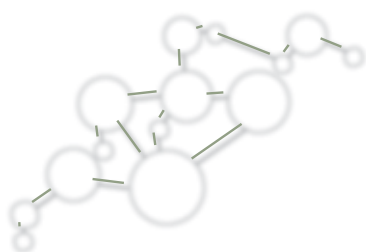
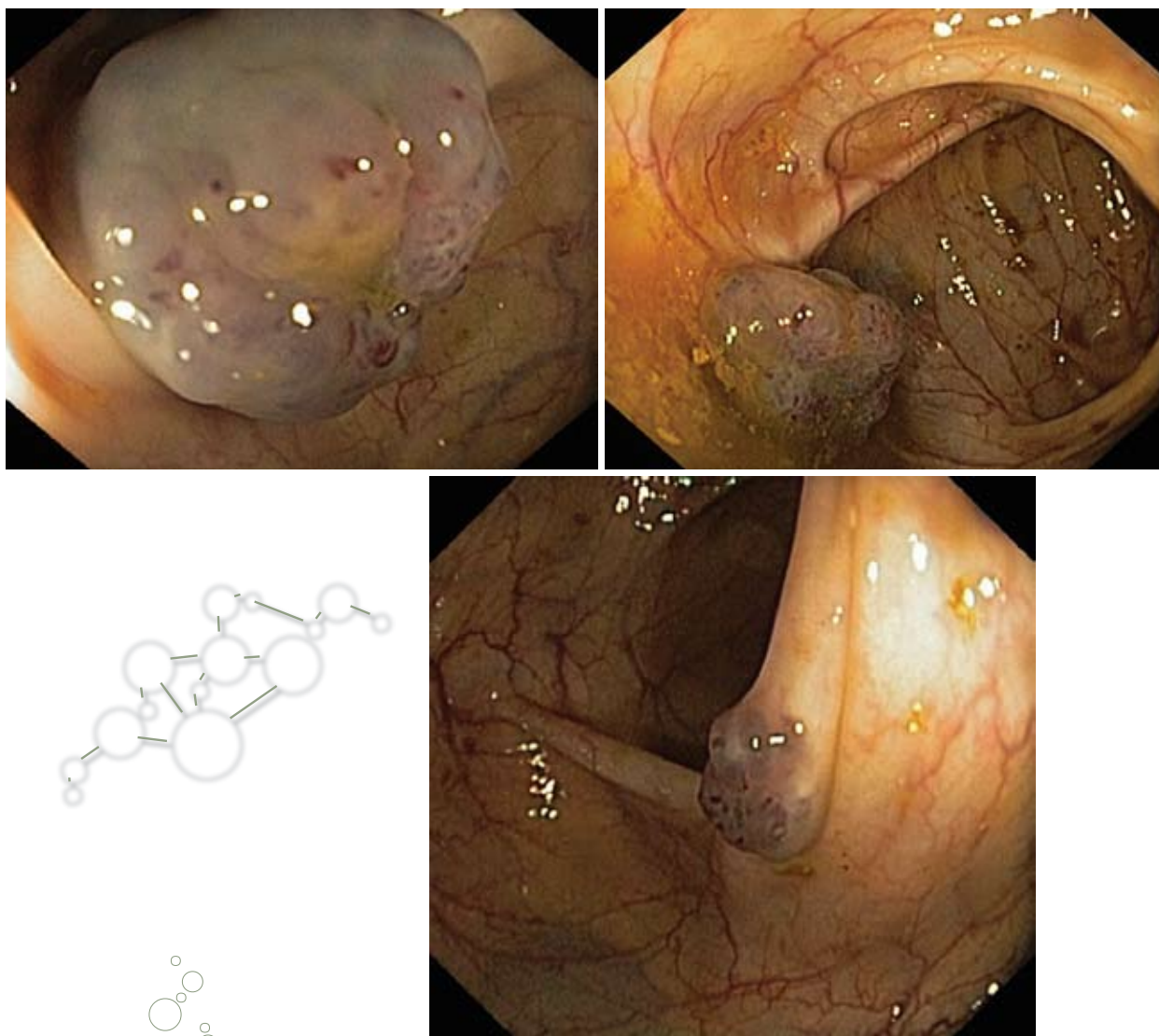
Case 5

Boonlert Imraporn, MD.

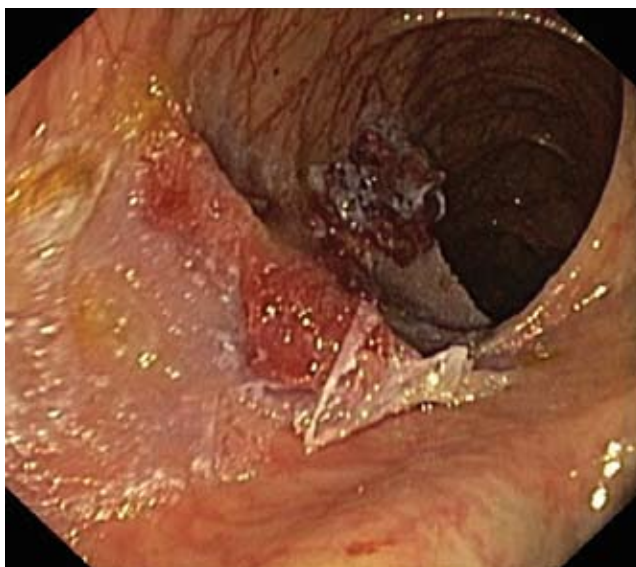
Sombat Treeprasertsuk, MD.

A 30 years old female, presented with chronic iron deficiency anemia with positive fecal occult blood test.

Colonoscopy was done and showed as figures.

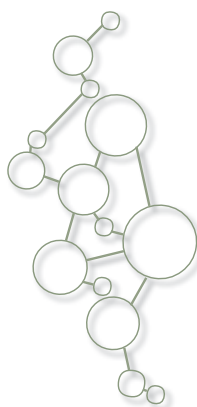


The colonoscopy showed multiple violaceous polypoid mass. The diagnosis is Blue rubber bleb nevus syndrome. In this case, she had no abnormal skin lesions. She was treated with glue injection as shown in picture.



Discussion

These lesions are not hemangiomas but rather venous malformations. This syndrome mainly involves skin and gastrointestinal tract and most occur sporadically. The classic skin lesion is emptied with digital compression to leave a “wrinkle scrotum” behind, and filled upon release to become like a “rubber nipple”. In addition skin lesion is tender and hyperhydrosis. Gastrointestinal lesions commonly involve small intestine and cause occult bleeding.



Case 6

Sukprasert Jutaghokiat, MD.

Sombat Treeprasertsuk, MD.

A 26 years old male, presented with recurrent bloody diarrhea for 6 months.

Colonoscopy was done and showed as pictures



The colonoscopy showed multiple aphthoid ulcer involving terminal ileum and ileocecal valve.

The differential diagnosis are ileal and ileocecal ulcer such as tuberculosis, Crohn's disease, Behcet disease, NSAIDs induced ulcer.

In this case, pathology confirmed Crohn's disease and his symptoms markedly improved with corticosteroid treatment.

Discussion

Crohn's disease is a relapsing, transmural inflammatory disease of the gastrointestinal mucosa that can affect the entire gastrointestinal tract from the mouth to the anus¹. At diagnosis, the disease is located in the terminal ileum in 47%, the colon in 28%, the ileocolon in 21%, and the upper gastrointestinal tract in 3%². The clinical presentation is largely dependent on disease location and can include diarrhea, abdominal pain, fever, clinical signs of bowel obstruction, as well as passage of blood or mucus or both. No definitive diagnostic test exists for Crohn's disease. Instead, the diagnosis is made on the basis of history and physical examination, supplemented with objective findings from endoscopic, radiological, laboratory, and histological studies.

References

1. Baumgart DC, Sandborn WJ. Inflammatory bowel disease: clinical aspects and established and evolving therapies. *Lancet* 2007;369:1641-57.
2. Louis E, Collard A, Oger AF, Degroote E, Aboul Nasr El Yafi FA, Belaiche J. Behaviour of Crohn's disease according to the Vienna classification: changing pattern over the course of the disease. *Gut* 2001;49:777-82.



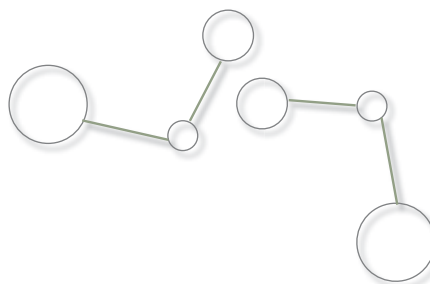
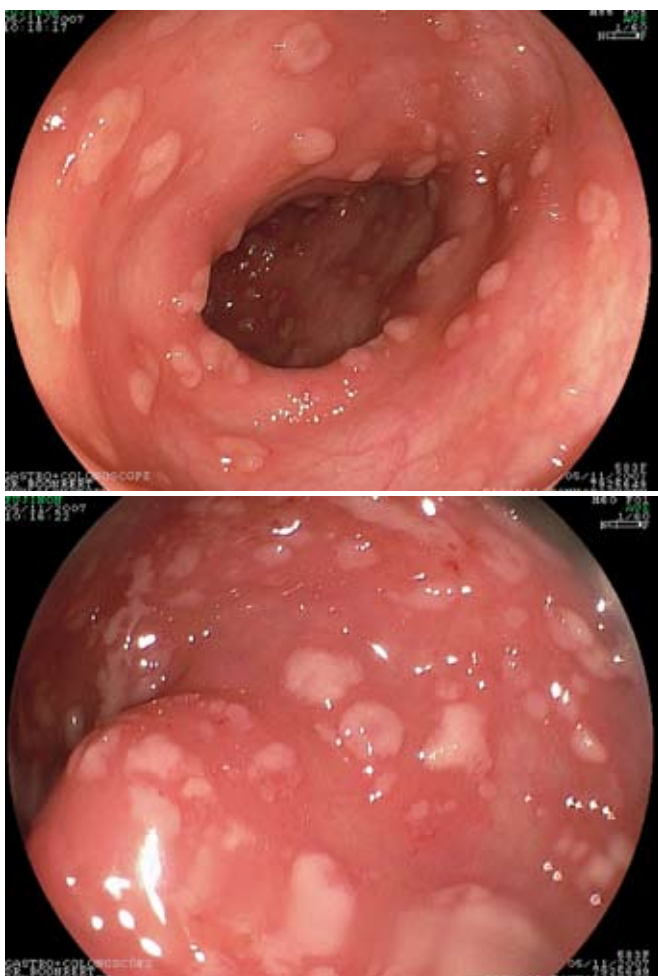
Case 7

Sukprasert Jutaghokiat, MD.

Sombat Treeprasertsuk, MD.

A 35 years old female, presented with watery diarrhea for 2 weeks. She was just discharged from the hospital one week before diarrhea. Her underlying disease was T cell lymphoma with complete course of chemotherapy.

Colonoscopy was done and showed as pictures.



In this case, pathology confirmed pseudomembranous colitis. She was treated with oral vancomycin for two weeks. Her symptoms markedly improved after treatment.

Discussion

The diagnosis of *C. difficile* associated diarrhea depends on presence of diarrhea and detection of toxins produced by *C. difficile*. Symptoms usually start during antibiotic treatment or shortly afterwards. Symptoms can be delayed by a few weeks.

Another systematic review identified clindamycin, cephalosporins, and penicillins as the classes of antibiotics most associated with *C. difficile* associated diarrhoea¹. Therapy for patients with *C. difficile* associated diarrhea comprises supportive measures (adequate fluid and electrolyte replacement), withdrawal of current antibiotic therapy if possible and antibiotic treatment to eradicate *C. difficile*. Standard first line antibiotic therapy is metronidazole 400 mg administered orally three times a day. An alternative is oral vancomycin 125 mg. four times a day, or at a higher dose for severe episodes. Recurrence can occur in up to one third of cases.

Reference

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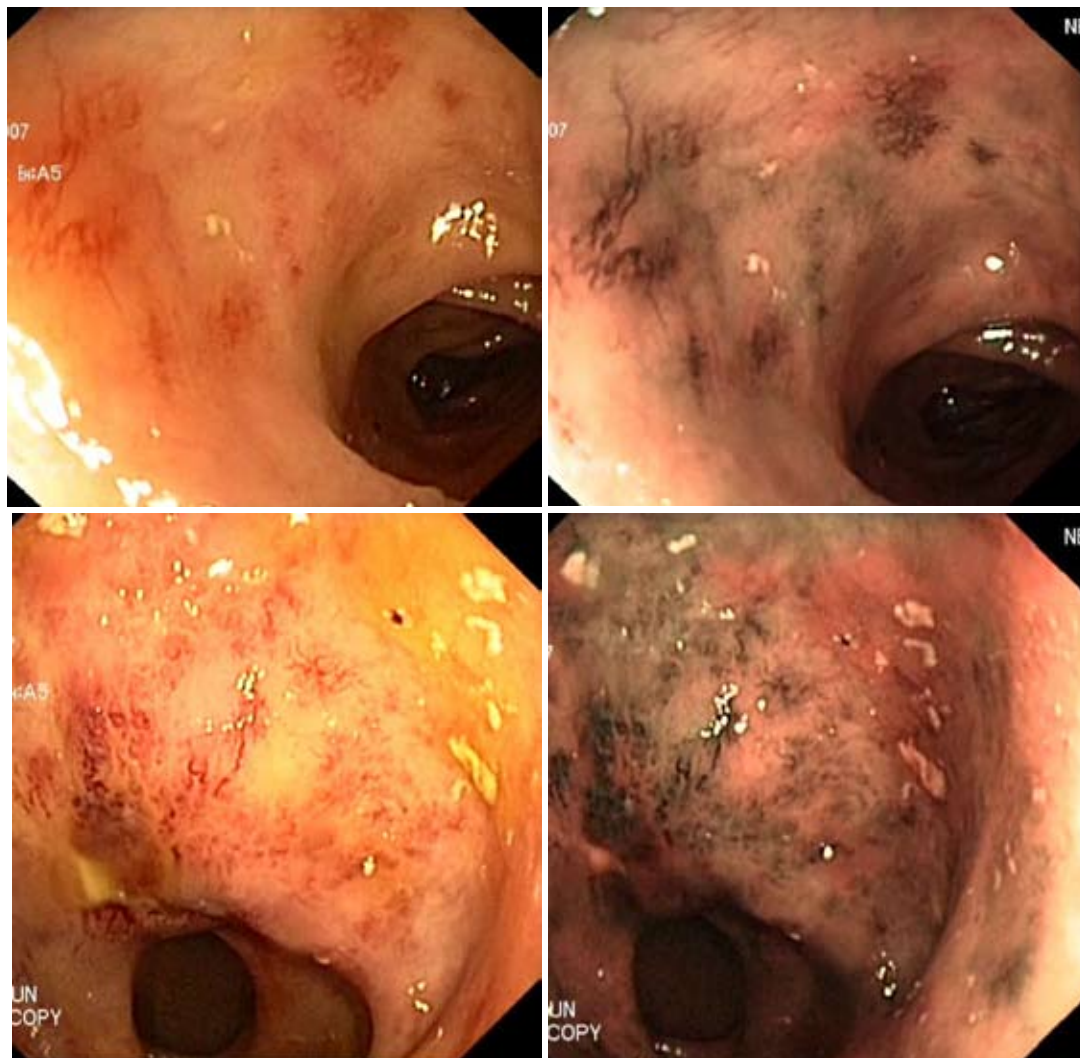


Case 8

Boonlert Imraporn, MD.

Rungsun Rerknimitr, MD.

A 70 years old presented with recurrent hematochezia for one year.



In this case, her underlying disease is cervical cancer post radiation previous 20 years. Bleeding was stopped by argon plasma coagulation as shown in pictures below.



Discussion

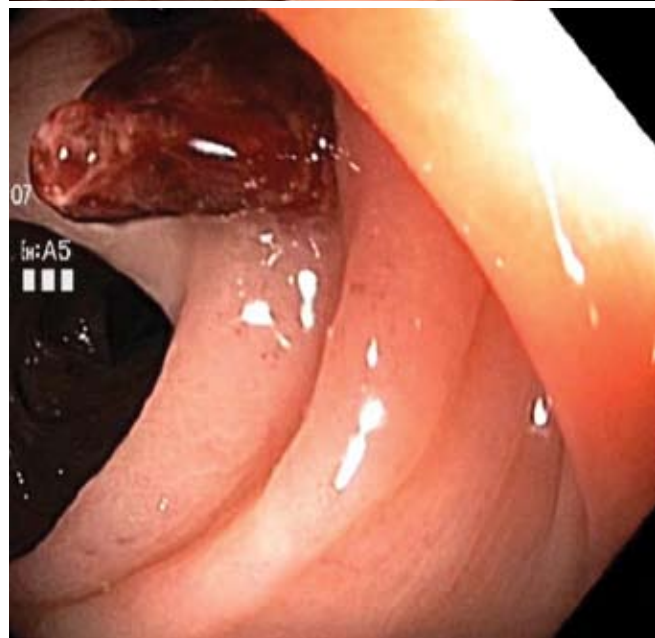
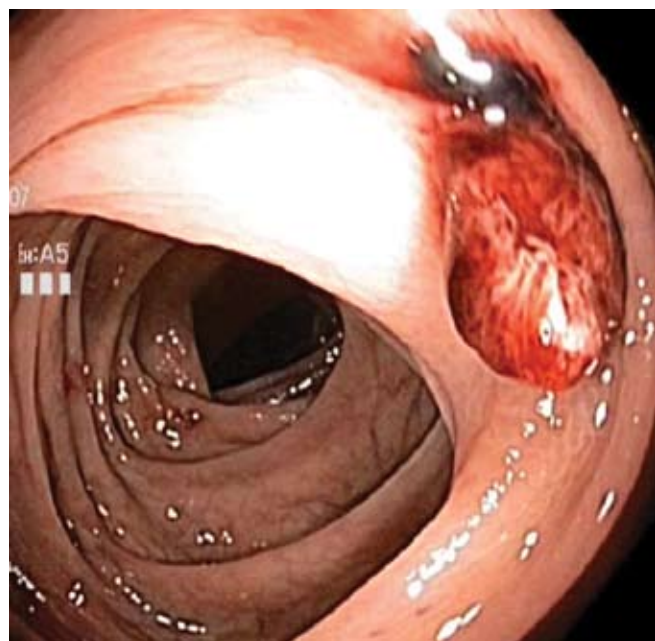
Chronic radiation enteritis tends to be chronic and progressive which typically occur at least 6 months after radiotherapy. The prevalence rate is about 5-15%. It can cause significant morbidity. The prominent histopathologic findings of chronic radiation injury include vascular sclerosis, fibrosis of intestinal wall and diffuse collagen deposit. Factors contributing to chronic radiation enteritis are older age, radiation dose, fraction size, postoperative irradiation, collagen vascular disease and concurrent chemotherapy.



Case 9

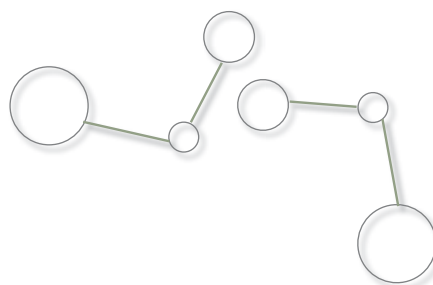
Sukprasert Jutaghokiat, MD.

Rungsun Rerknimitr, MD.

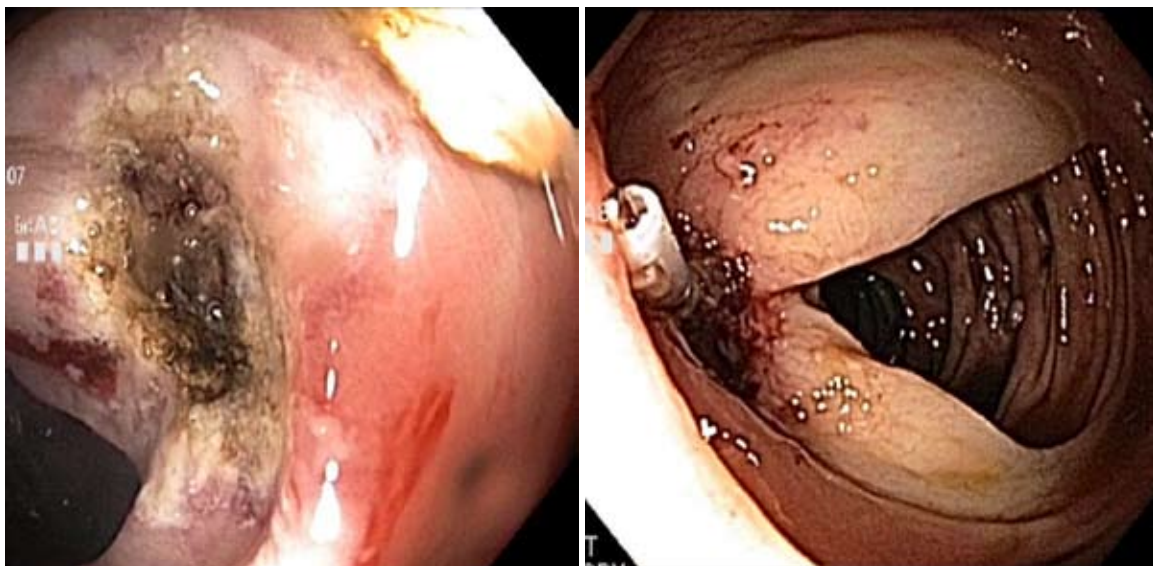


A 50 years old male presented with acute lower GI bleeding. He has no underlying disease. His vital sign is stable.

Colonoscopy was done and showed as pictures.



In this case, he was first treated with argon plasma coagulation and then bleeding stopped. However, recurrent bleeding occurred, therefore hemoclip was applied without complication. The pictures showed post endoscopic treatment.



Discussion

Significant diverticular bleeding occurs in 3-5% of patients with diverticulosis and accounts for approximately 40% of lower haemorrhage episodes. As diverticula herniated, the vasa recta penetrating through the circular muscle layer are displaced to the dome of the diverticulum where they are exposed to injury in the luminal aspect. In more than 50% of diverticular bleeding cases requiring surgery, the lesion is right-sided^{1,2}. Non-steroidal anti-inflammatory drugs may be an important risk factor for diverticular bleeding^{2,3}. Bleeding ceases spontaneously in 75-80% of the patients, out of whom 25-35% will present rebleeding⁴. Bleeding recurred in 53% of patients with stigmata of bleeding treated medically, one-third of which required emergency surgery. No early or delayed recurrence (after a median follow-up of 2 years) took place in the patients who underwent endoscopic haemostatic treatment⁵.

References

1. Meyers MA, Alonso DR, Gray GF, Baer JW. Pathogenesis of bleeding colonic diverticulosis. *Gastroenterol* 1976;71:577-583.
2. Foutch G. Diverticular bleeding: Are non-steroidal anti-inflammatory drugs risk factors of hemorrhage and can colonoscopy predict outcome for patients? *Am J Gastroenterol* 1995;90:1780-4.
3. Lanas A, Sekar MC, Hirschowitz BI. Objective evidence of aspirin use in both ulcer and nonulcer upper and lower gastrointestinal bleeding. *Gastroenterol* 1992;103:862-869.
4. Elta G. Urgent colonoscopy for acute lower gastrointestinal bleeding. *Gastrointest Endosc* 2004;59:402-8.
5. Jensen DM, Machicado GA, Jutabha R, Kovacs TO. Urgent colonoscopy for the diagnosis and treatment of severe diverticular hemorrhage. *N Engl J Med* 2000;342:78-82.

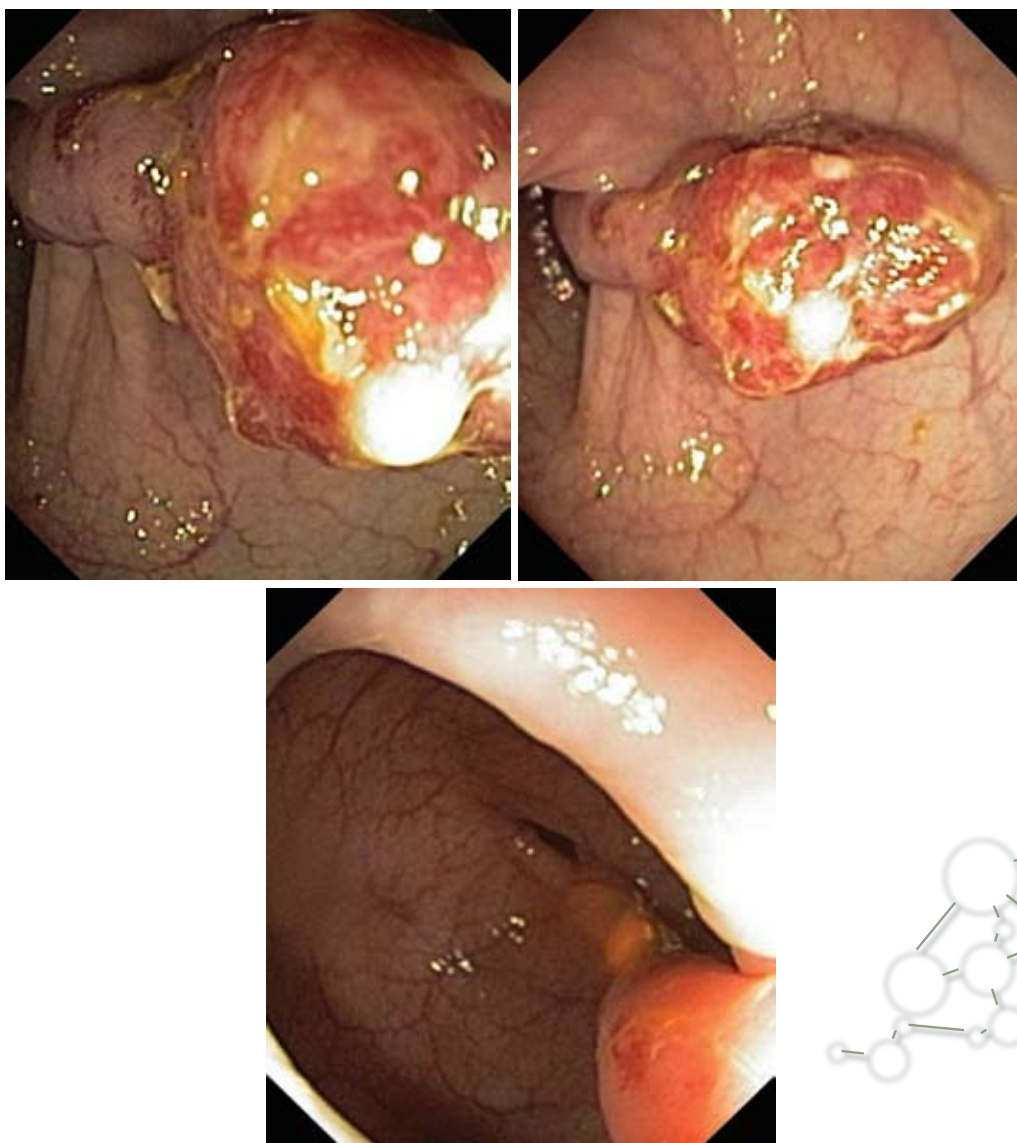
Case 10

Wiriaporn Ridtitid, MD.

Rungsun Rerknimitr, MD.

A 42 years old male presented with intermittent hematochezia for 5 years. Physical examination revealed hyperpigmentation at lips and both palms.

Colonoscopy was done and showed as figure.



The colonoscopy showed large pedunculated polyp with long stalk and erythematous lobulated surface. The diagnosis is Peutz-Jegher syndrome.

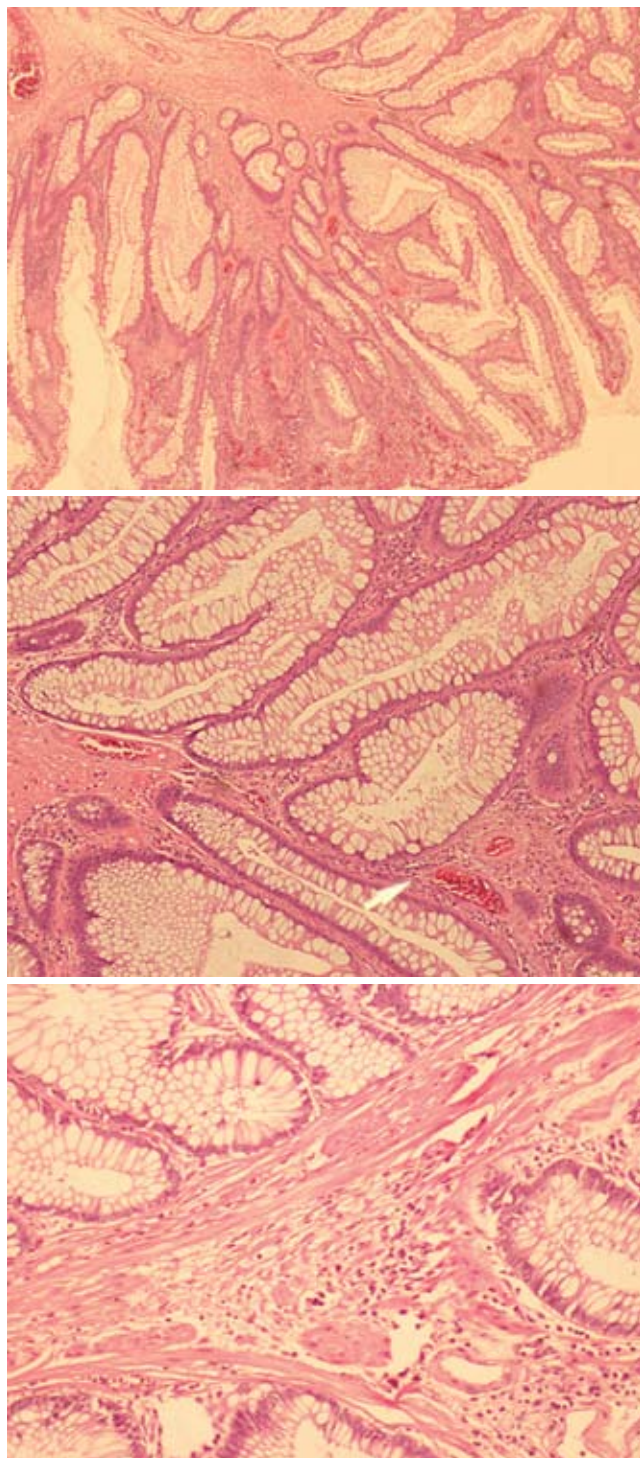
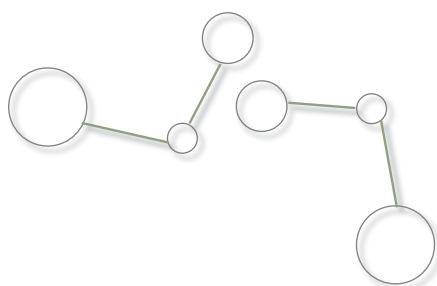
Polypectomy was done and pathologic finding showed hamartomatous polyp (a polypoid lesion composed of ramified colonic mucosa with fibromuscular core) as figure.

Discussion

Colorectal cancer risk is 39% (age of diagnosis at 46 years old)¹. Polyp distribution are in stomach 24%, small bowel 96%, colon 27%, and rectum 24%². Complications are intussusception and obstruction, torsion, infarction and bleeding.

References

1. Lim W, Olschwang S, Keller JJ, et al. Relative frequency and morphology of cancers in STK11 mutation carriers. *Gastroenterol* 2004;126:1788-94.
2. Amos CI, Keitheri-Cheteri MB, Sabripour M, et al. Genotype-phenotype correlations in Peutz-Jeghers syndrome. *J Med Genet* 2004;41:327-33.



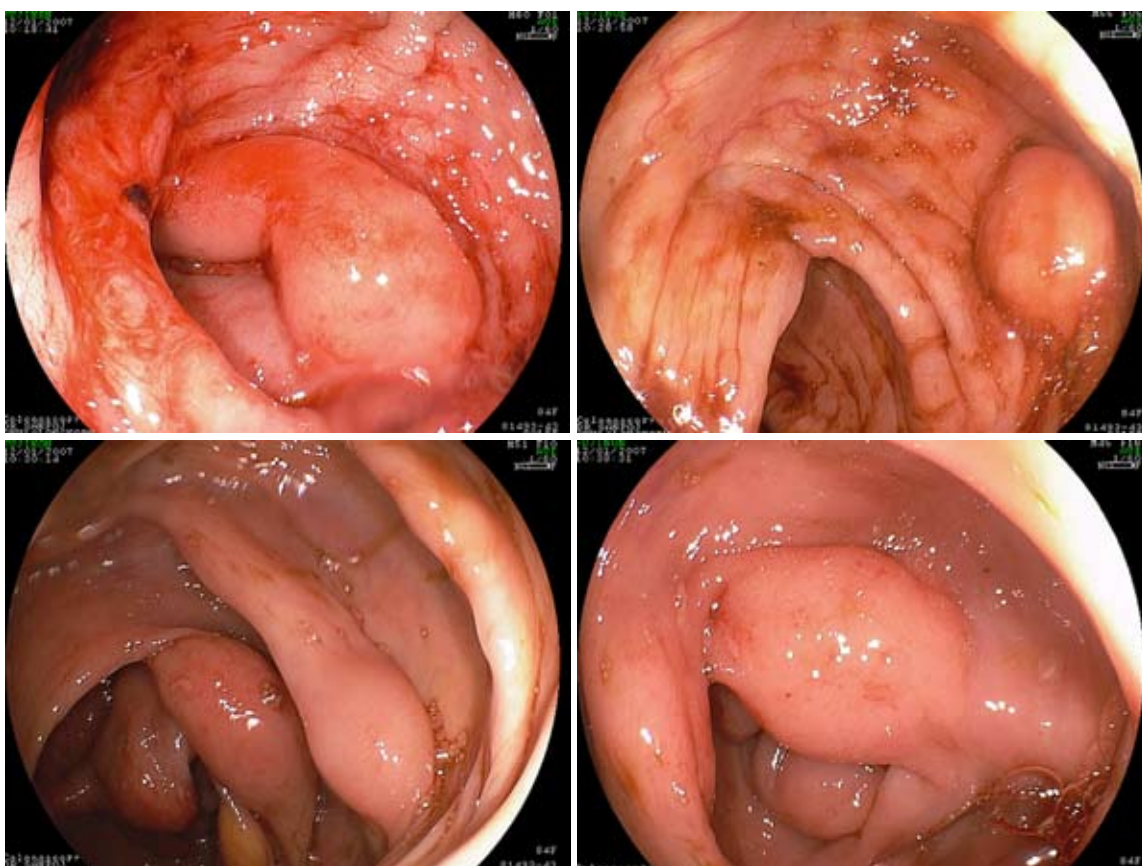
Case 11

Wiriyaporn Riditid, MD.

Rungsun Rerknimitr, MD.

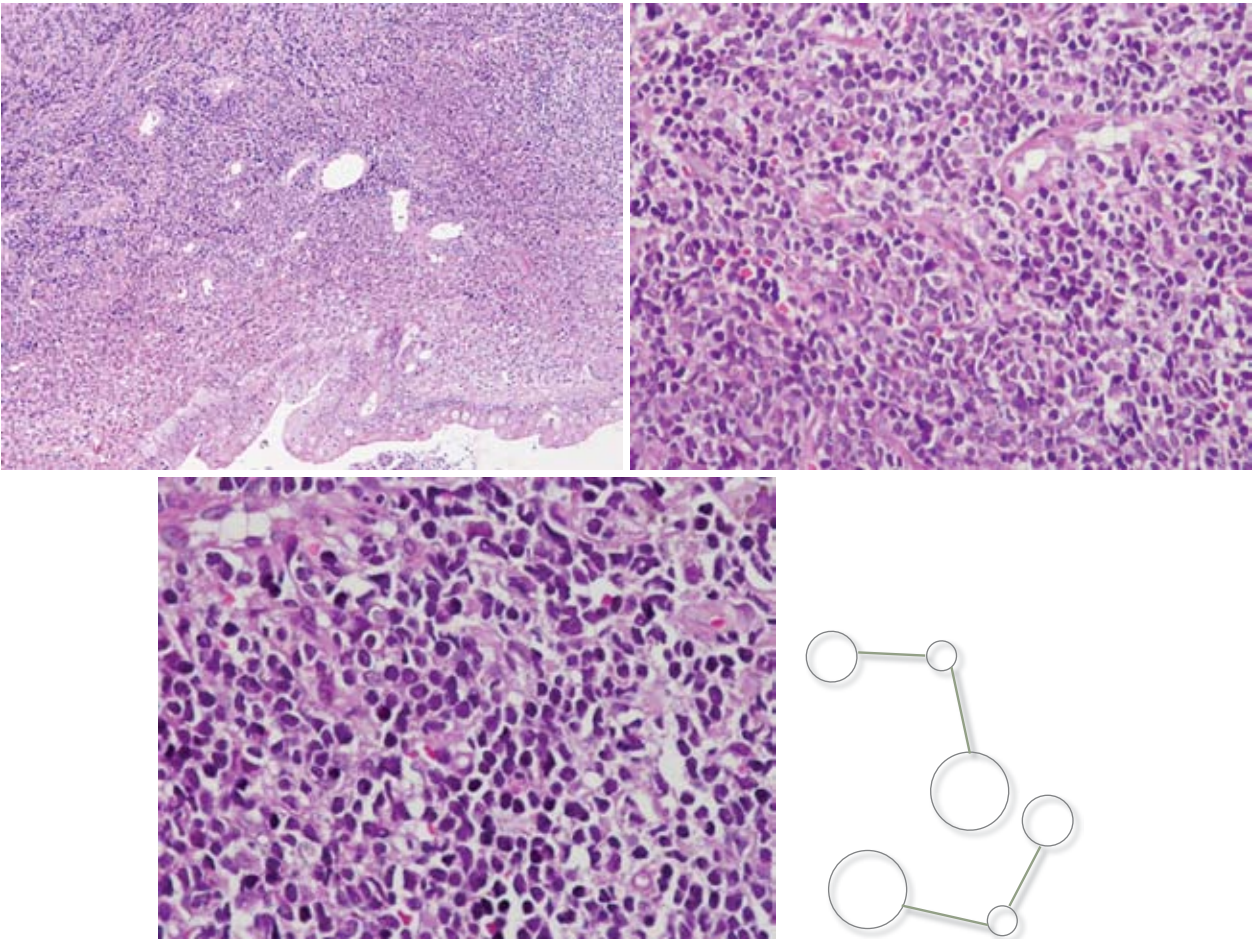
A 85 years old female presented with hematochezia and fatigue for 2 months.

Colonoscopy was done and showed as picture.

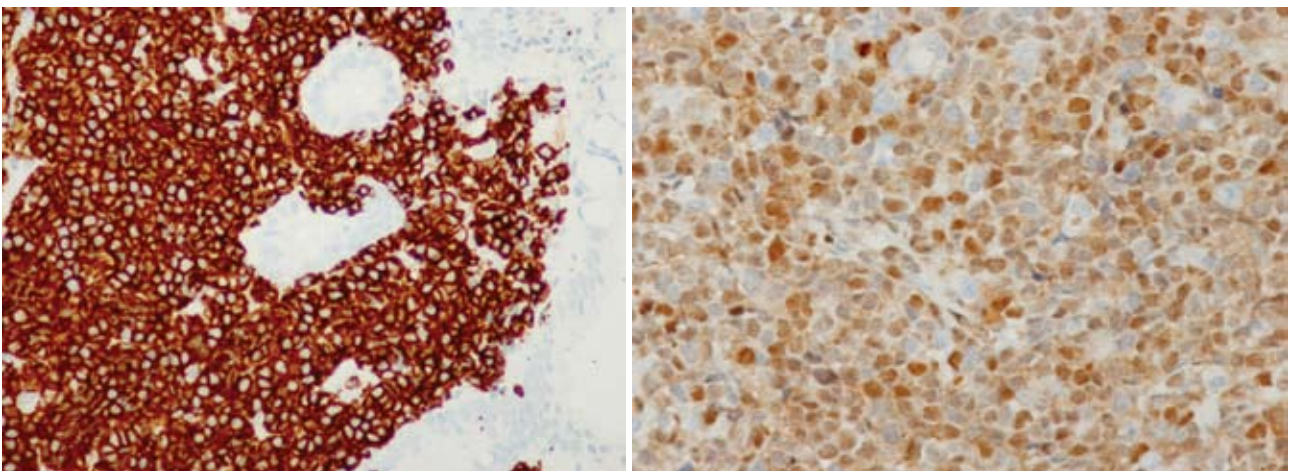


Colonoscopy revealed multiple submucosal mass-like lesions with mucosal erosion on top of these lesions at cecum and ascending colon.

Biopsy was done and pathological finding showed diffuse infiltration by small to medium-sized atypical lymphoid cells involving lamina propria, submucosa, and mucosa as figure.



The diagnosis was highly suspicious for lymphoma. Immunohistochemical study was performed as figure; CD20 and cyclin D1 were positive.



The definitely diagnosis was Mantle cell lymphoma.

Discussion

Mantle cell lymphoma is low-grade B-cell lymphoma. It is found 3-10% of non-Hodgkin lymphoma and 30% of mantle cell lymphoma have gastrointestinal lymphoma¹. It involves colon and small intestine rather than gastric and duodenum².

References

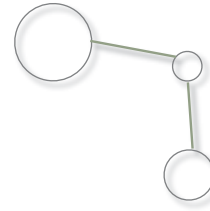
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2. Ferry JA. Lymphoid Tumors of the GI Tract. In, Odze RD, Goldblum JR, Crawford JM, eds. Surgical Pathology of the GI Tract, Liver, Biliary Tract, and Pancreas. Philadelphia, WB Saunders, 2004:523-47.



Case 12

Boonlert Imraporn, MD.

Rungsun Rerknimitr, MD.



A 18 year-old man presented with acute abdominal pain and bloody diarrhea for one week. He also developed fever and rash over both lower extremities.

Colonoscopy was done. Figures of rash and colonoscopic findings were shown below.



Colonoscopy revealed diffuse mucosal swelling with multiple subepithelial hemorrhage and petichiae along entire colon. Typical palpable purpura was seen over both lower extremities. His laboratory investigations showed microscopic hematuria. His diagnosis is Henoch-Schonlein syndrome.

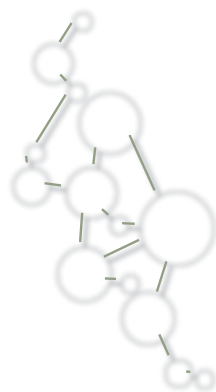
Discussion

Henoch-Schonlein purpura is an IgA-mediated autoimmune vasculitis which mainly occurs in childhood or young adults and involves non-thrombocytopenic purpuric rash, abdominal pain, renal involvement or arthritis. Gastrointestinal involvement occurs in 50-75% of patients who have colicky abdominal pain, vomiting and bleeding. GI bleeding can manifest with occult GI bleeding or melena. Massive gastrointestinal haemorrhage is reported in about 2% of patients. Intussusception,

obstruction or perforation are occasionally reported. The endoscopic findings included redness, swelling, petechiae or haemorrhage, erosions and ulceration of the mucosa. Histology of the mucosal biopsy specimens revealed non-specific inflammation and vasculitis with positive staining for IgA in the capillaries. EGD appears to have the greatest diagnostic utility in patients suspected to have Henoch-Schönlein purpura with GI involvement². Systemic treatment with corticosteroids is sometimes required for severe abdominal pain with suspected bowel ischemia and may also prevent intussusception³.

References

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2. Esaki M, Matsumoto T, Nakamura S, Kawasaki M, Iwai K, Hirakawa K, et al. GI involvement in Henoch-Schönlein purpura. *Gastrointest Endosc* 2002;56:920-3.
3. Bailey M, Chapin W, Licht H, Reynolds JC. The effects of vasculitis on the gastrointestinal tract and liver. *Gastroenterol Clin North Am* 1998;27:747-82, v-vi.



Case 13

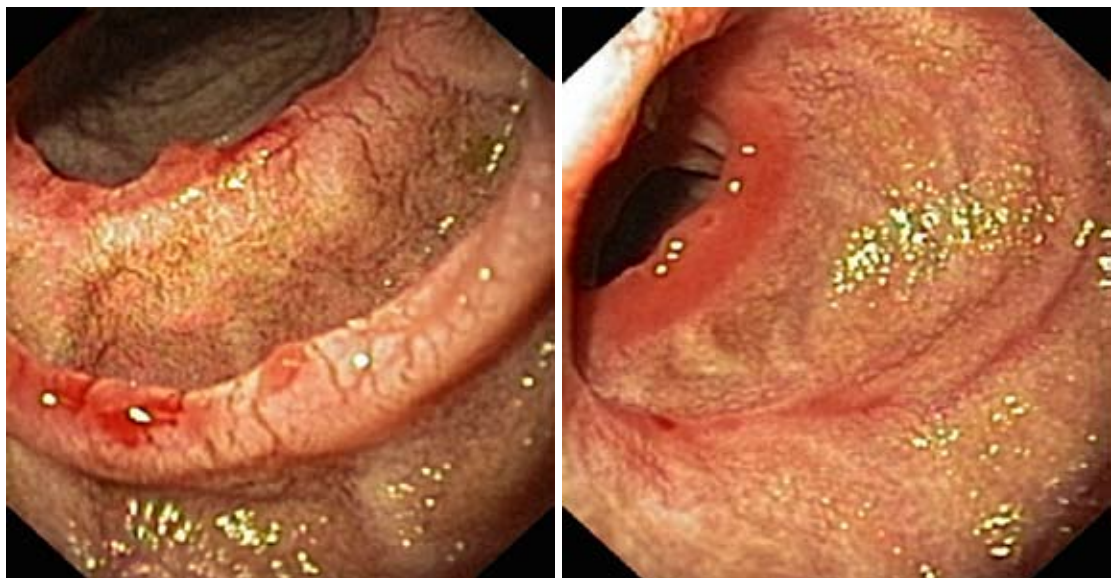
Sukprasert Jutaghokiat, MD.

Rungsun Rerknimitr, MD.

A 65 year-old woman came to the hospital with chronic anemic symptom for 3 months. She also passed melena occasionally. Her underlying diseases were DM type2, hypertension and osteoarthritis. She regularly used diclofenac for her knee problems.

EGD findings were normal.

Colonoscopy was done and showed as figures.



Colonoscopic findings revealed diaphragm like stricture with few ulcer and erosions at right sided colon. Her diagnosis is NSAIDs induced colonic ulcer. NSAIDs was stopped and no recurrent bleeding occurred.

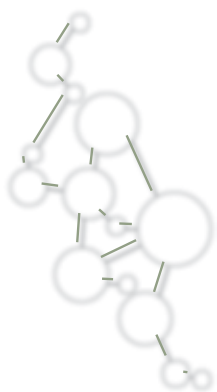
Discussion

The exact pathogenesis of these intestinal damages by NSAIDs remains unknown. Severe stricture which has been referred to as diaphragm-like stricture has been known to be the most characteristic feature of bowel lesions induced by NSAIDs^{1,2}. The apex at these diaphragm-like strictures often contains an area of ulceration with nonspecific acute or chronic inflammations³ and usually located in ileocecal region. However differential diagnosis of ulcer at ileocecal region involves infectious causes

such as yersinosis, campylobacter, amebiasis and tuberculosis as well as non-infectious causes such as Crohn's disease or Behcet's disease.

References

1. Bjarnason I, Hayllar J, MacPherson AJ, Russell AS. Side effects of nonsteroidal anti-inflammatory drugs on the small and large intestine in humans. *Gastroenterol* 1993;104:1832-47.
2. Bjarnason I, Price AB, Zanelli G, Smethurst P, Burke M, Gumpel JM, et al. Clinicopathological features of nonsteroidal antiinflammatory drug-induced small intestinal strictures. *Gastroenterol* 1988;94:1070-4.
3. Lang J, Price AB, Levi AJ, Burke M, Gumpel JM, Bjarnason I. Diaphragm disease: pathology of disease of the small intestine induced by non-steroidal anti-inflammatory drugs. *J Clin Pathol* 1988;41:516-26.
4. Kurahara K, Matsumoto T, Iida M, Honda K, Yao T, Fujishima M. Clinical and endoscopic features of nonsteroidal anti-inflammatory drug-induced colonic ulcerations. *Am J Gastroenterol* 2001;96:473-80.



Case 14

Boonlert Imraporn, MD.

Rungsun Rerknimitr, MD.

A 60 year-old man complained chronic constipation for 4 years. He had no weight reduction. He requested for colon cancer screening as well due to history of colon cancer of his mother.

Colonoscopy with NBI magnification was done and showed as figures.



A

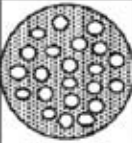











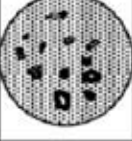

B

White light colonoscopy (picture A) showed single small sessile polyp size 0.5 cm. in diameter. NBI with magnification image (picture B) showed regular round pit which classified as type I pit pattern according to Kudo classification (shown in table below).

The sessile polyp was removed and pathology confirmed hyperplastic polyp.

Discussion

Detection of neoplastic polyps is important because of their well-known relationship with colorectal cancer. Colonic biopsy is still standard approach for histological diagnosis of colonic polyps in order to differentiate non-neoplastic polyps from neoplastic polyps. Kudo verified the feasibility of examining the pit pattern of colonic polyps for differentiation of two kinds of polyps via magnifying endoscopy with indigo carmine dye contrast¹ as shown in the table below. Narrow-banded width imaging with magnification was applied as well with good comparability and high diagnostic yields².

Type	Schematic	Endoscopic	Description	Suggested Pathology	Ideal Treatment
I			Round pits.	Non-neoplastic.	Endoscopic or none.
II			Stellar or papillary pits.	Non-neoplastic.	Endoscopic or none.
III _s			Small tubular or round pits that are smaller than the normal pit.	Neoplastic.	Endoscopic.
III _l			Tubular or roundish pits that are larger than the normal pits.	Neoplastic.	Endoscopic.
IV			Branch-like or gyrus-like pits.	Neoplastic.	Endoscopic.
V _s			Irregularly arranged pits with type III _s , III _l , IV type pit patterns.	Neoplastic (invasive).	Endoscopic or surgical.
V _n			Non-structural pits.	Neoplastic (massive submucosal invasive).	Surgical.

Kudo's classification

References

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2. Su MY, Hsu CM, Ho YP, Chen PC, Lin CJ, Chiu CT. Comparative study of conventional colonoscopy, chromoendoscopy, and narrow-band imaging systems in differential diagnosis of neoplastic and nonneoplastic colonic polyps. Am J Gastroenterol 2006;101:2711-6.

Case 15

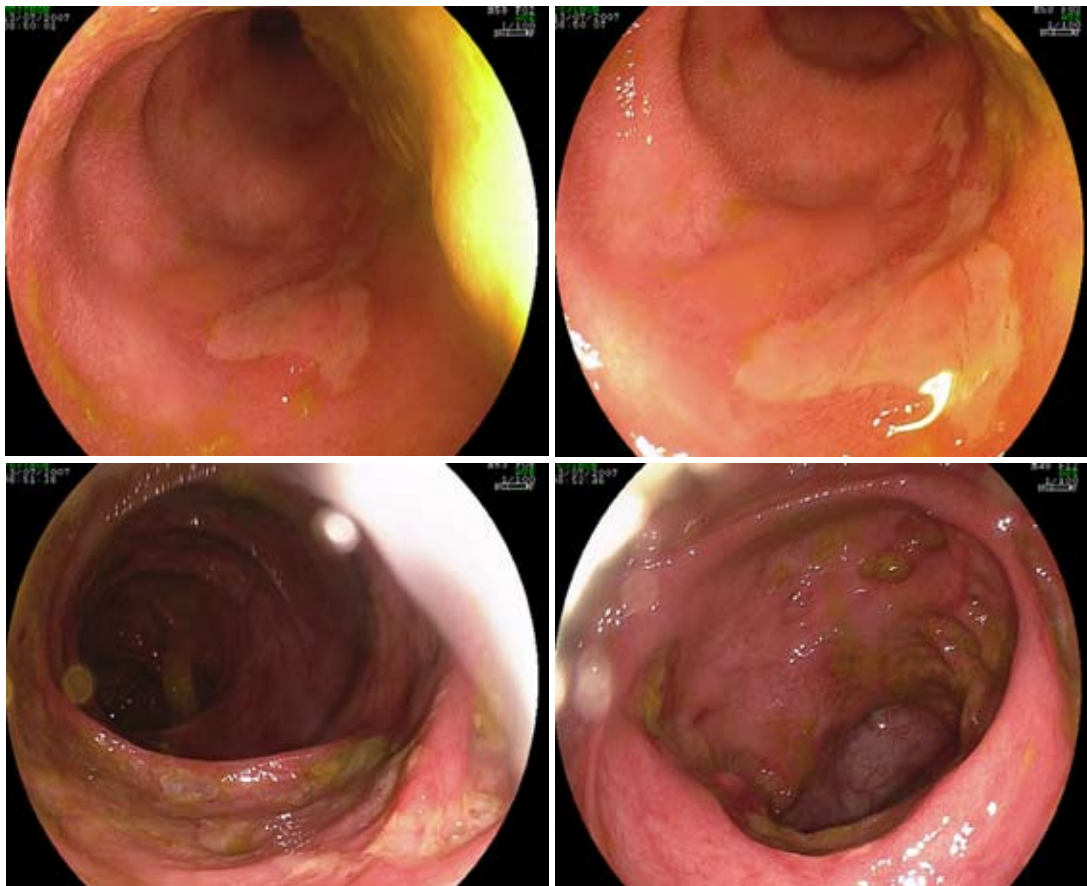
Nathavut Sirimontaporn, MD.

Rungsun Rerknimitr, MD.

A Thai 55 years old presenting with symptoms of intermittent chronic diarrhea for 4-5 months with history of prolonged steroid uses.

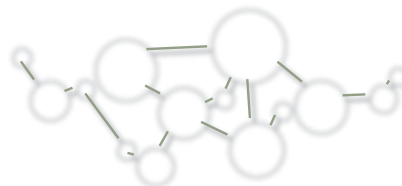
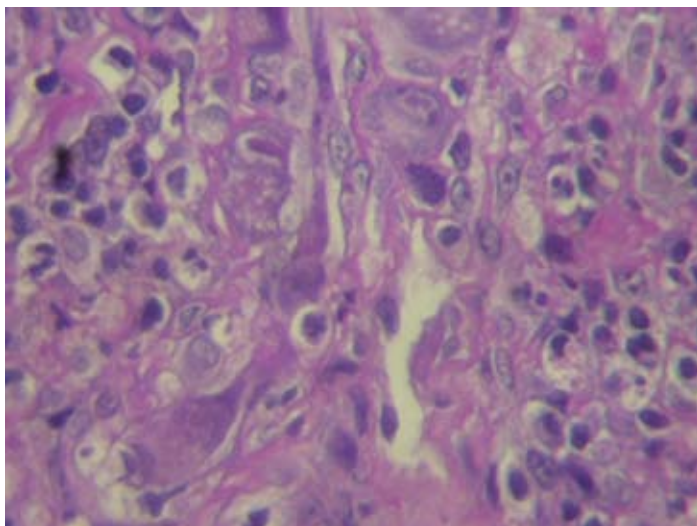
Stool exam revealed WBC 50-100, No RBC and parasite was negative

Colonoscopy was shown as pictures



Pathological findings : Colonic mucosa with ulceration filled with proliferated vessels and mixed inflammatory cell infiltration. Disperse cells containing **intranuclear inclusion** with **perinuclear halo** are detected.

Diagnosis : Cytomegalovirus Colitis.



Discussion

CMV usually acquired in infancy or young adulthood, in normal host, CMV primary infection usually asymptomatic or could resemble an infectious mononucleosis related to EBV¹. But in the immunocompromised status defined as HIV patients, post-transplant patients or immunosuppressive drugs user, CMV infection usually present as organ specific clinically significant disease. Target organs of CMV include the lung, retina, liver, and gastrointestinal tract². The most common GI sites are the esophagus and colon. Lesions of CMV colitis in endoscopy might show sub-epithelial hemorrhage, erosion or one to multiple shallow ulcerations. The findings might appear as resemble as in inflammatory bowel disease and CMV colitis may exclusively affect the right colon in up to 30% so flexible sigmoidoscopy with biopsy will have a low yield in these circumstances³.

The treatment of CMV colitis with Ganciclovir (the dosage of 5 mg./kg. intravenously every 12 hr) for 2-3 weeks is recommended. After 3-5 days, a switch to oral valganciclovir for the remainder of the 2-3 weeks course can be considered⁴.

References

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2. Goodgame RW. Gastrointestinal cytomegalovirus disease. *Ann Intern Med* 1993;119:924-35.
3. Streetz KL, Buhr T, Wedemeyer H, et al. Acute CMV-colitis in a patient with a history of ulcerative colitis. *Scand J Gastroenterol* 2003;38:119-22.
4. Rowshani AT, Bemelman FJ, van Leeuwen EM, et al. Clinical and immunologic aspects of cytomegalovirus infection in solid organ transplant recipients. *Transplantation* 2005;79:381-6.

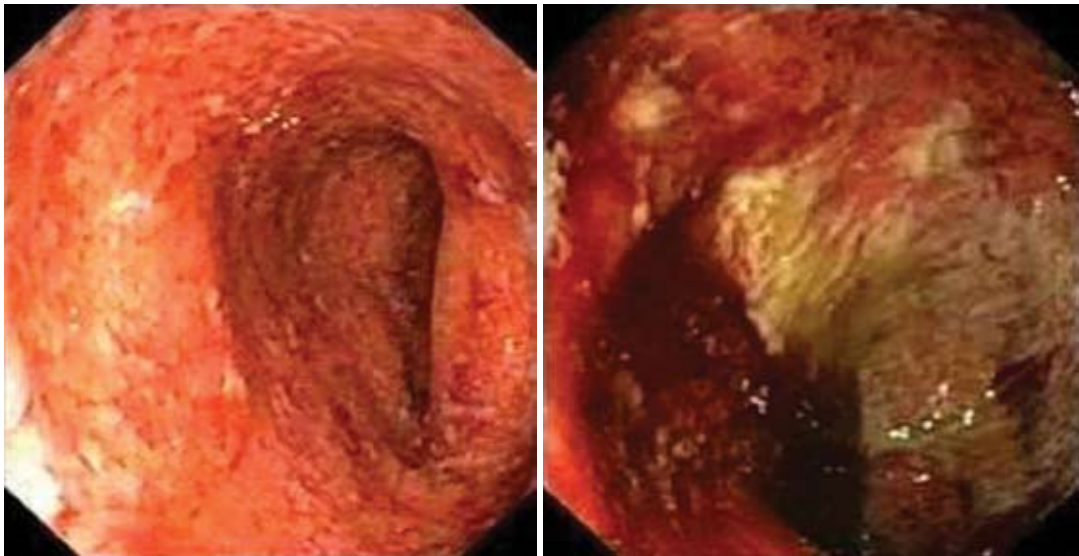
Case 16

Boonlert Imraporn, MD.

Rungsun Rerknimitr, MD.

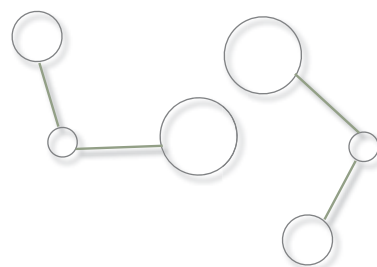
A 30 year-old man developed chronic mucus bloody diarrhea for 2 months. He also had fever and non significant weight loss. Laboratory findings revealed only microcytic anemia and inflammatory cells in stool. No organisms were seen.

Colonoscopy was done and shown as figures.



Colonoscopic findings revealed severe diffuse ulceration with subepithelial hemorrhage, loss of vascularity, contact bleeding and exudates along rectum through cecum without skipped lesions and ileal involvement.

Colonic biopsy was done and pathology demonstrated acute and chronic colitis without organisms. His diagnosis was severe ulcerative pancolitis.



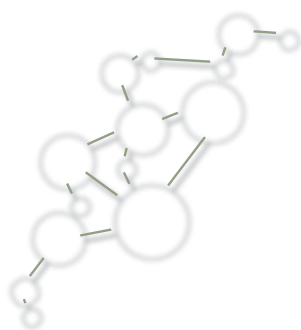
Discussion

Ulcerative colitis is a relapsing non-transmural inflammatory disease that is restricted to colon. Classification is applied anatomically as proctitis, left-sided colitis and pancolitis.

Ulcerative colitis is a clinical diagnosis, confirmed by objective findings from endoscopic and histological studies. Another causes including infections and non-infections should be ruled out. Severe active ulcerative colitis usually requires corticosteroids for induction of remission. After induction of remission, medications including 5-amino salicylates, azathioprine, 6-mercaptopurine or infliximab can be used for maintenance.

References

1. Baumgart DC, Sandborn WJ. Inflammatory bowel disease: clinical aspects and established and evolving therapies. *Lancet* 2007;369:1641-57.
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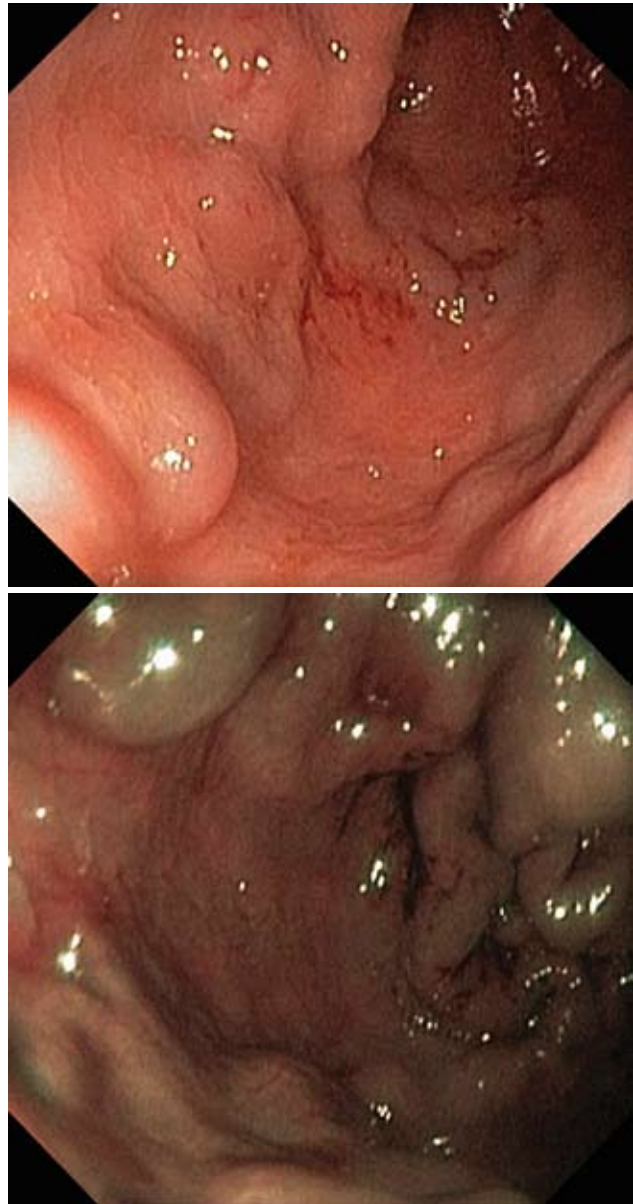
Case 17

Roongruedee Chaiteerakij, MD.

Rungsun Rerknimitr, MD.

A 65 year-old male with underlying HBV cirrhosis. He developed recurrent episodes of massive hematochezia.

Colonoscopy was performed as figured.



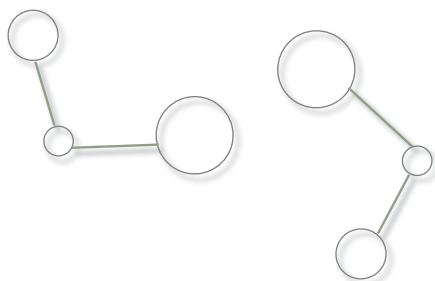
The colonoscopic finding showed dilated tortuous bluish submucosal lesions in the rectum. Rectal varices were diagnosed. Endoscopic sclerotherapy with N-butyl-2-cyanoacrylate was successfully done.

Discussion

Anorectal varices are one of the most common sites for colorectal varices which can be found in 40% of patients with portal hypertension who undergo colonoscopy¹. It should not be confused with hemorrhoids, which are vascular communication of venules and arterioles. Bleeding anorectal varices, the second most common site of ectopic varices following the varices at enterostomy site, occur uncommonly but can be massive and fatal². The triggering factor is not clearly understood, however, more advanced varices such as those with red color sign are at risk for bleeding³. Standard treatment for bleeding rectal varices has not been established. Successful hemostasis with endoscopic band ligation⁴, sclerotherapy with N-butyl-2-cyanoacrylate⁵ and transjugular embolization with TIPS⁶ and IMV ligation had been reported.

References

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2. Herman BE, Baum S, Denobile J, et al. Massive bleeding from rectal varices. *Am J Gastroenterol* 1993;88:939-42.
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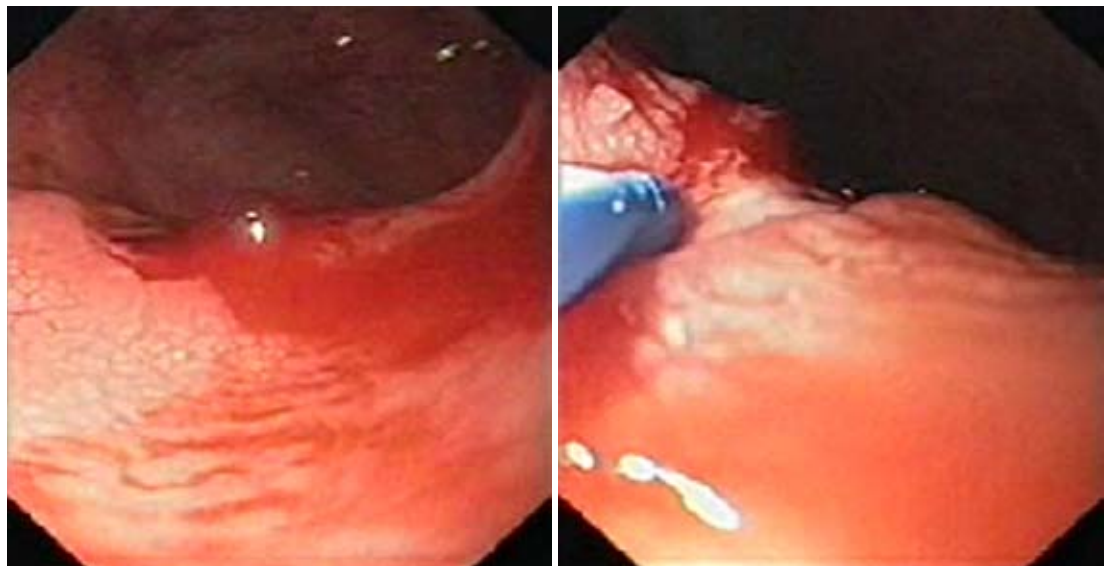


Case 18

Roongruedee Chaiteerakij, MD.

Rungsun Rerknimitr, MD.

A 70-year-old Thai male underwent screening colonoscopy. Pedunculated polyp 1 cm. was found and excised using a snare wire. Active bleeding from the polyp stalk was ensued following snare polypectomy as figure A shown. The bleeding was initially controlled by diluted epinephrine injection (figure B). What is the next step of management?



A

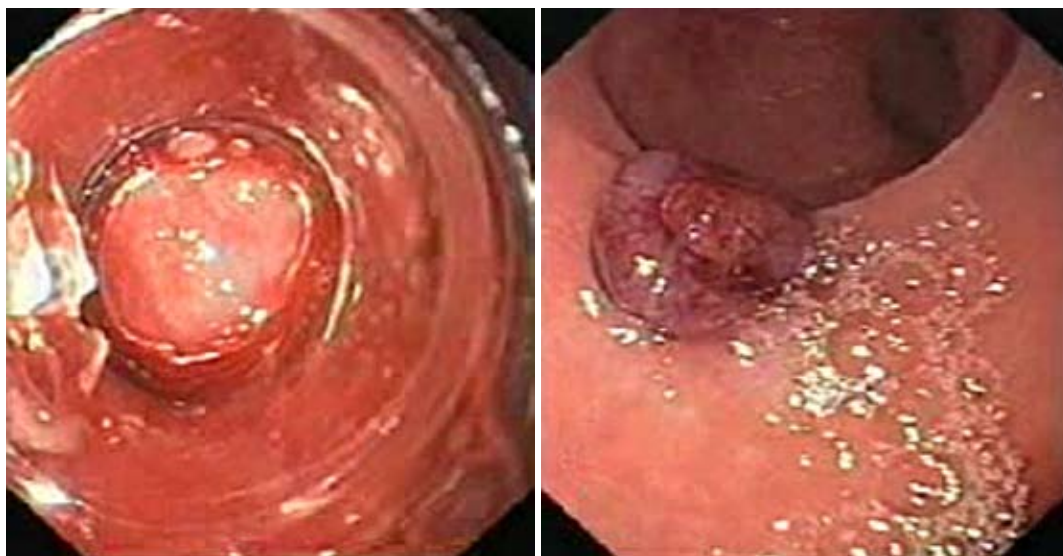
B

Discussion

Bleeding is the most common complication of polypectomy, occurring in 0.3-6% of this procedure^{1,2}. It can occur immediately following polypectomy or be delayed from hours up to 4 weeks^{1,2}. Postpolypectomy bleeding can range from persistent oozing to dramatic arterial hemorrhage (a “pumper”), fortunately, most can be controlled endoscopically. The risk is related to type and size of polyp, technique of polypectomy, and the coagulation status of the patients². The risk of immediate bleeding is increased when blended current (rather than pure coagulation current) is used and more likely occur with large polyps, those with a thick stalk, and sessile polyp¹. Immediate bleeding after excision of pedunculated polyps can be stopped by regrasping the stalk with a snare and holding tightly for five minutes. This maneuver can always successfully stop bleeding. After active bleeding is controlled, endoclips or heater probe can be applied for permanent control of bleeding. Rubber band ligation can also be used³. Bleeding from

excision of sessile polyp can be controlled by diluted epinephrine injection, followed by applying the thermal or argon plasma coagulator (APC) probe or hemoclips. The patients should be observed at least for a few hours and if the hemodynamic remain stable, they can be discharged with careful instructions for recurrent bleeding⁴. Antiplatelets and NSAIDs should be discontinued for 7-10 days if possible and coumadin should be withheld for as long as possible, preferably at least 48-72 hours⁵.

In this present case, the bleeding was initially controlled by diluted epinephrine injection and then band ligation was used for permanent control of bleeding (figure C and D). The patients was discharged without recurrent bleeding.



C

D

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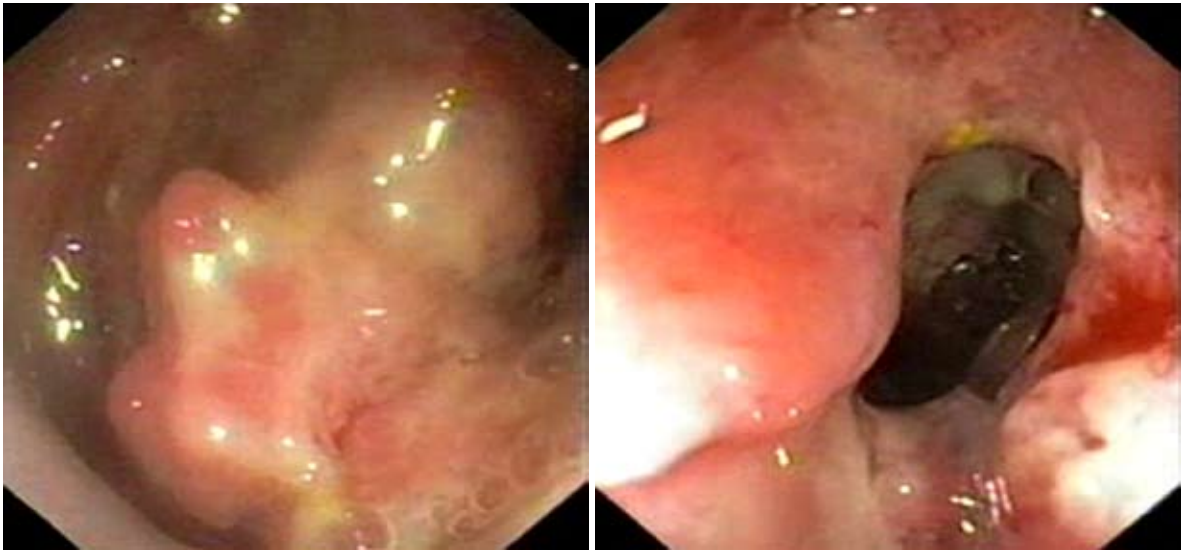
Case 19

Roongruedee Chaiteerakij, MD.

Rungsun Rerknimitr, MD.

A 78 year-old women presented with abdominal pain, bowel habit change and weight loss for 2 months. Physical exam revealed mild anemia, otherwise were unremarkable.

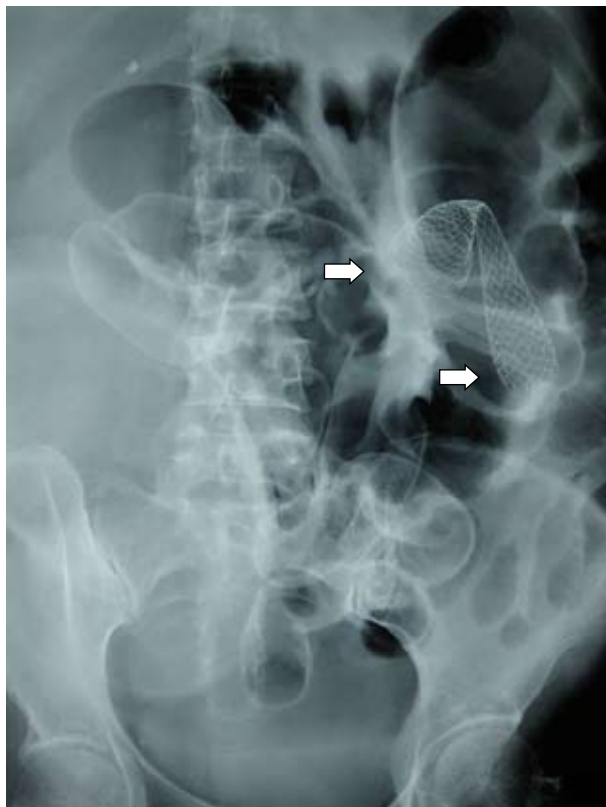
The colonoscopy was performed.



The endoscopic finding was bulky polypoid mass at sigmoid colon with circumferential narrowing causing nearly obstructing the lumen. The differential diagnosis was other primary tumors of colon such as lymphoma, malignant carcinoid tumor, leiomyosarcoma; metastatic cancer from the breast, ovary, prostate, lung and stomach; Crohn's disease and other inflammatory masses from infection such as tuberculosis or fungal infection. Mucosal biopsy was done and histopathology revealed poorly differentiated adenocarcinoma. Abdominal CT showed multiple liver metastasis with carcinomatosis peritonii. The patient was diagnosed as advanced stage of adenocarcinoma of sigmoid colon and palliatively treated with self-expanding metallic stent placement.

Discussion

Colorectal cancer is one of the most prevalent cancer worldwide. Approximately, 7-29% of patients present with near or complete bowel obstruction and these patients have a poorer prognosis since they tend to have more advance disease and may not be candidates for curative surgery¹. Palliative endoscopic treatments can be the options for patients who are poor surgical candidates or have



advanced or metastatic disease. For patients with malignant left-sided colorectal obstruction, self-expanding metallic stents (SEMS) have had an important role in both palliative treatment^{2,3} and bridging therapy to surgery, in order to avoid colostomy which provided safer single-stage surgery^{4,5}. It is considered as effective, safe form of treatment with 96% and 84% technical success rate and 92.7% and 76% clinical success rate when used as a palliative treatment or bridge to surgery⁵. Major complication included perforation (3.8%), stent migration (11.8%), and re-obstruction (7.3%)⁵. The risk for perforation was related to the

stent wires or during balloon dilatation and laser recanalization prior stent placement. Median time to re-obstruction was 24 weeks (range 1-52 weeks), mostly from tumor ingrowth. Stent-related mortality was 0.6% and related to the perforation. Other endoscopic therapy includes recanalization using argon plasma coagulation, snare cautery or neodymium-yttrium-aluminum-garnet (Nd:YAG) laser.

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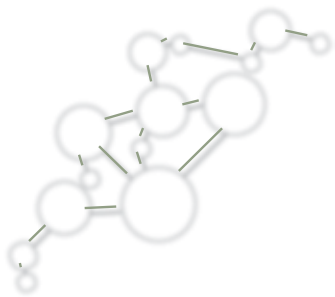
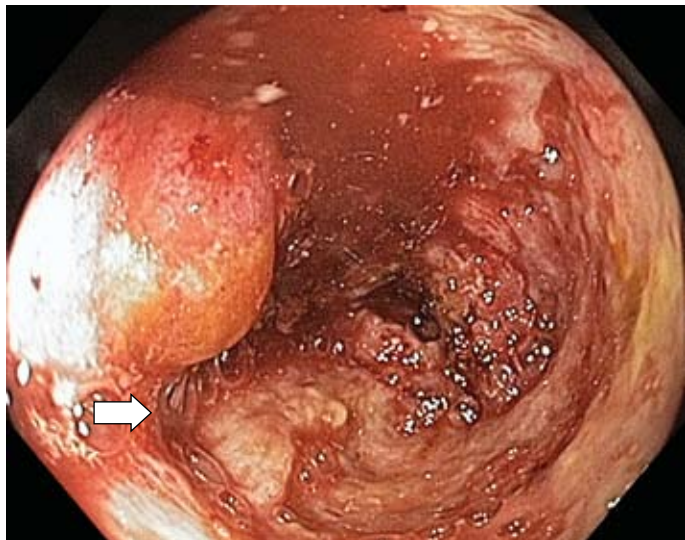
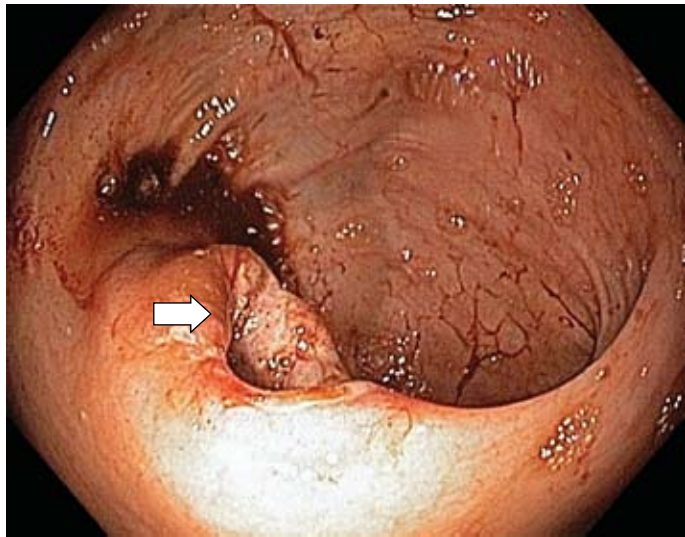
Case 20

Chatporn Kittitrakul, MD.

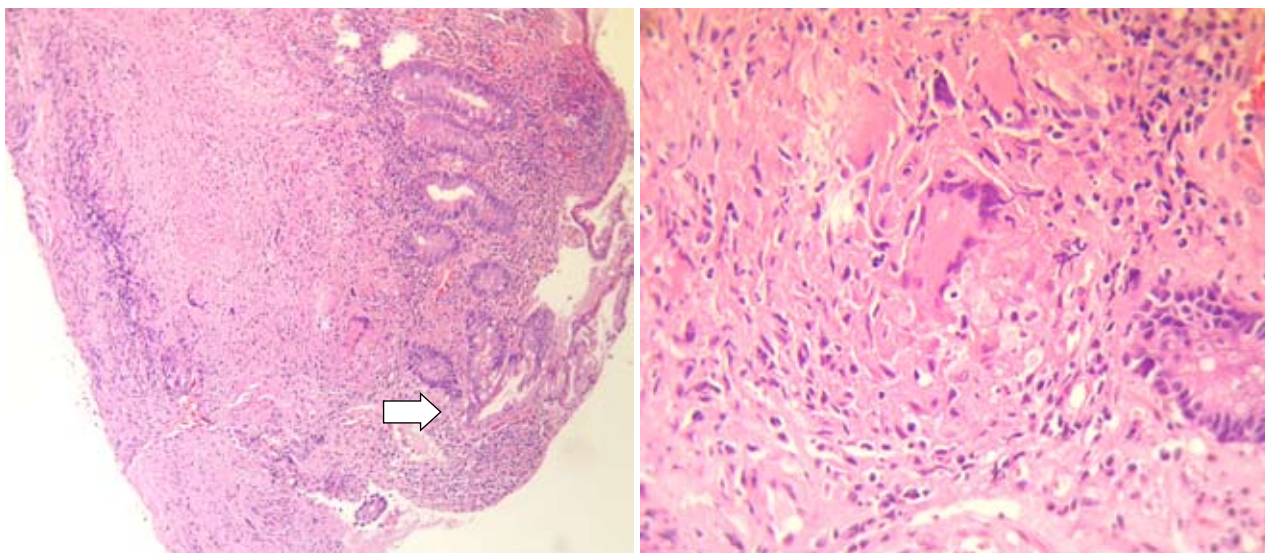
Sombat Treeprasertsuk, MD.

A 81 year-old man presented with hematochezia for 3 days. He complained prolonged fever with chronic cough and weight loss for several months. He had no underlying disease. His serology for HIV was negative.

Colonoscopy was done and figures were shown below.



Colonoscopic findings showed multiple ulcers with tissue debris and friability were seen at ileo-cecal valve and terminal ileum. Sputum AFB stain revealed positive result. Differential diagnosis for multiple colonic ulcers is infectious related diseases such as TB, CMV. But non-infectious causes such as NSAIDs-induced ulcer or lymphoma are also need to be excluded. Biopsy from ulcer was done and histologic finding revealed granulomatous inflammation with AFB positive bacilli. The final diagnosis is TB ileum..



Discussion

Mycobacterium tuberculosis usually involves gastrointestinal tract at terminal ileum and ileocecal region. Both sides of the ileocecal valve involvement is helpful to distinguish tuberculosis from Crohn's disease¹. The most common symptom of intestinal tuberculosis is non-specific chronic abdominal pain. Definite diagnosis requires tissue biopsy for histology, AFB staining, culture or PCR. Standard anti-tuberculosis treatment provides a high cure rate². Ileoscopy is a helpful adjunct to colonoscopy to get the definite diagnosis³. Perforation is an extremely uncommon complication of TB ileum⁴.

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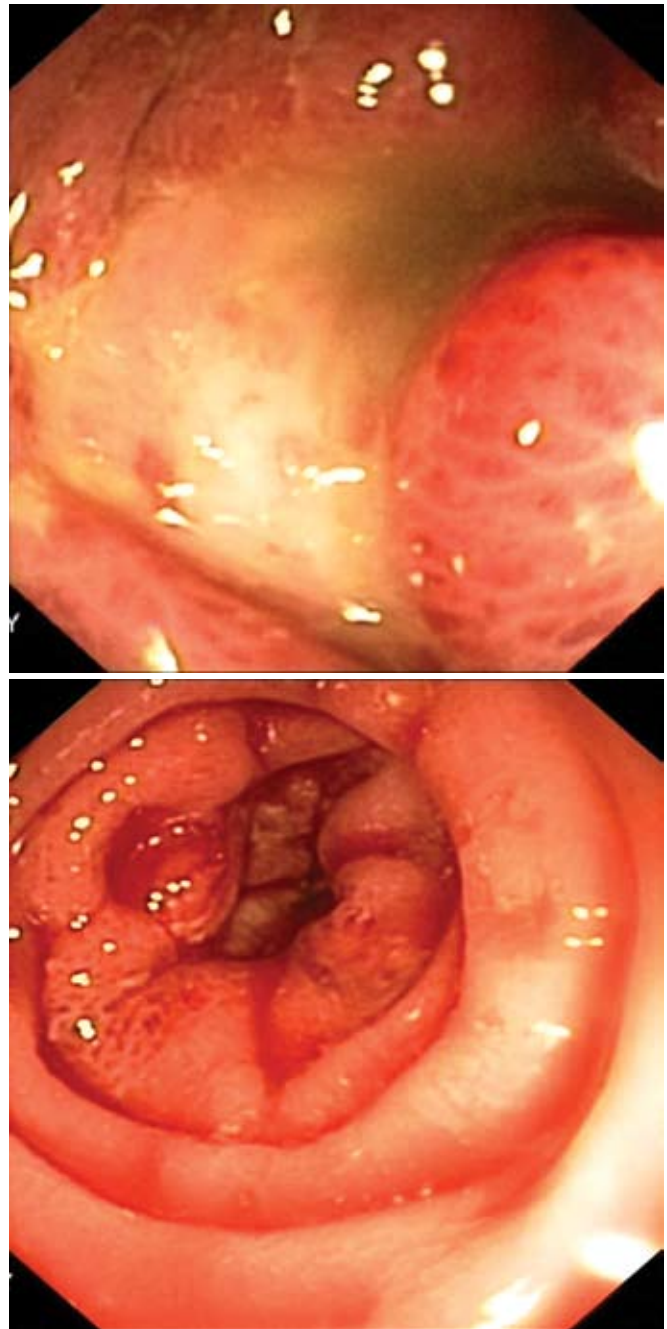
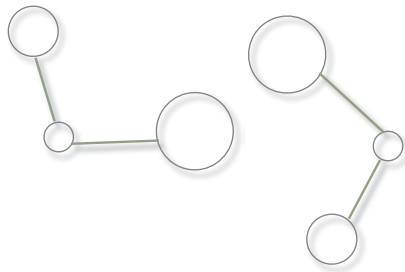
Case 21

Roongruedee Chaiteerakij, MD.

Sombat Treeprasertsuk, MD.

A 58 year-old female with history of mitral stenosis and atrial fibrillation. She presented with acute colicky pain and hematochezia.

Colonoscopy was performed as figures shown



Colonoscopic findings were few small clean base ulcers sized 0.3 cm. in diameter with normal appearing mucosa in the rectum. Circumferential edematous, erythematous mucosa covering with white exudates was seen at sigmoid colon and there was abrupt transition between the lesion and normal appearing mucosa in the rectosigmoid colon. Differential diagnosis were infectious colitis, pseudomembranous colitis, radiation colitis, inflammatory bowel disease and colonic cancer. The final diagnosis is ischemic colitis confirmed by histopathological findings.

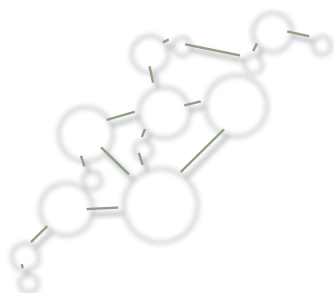
Discussion

Ischemic colitis, most common ischemic injury of the gastrointestinal tract, is caused by disruption or decline in blood flow to the colon. It can affect any part of the colon, mostly at descending colon (37%), followed by splenic flexure (33%), sigmoid colon (24%), transverse colon (9%) and ascending colon (7%). However, the classic site of involvement is the splenic flexure which is a “watershed” area between the areas supplied by the superior and inferior mesenteric arteries. Predisposing factors include atherosclerosis, shock and congestive heart failure. Clinical presentation is usually acute, with cramping pain of abrupt onset, abdominal distention and bloody diarrhea. However, the manifestations vary widely, from severe abdominal pain with transmural infarction and early perforation to mild abdominal pain and only slight tenderness¹. Discrepancy between subjective symptoms and objective findings are hallmark of ischemic colitis. Colonoscopy is considered for the definitive diagnosis. Three endoscopic stages of ischemic colitis have been described²: acute, which is characterized by petechiae, pallor, hyperemia, and necrosis; subacute, consisting of ulceration and exudation; and chronic which composed of stricture, decreased haustration, and mucosal granularity. The sharp demarcation between viable and necrotic colonic mucosa on endoscopic findings is highly suggestive for the diagnosis of ischemic colitis.

Most patients response to conservative treatment including hydration, bowel rest, antibiotic therapy, and correction of the precipitating causes within 48 hours. Surgical resection of ischemic segment is indicated in patients with frank peritonitis, transmural infarction or perforation, or clinical deterioration after conservative treatment. Follow-up colonoscopy may be necessary to assess progression of colonic injury or stricture formation.

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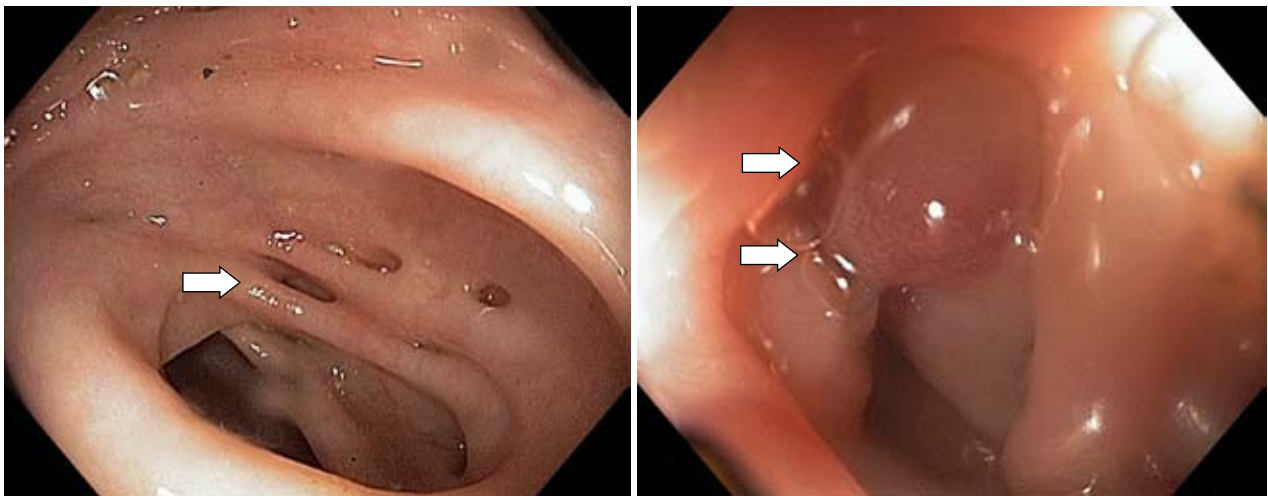
Case 22

Phonthep Angsuwatcharakon, MD.

Sombat Treeprasertsuk, MD.

A 52 year-old man present with left lower abdominal pain without fever. He had constipation off and on. His father was diagnosed as colonic cancer last month. Physical examination showed no sign of peritonitis.

Screening colonoscopy was done and shown as figure A and B



A

B

Colonoscopic findings showed multiple small diverticuli at sigmoid colon (A), with a short segment of swollen, erythematous colonic mucosa closed to diverticulum (B). Abdominal CT scan was done and showed multiple diverticuli at sigmoid colon, with a short segment of bowel wall thickening and increased soft tissue density within pericolic fat at sigmoid area. The final diagnosis was acute colonic diverticulitis.

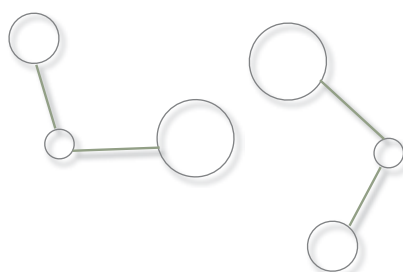
Discussion

Acute diverticulitis is a complication of colonic diverticular disease, accounting for 10-20% of patients. Clinical presentation may different between western and Asian population, and 70% of western patients presented with nonspecific left lower quadrant pain¹⁻³. The “pseudo-kidney” sign, which was thought to represent acute diverticulitis, can be detected by bedside ultrasound and confirmed by computed tomography⁴. Actually, colonoscopy is contraindicated in case of suspected diverticulitis

because it represents micro-or macroscopic perforation of a diverticulum. Conservative treatment is preferred in first attack of uncomplicated cases. More than 2 significant attacks of diverticulitis would be the recommendations of surgical resection. The following risk factors including age group less than 40 years, immunocompromised hosts, steroid-dependent patients, diabetic, and transplant patients, were at greater risk with high morbidity if not treated early and aggressively⁵.

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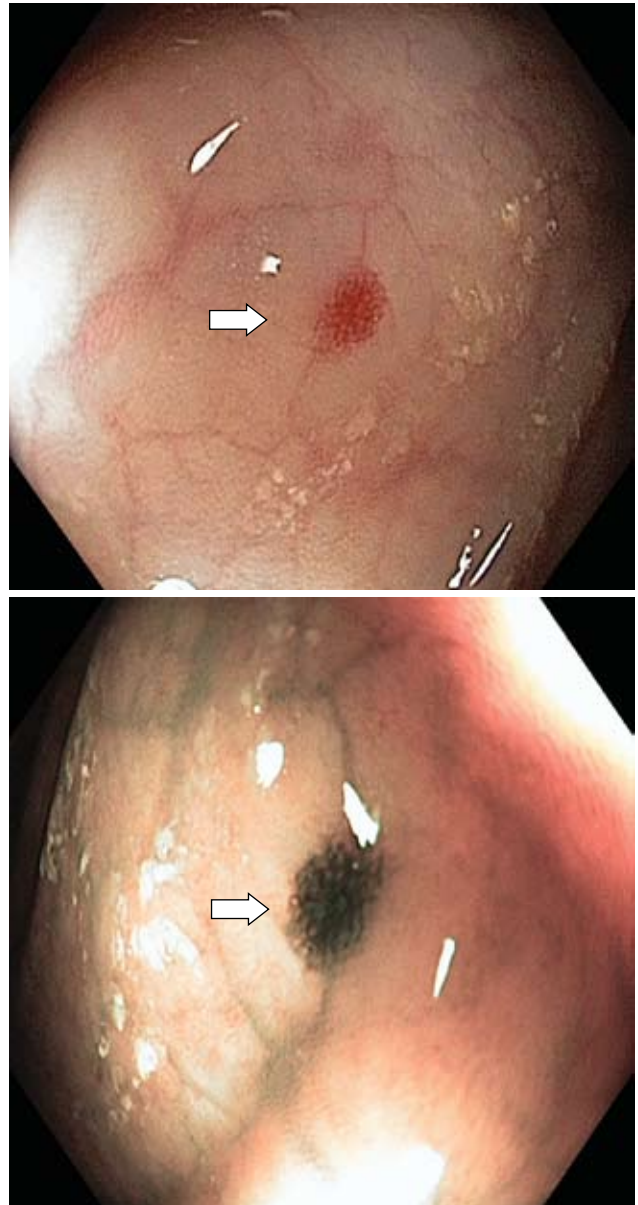
Case 23

Boonlert Imraporn, MD.

Rungsun Rerknimitr, MD.

A 60 year-old woman presented with chronic iron deficiency anemia and positive fecal occult blood test. Her underlying disease is end stage renal disease from diabetes mellitus and hypertension. She has no dyspeptic symptom.

Colonoscopy with narrow-band width was done and pictures were shown below.



Colonoscopic findings showed focal areas of dilated, tortuous submucosal capillary networks with normal colonic mucosa at ascending sided colon. The final diagnosis was colonic angiodysplasia. Endoscopic intervention with argon plasma coagulation (APC) was performed to prevent bleeding recurrence.

Discussion

Angiodysplasia is an arteriovenous malformation which can be found in the entire gastrointestinal tract and especially the colon¹. Colonic angiodysplasia occurs more commonly in elderly, cardiovascular disease especially aortic valve disease, chronic kidney disease, diabetic mellitus or liver cirrhosis². Right sided colon is involved much more common than left sided colon¹. Bleeding usually occurred recurrent and inactively. Only 15% of patients present with massive hemorrhage. The appearance of vascular lesions by colonoscopy is influenced by blood pressure, blood volume, and state of hydration. Meperidine may also diminish prominence of some vascular lesions including colonic angiodysplasia. Treatment of this symptomatic vascular lesions include endoscopic treatment for example APC³. Overt bleeding resolved and hemoglobin levels were stabilized without transfusions in 85%⁴. Angiographic embolization or even hemicolectomy are considered in the recurrent bleeding events⁵. Hormonal therapy is not clearly proven for hemostatic treatment.

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