소화성 궤양 합병증

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소화성 궤양의 증상 – 비특이적이다.

	Duodenal ulcer	Gastric ulcer
Epigastric pain	90 min to 3 h after a meal (hunger pain)	precipitated by food
	70% awakes the patient from sleep (between midnight and 3 A.M.)	Nausea and weight loss occur more common
	frequently relieved by antacids or food	

증상발생 기전 – 모른다.

- The mechanism of abdominal pain in ulcer : unknown.

  - Acid-induced activation of chemical receptors in the duodenum
  - Enhanced duodenal sensitivity to bile acids and pepsin
  - Altered gastroduodenal motility

이럴 때 합병증을 의심한다.

Dyspepsia constant, not relieved by food or antacids, or radiates to the back

→ penetrating ulcer (pancreas)

Sudden onset of severe, generalized abdominal pain

→ perforation

Pain worsening with meals, nausea, and vomiting of undigested food

→ gastric outlet obstruction

Tarry stools or coffee ground emesis

→ bleeding

천공

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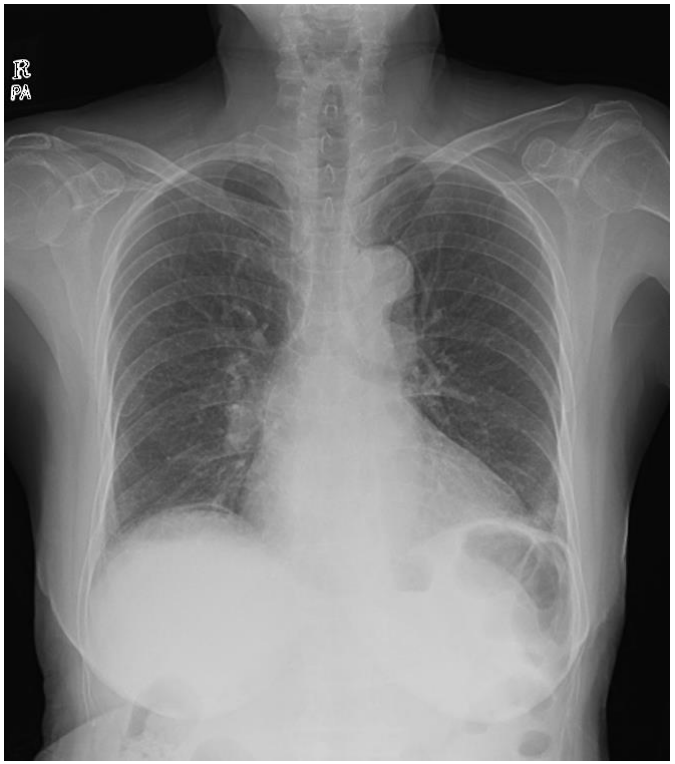
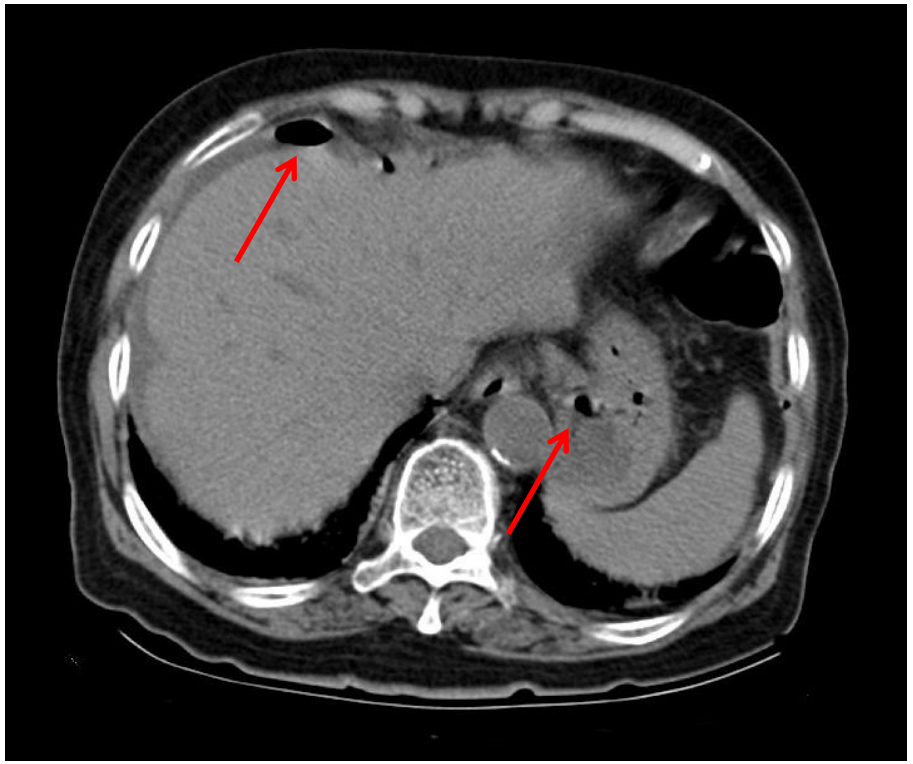
소화성 궤양 천공

- About 6 to 7% of PUD pts
- More often in elderly pts
- DUs tend to penetrate posteriorly into the pancreas (pancreatitis)
- GUs tend to penetrate into the left hepatic lobe
- Gastrocolic fistulas associated with GUs

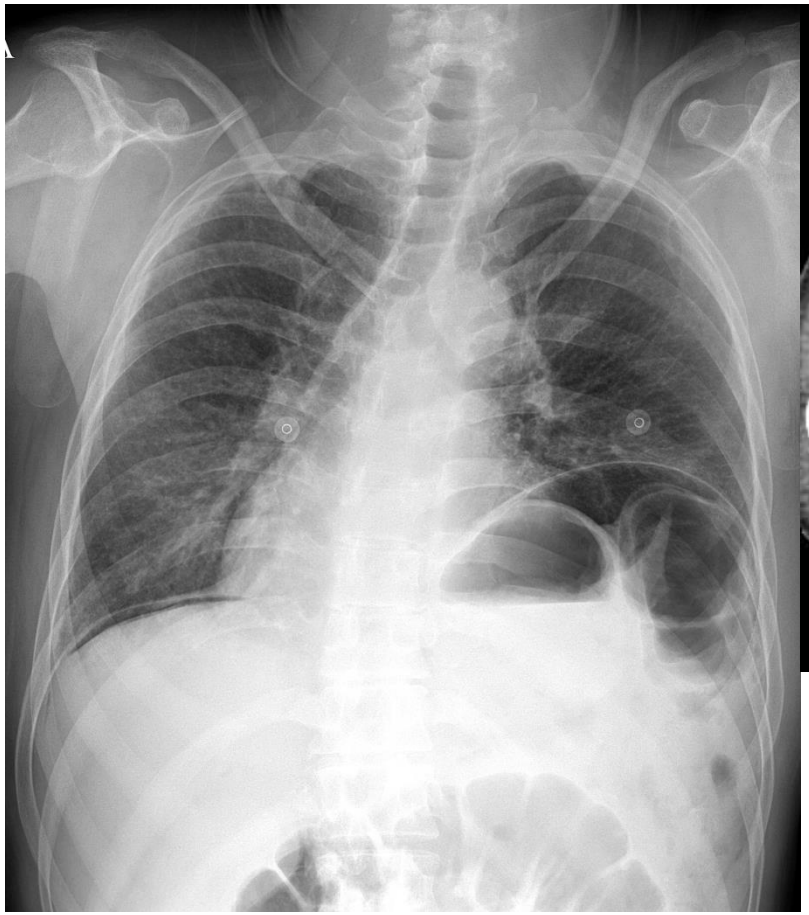
갑작스러운 복통

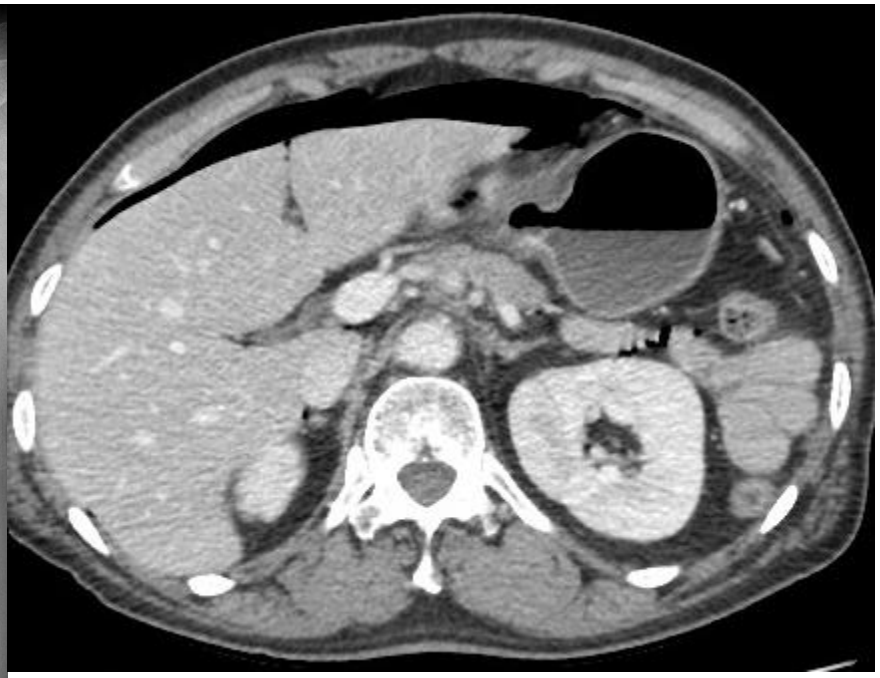
- Aspirin과 clopidogrel 복용





Multiple joint pain으로 NSAIDs를 반년 이상 복용하다가 갑작스런 복통 (M/58)

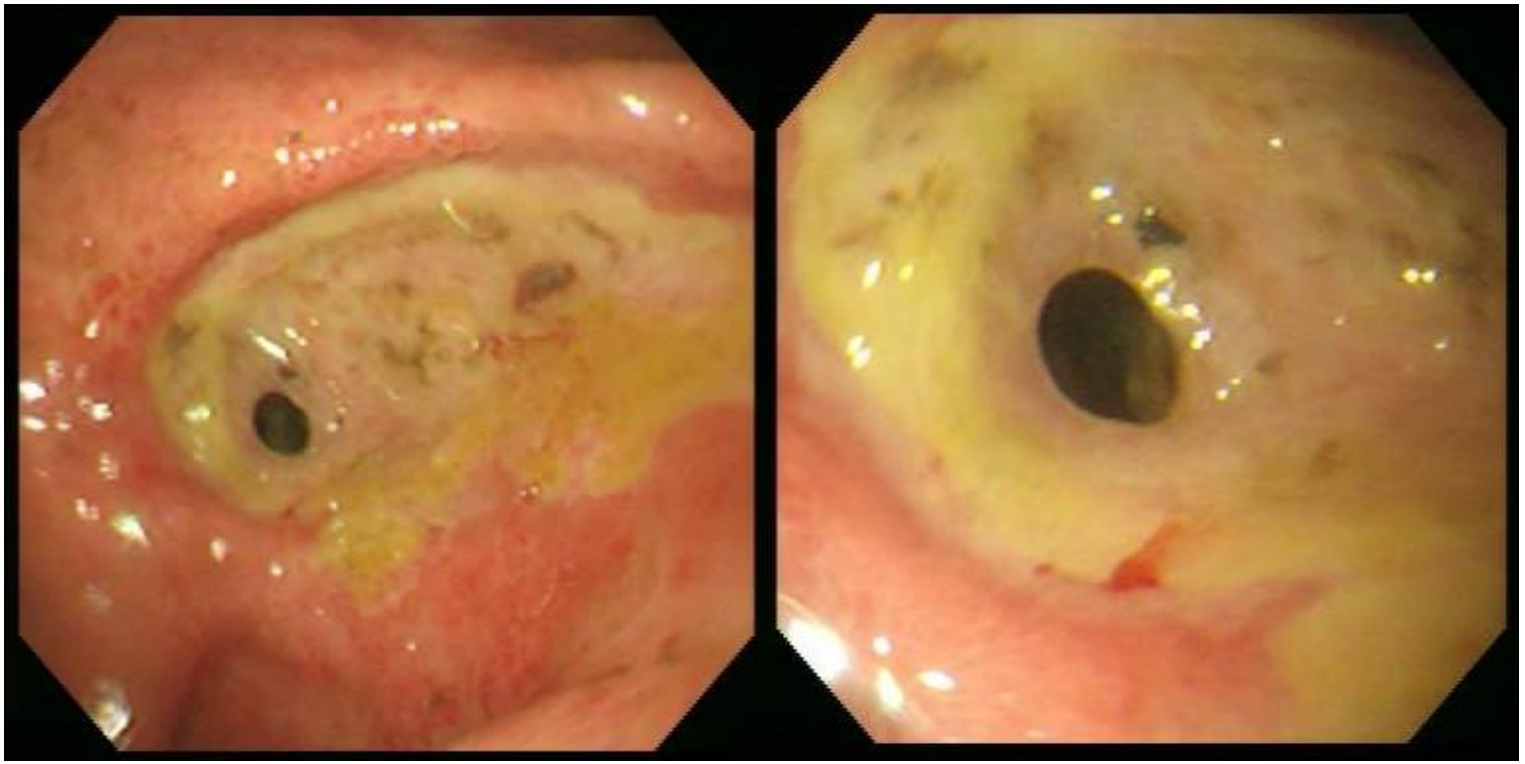




수술장: Stomach LB AW 0.5cm sized ulcer perforation 있으며 그 주변으로 inflammatory change로 stomach wall fibrosis, edema 심함.

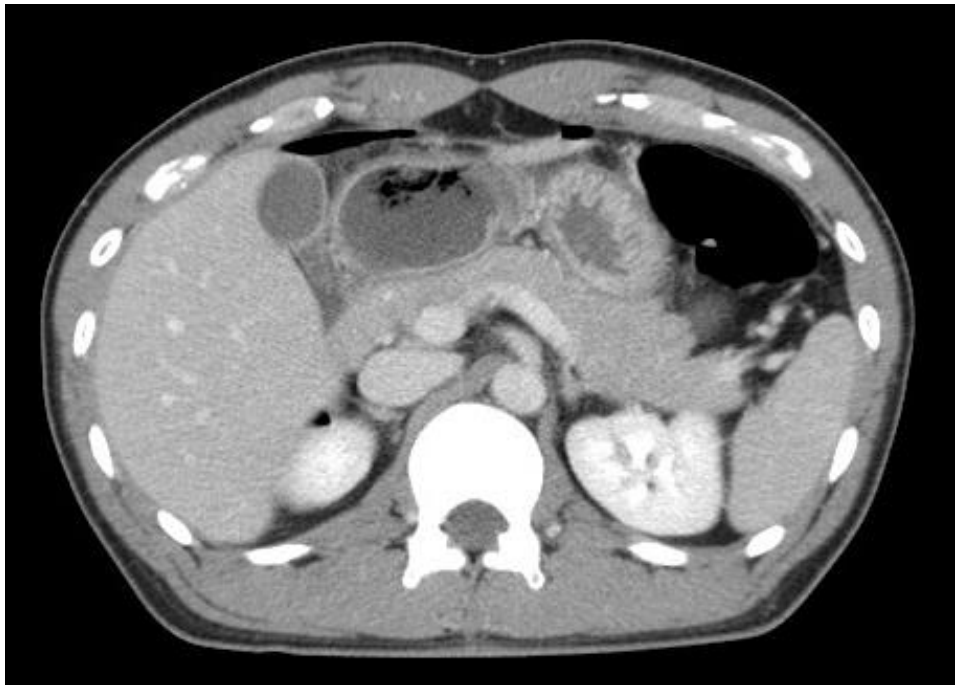
위궤양 천공을 내시경으로 보기는 어렵다.

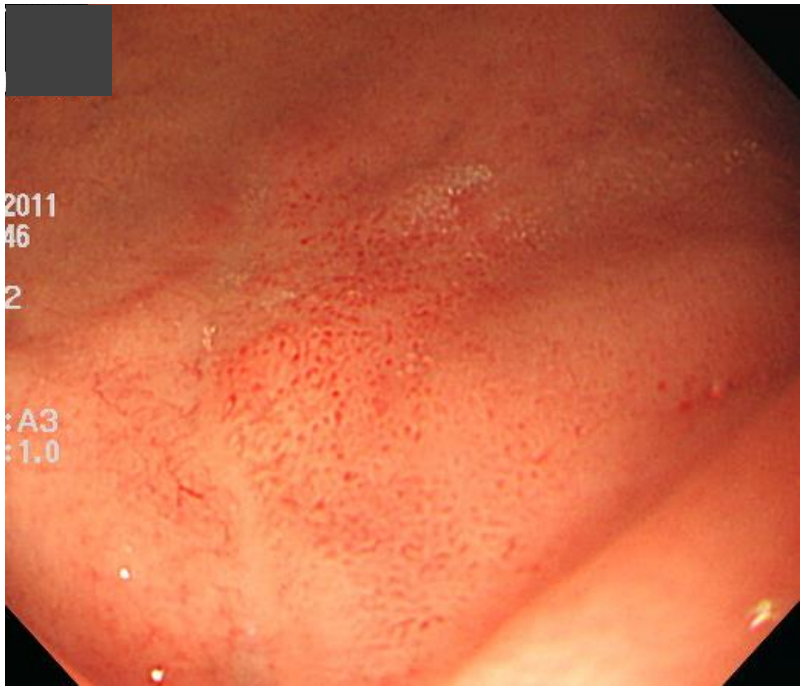
- Radiation-induced ulcer with perforation



십이지장궤양 천공

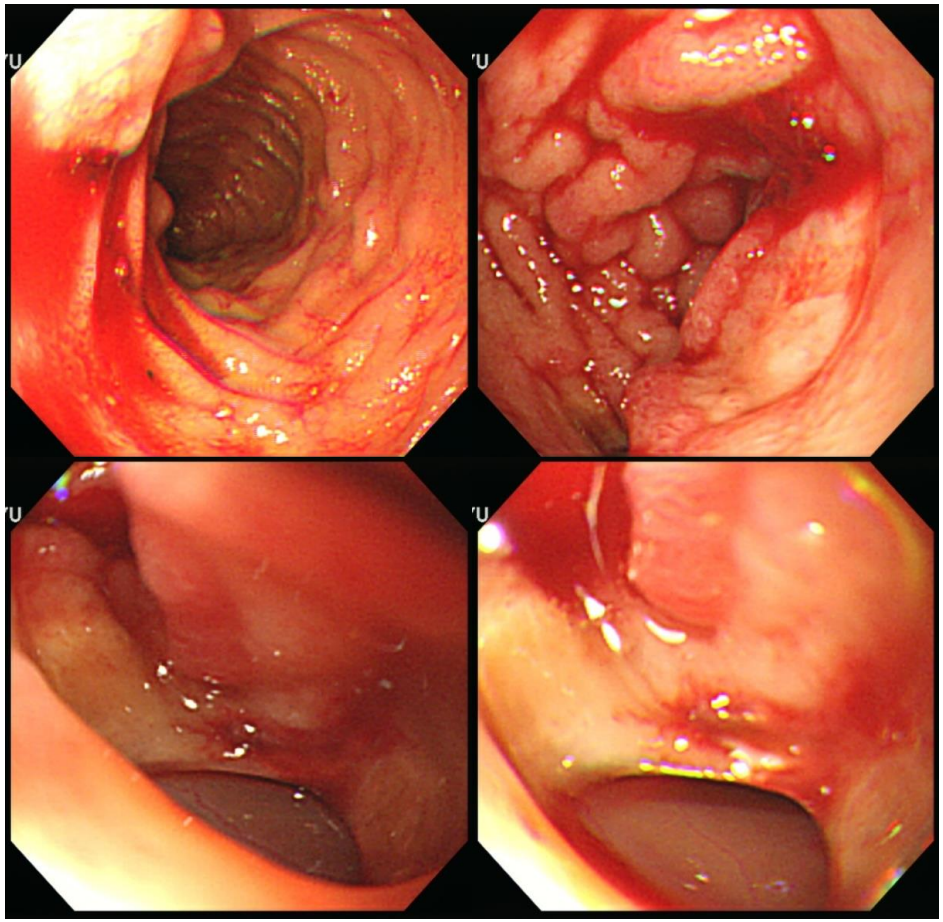
- 나중에 시행한 내시경에서 십이지장 수술 흔적(?)만 보임

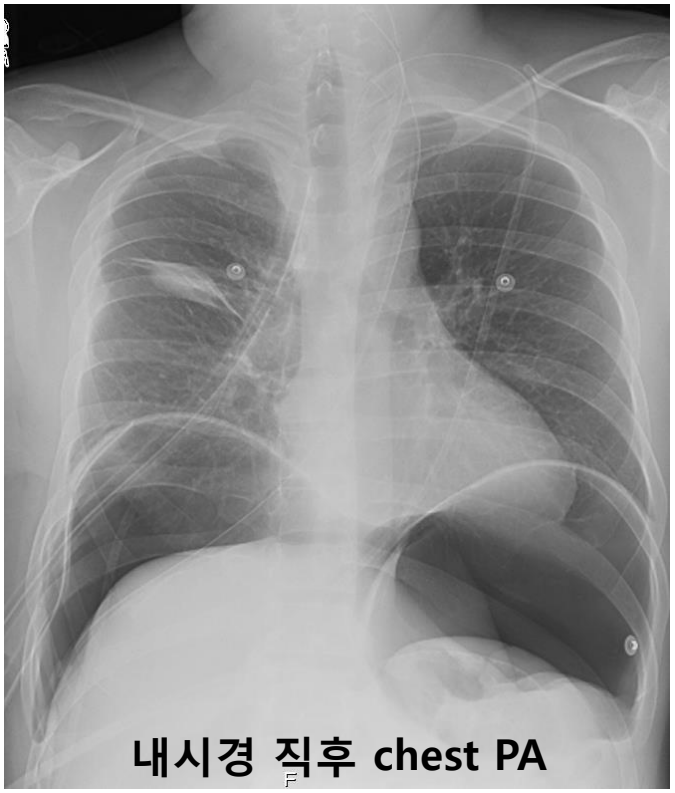




위장관 출혈과 복통

- Duodenal ulcer with perforation





내시경 직후 chest PA

협착

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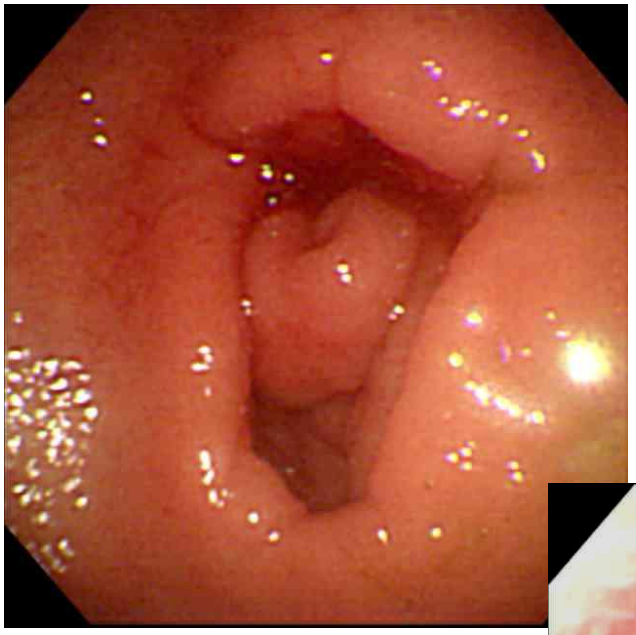
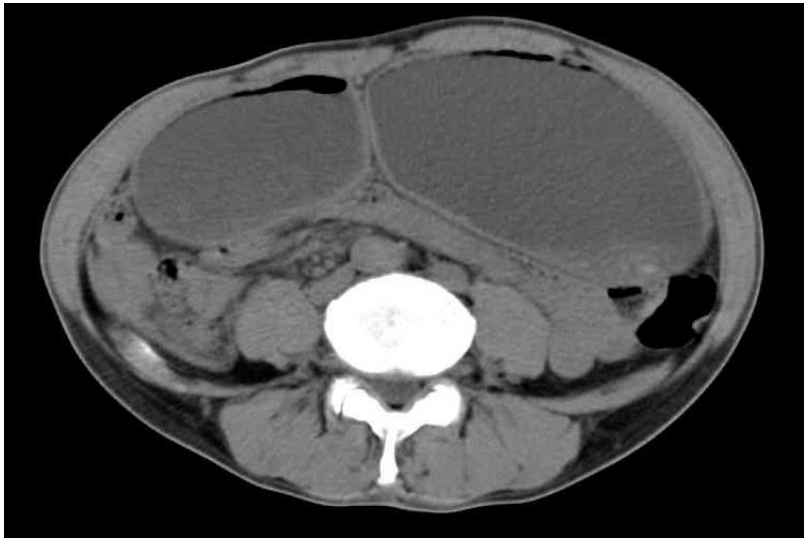
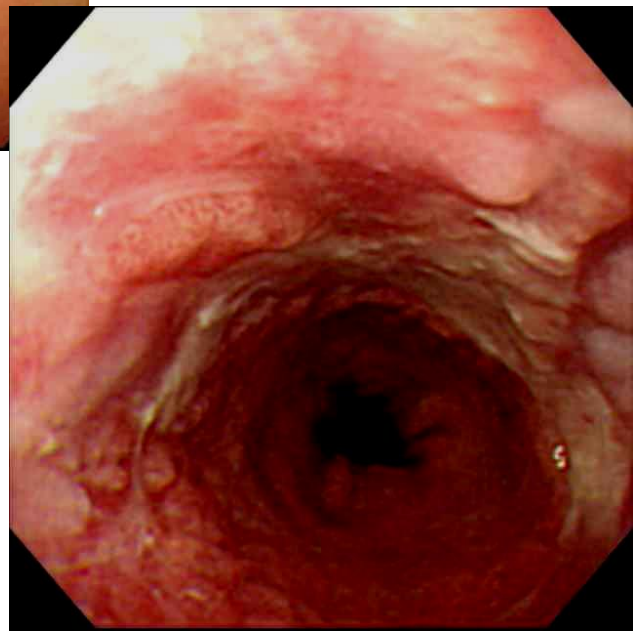
소화성 궤양 협착

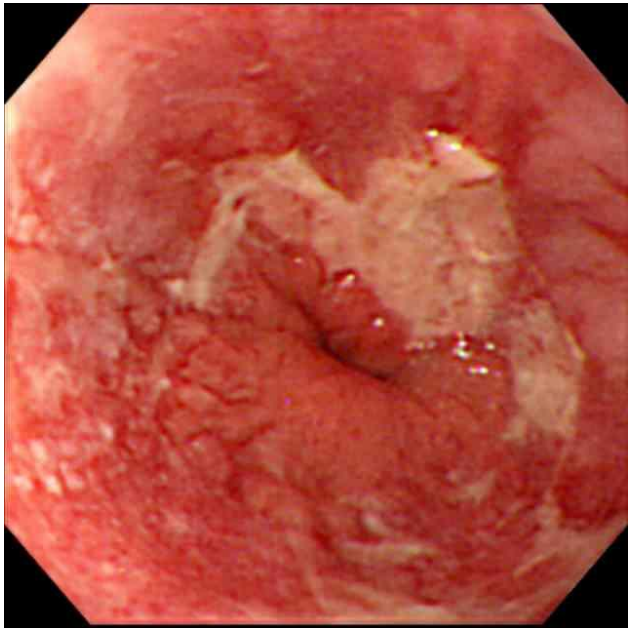
- 1 to 2% of patients
- Relative obstruction
  - secondary to ulcer-related inflammation and edema
  - often resolves with ulcer healing
- A fixed, mechanical obstruction
  - secondary to scar formation
  - requires endoscopic (balloon dilation) or surgical intervention

Gastric outlet obstruction with severe reflux esophagitis

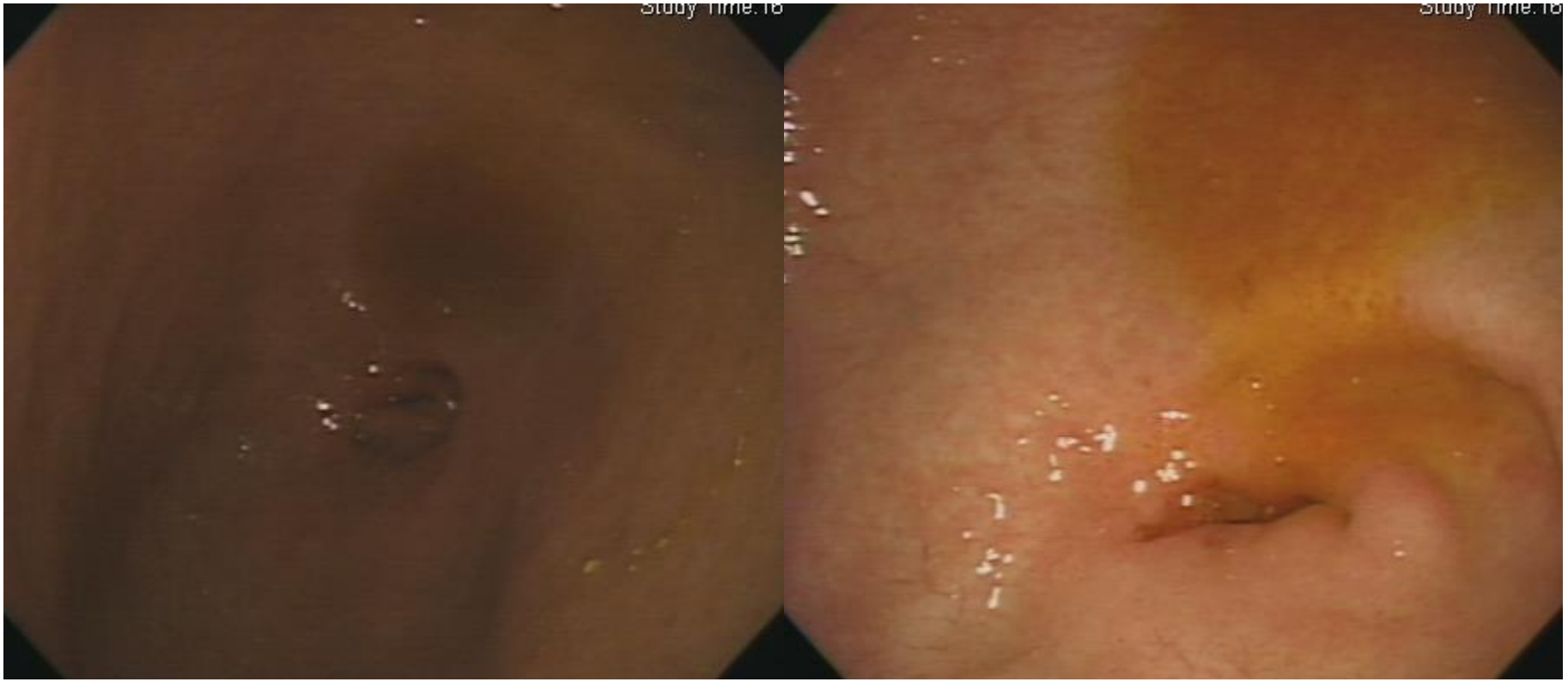






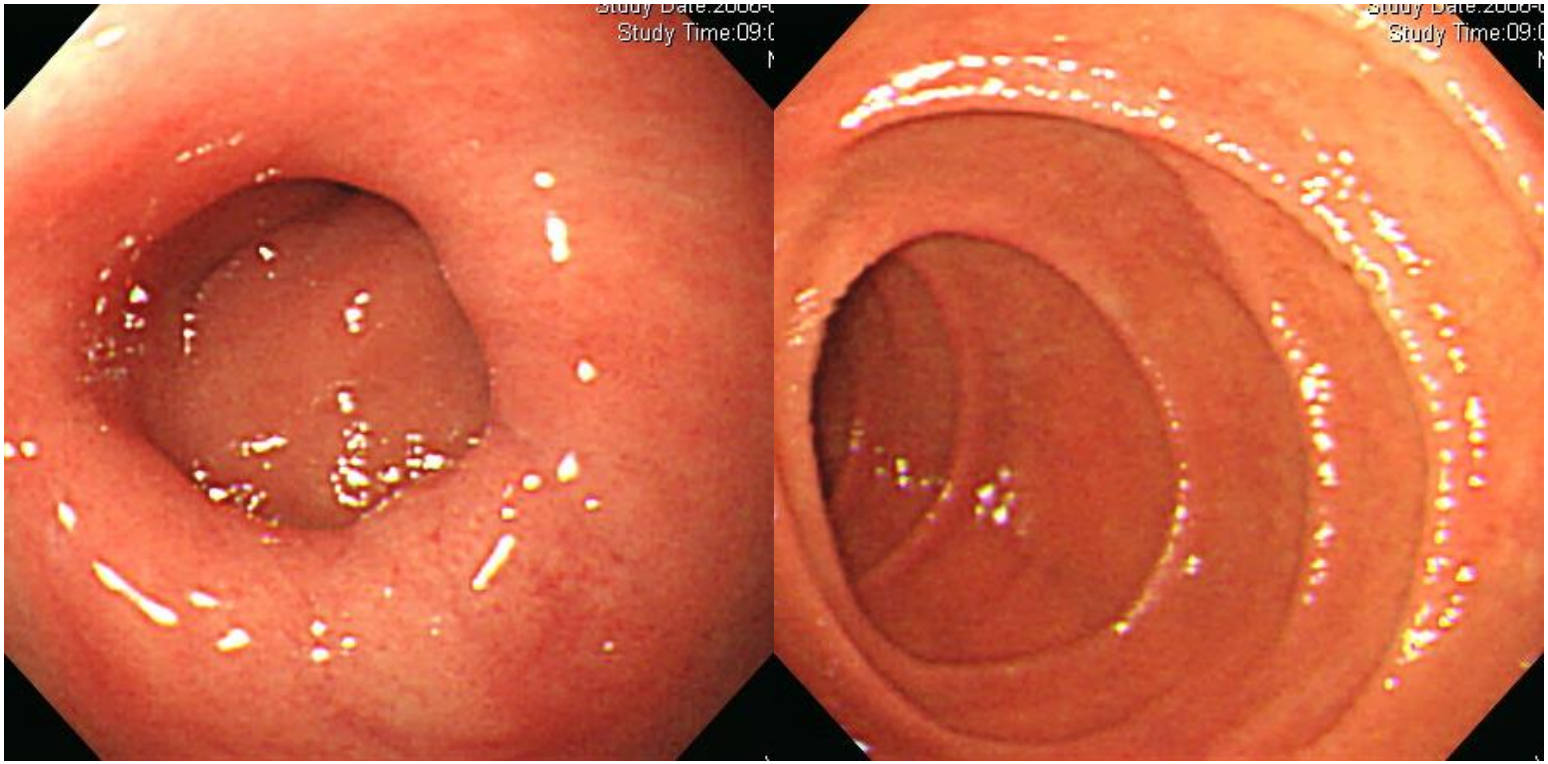


소화성궤양 협착인데 구토도 없고 체중감소도 없는데 수술을 꼭 해야 할까요?



DU with obstruction

- 내시경이 제 2부로 통과는 가능하였음



출혈

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위장관 출혈의 종류

- Hematemesis : vomiting of blood
- Melena : passage of stools rendered black and tarry
- Hematochezia : passage of red blood per rectum
- Occult bleeding : blood in the stool detected by card test for hemoglobin peroxidase

History taking in GI bleeding (1)

❖ ***Identify the probable presence of bleeding***

- Hematemesis
- Melena
- Hematochezia
- Hypovolemia (syncope, faintness)

History taking in GI bleeding (2)

❖ ***Estimate the amount and rapidity of bleeding***

- Frequency and volume of stools or emesis
- Symptoms of hypovolemia
- Hematemesis

History taking in GI bleeding (3)

❖ ***Ask about site and potential causes***

- Upper gastrointestinal
  - Melena and/or hematemesis
  - Symptoms of peptic ulcer, varices, esophagitis, Mallory-Weiss tears, and malignancy
- Lower intestinal
  - Hematochezia
  - Symptoms of arteriovenous malformations, diverticulosis, cancer, hemorrhoids, inflammatory bowel disease, ischemic colitis

History taking in GI bleeding (4)

❖ ***Determine the presence of diseases or situations having poorer prognosis***

- Congestive heart failure or prior myocardial infarction
- Chronic obstructive lung disease
- Cirrhosis
- Renal failure
- Advanced malignancy
- Age over 60 years

Upper vs lower GI bleeding (1)

	Upper	Lower
Location	proximal to Treitz lig.	distal to Treitz lig.
Manifestation	hematemesis/melena	hematochezia
Nasogastric tube	blood	bile/no blood
Peristalsis	increase	normal
BUN/Cr	increase	normal

Upper vs lower GI bleeding (2)

- Massive upper GI bleeding
  - hematochezia
- Upper GI bleeding distal to pyloric channel
  - no blood via nasogastric tube
- Small bleeding from small bowel or right colon
  - melena

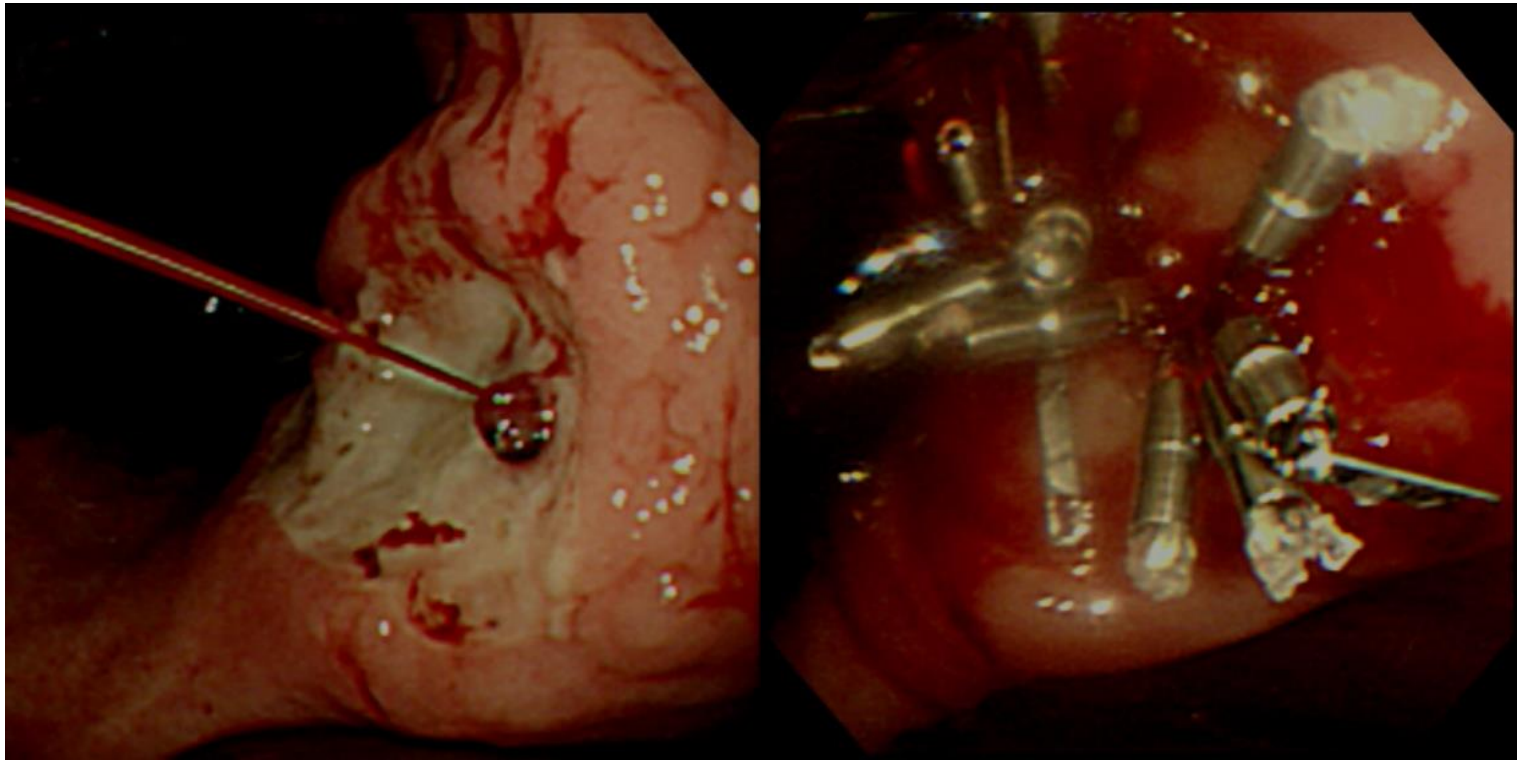
Management of upper GI bleeding

1. Restore and maintain normal volume (not necessarily transfusion). Get appropriate access with ***2 large bore IVs***
2. The site and cause of the bleeding should be established. ***Knowing the site*** of bleeding is more important than knowing the cause.
3. A treatment regimen should be planned, based on diagnosis and the condition of the patient .

Common causes of upper GI bleeding

- Gastric ulcer
- Duodenal ulcer
- Varix
- Mallory-Weiss syndrome
- Gastritis or erosion
- Esophagitis or esophageal ulcer
- Stomach cancer

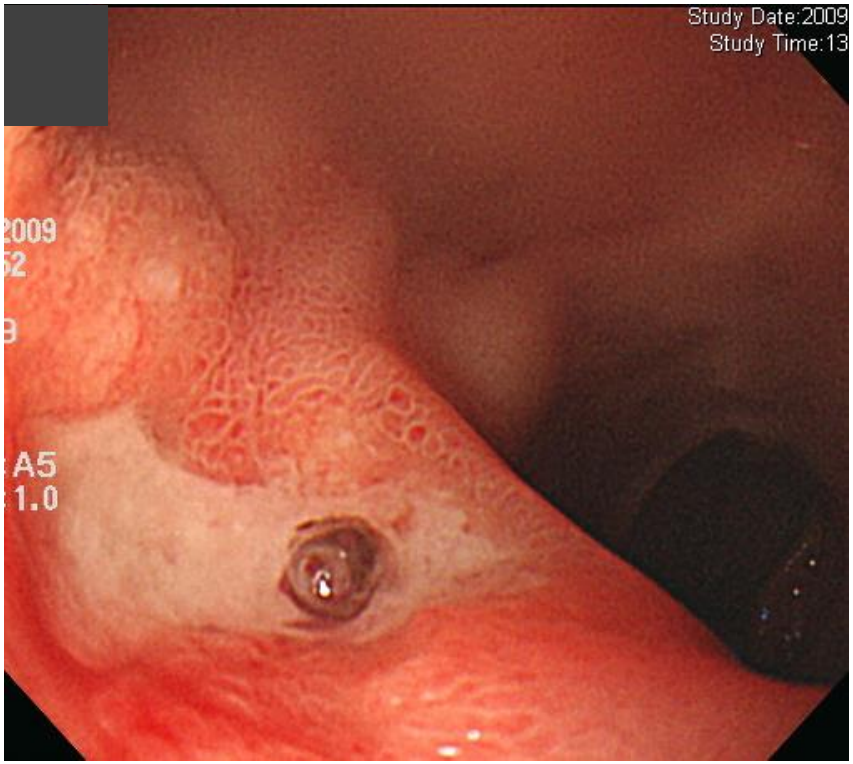
Complication: bleeding (spurting)

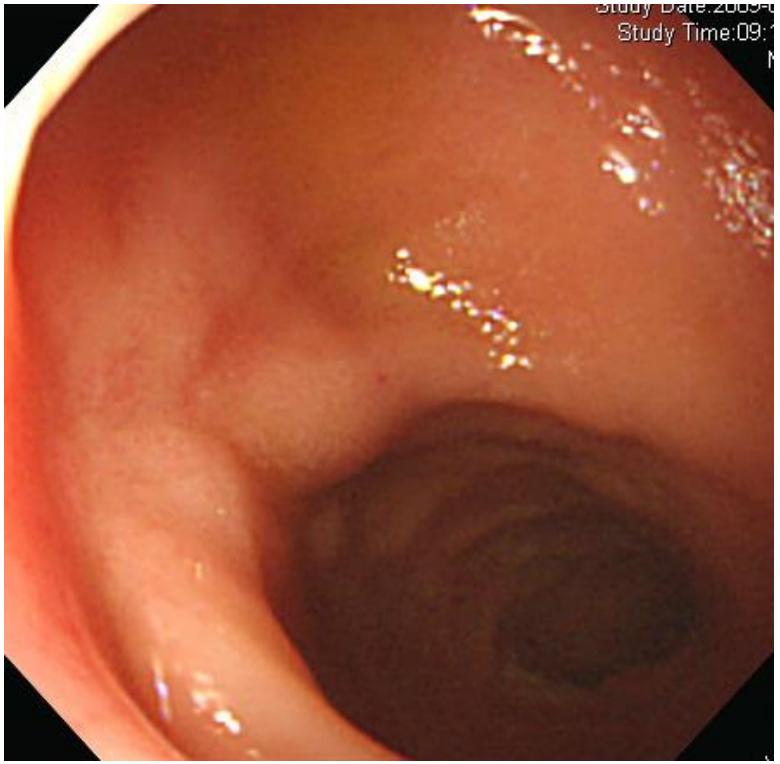


Active bleeding

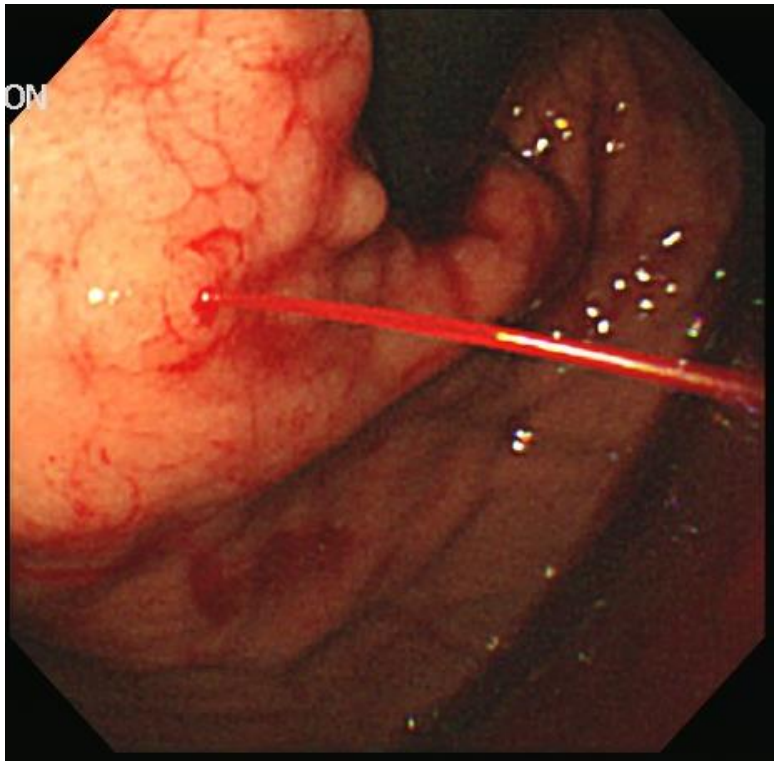
Clipping

Duodenal ulcer with exposed vessel

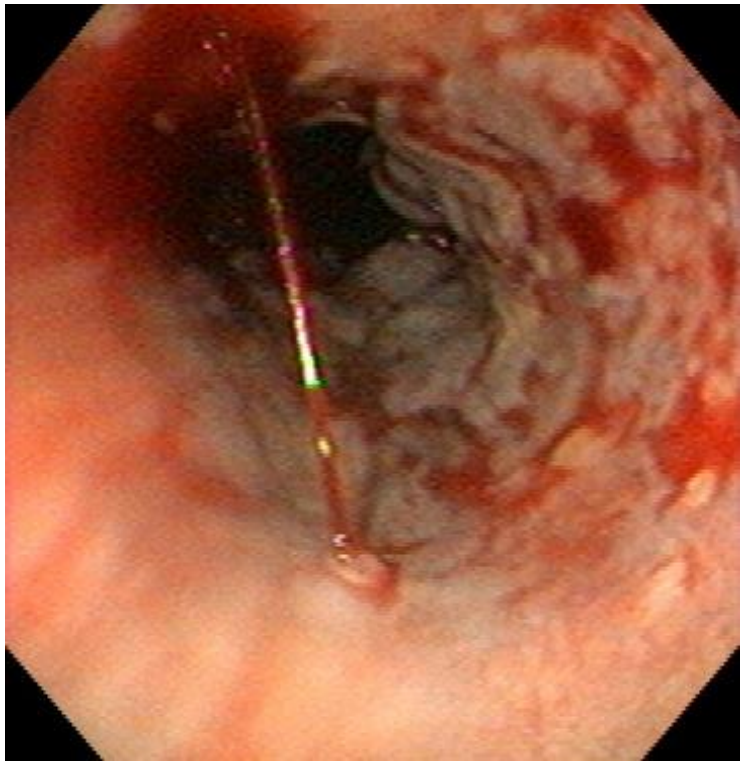


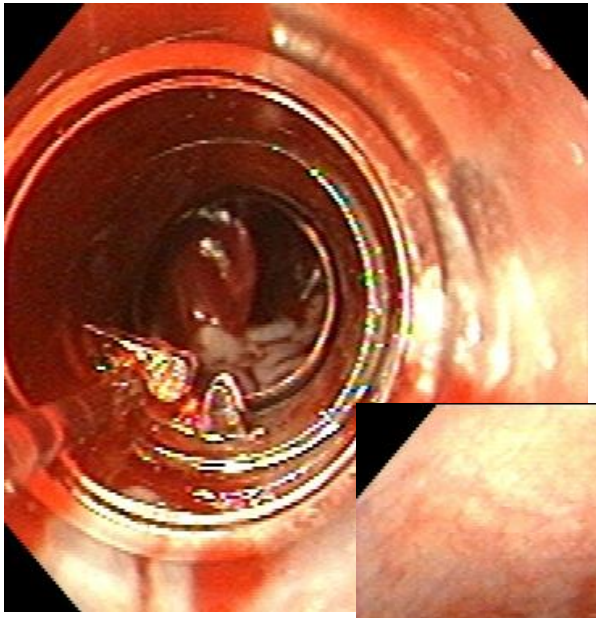


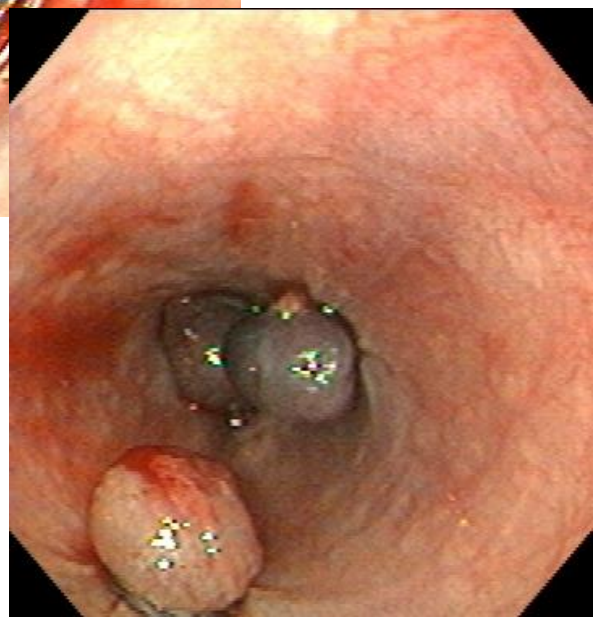
Bleeding Dieulafoy ulcer



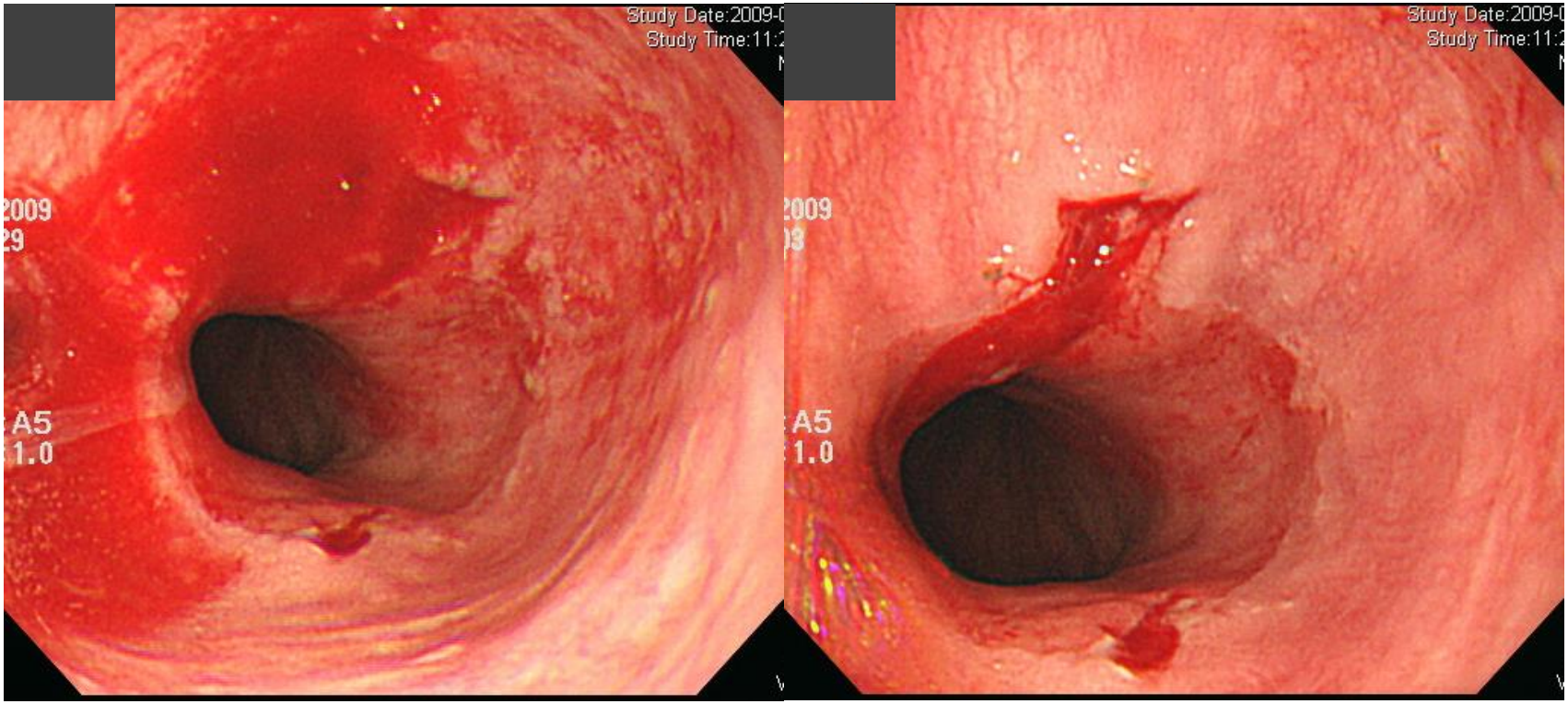
Esophageal varix → band ligation





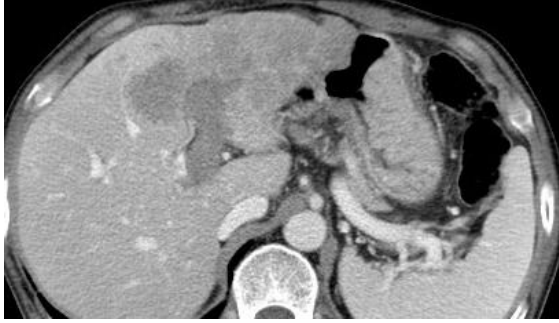


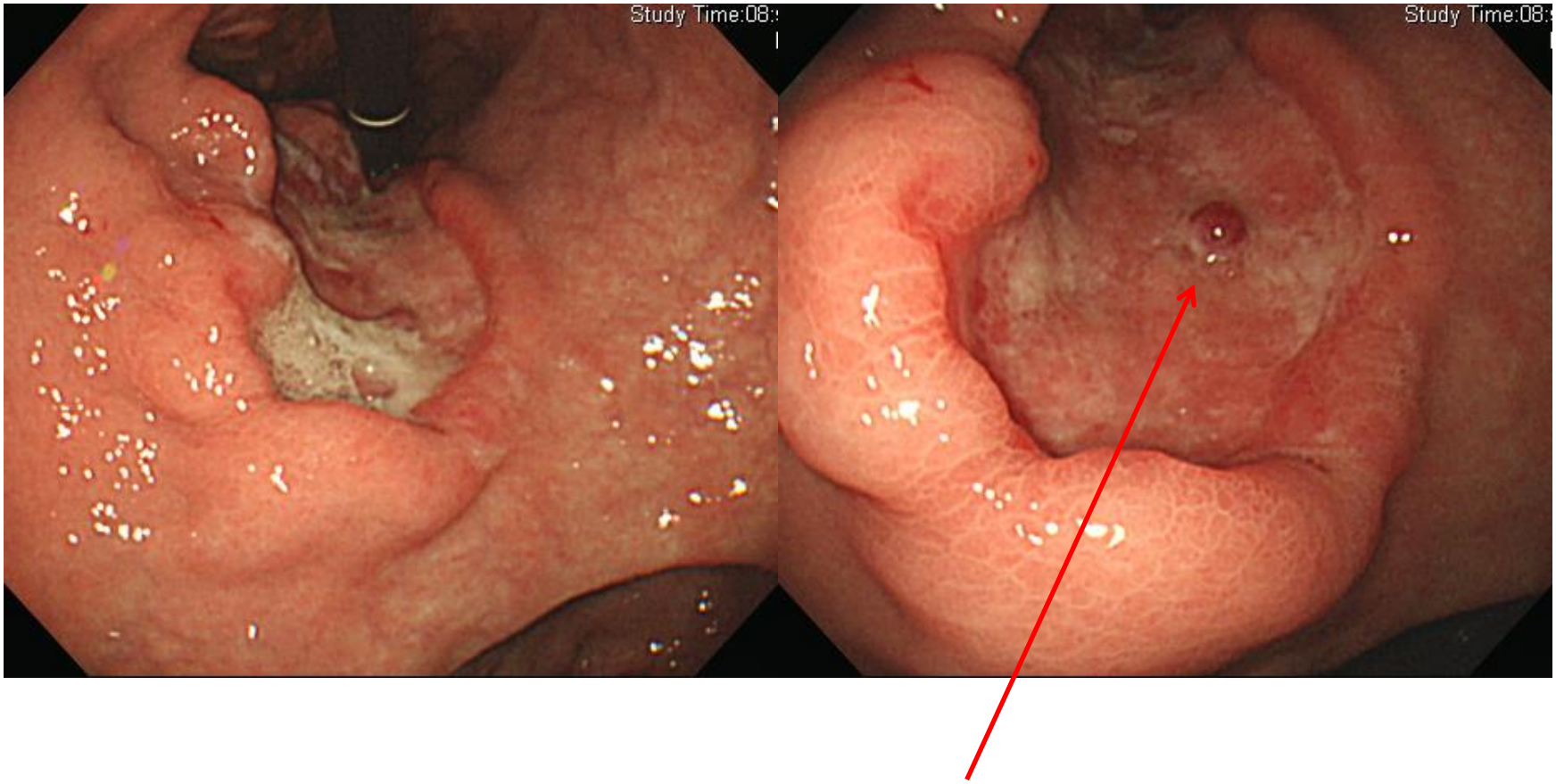
Mallory Weiss tear



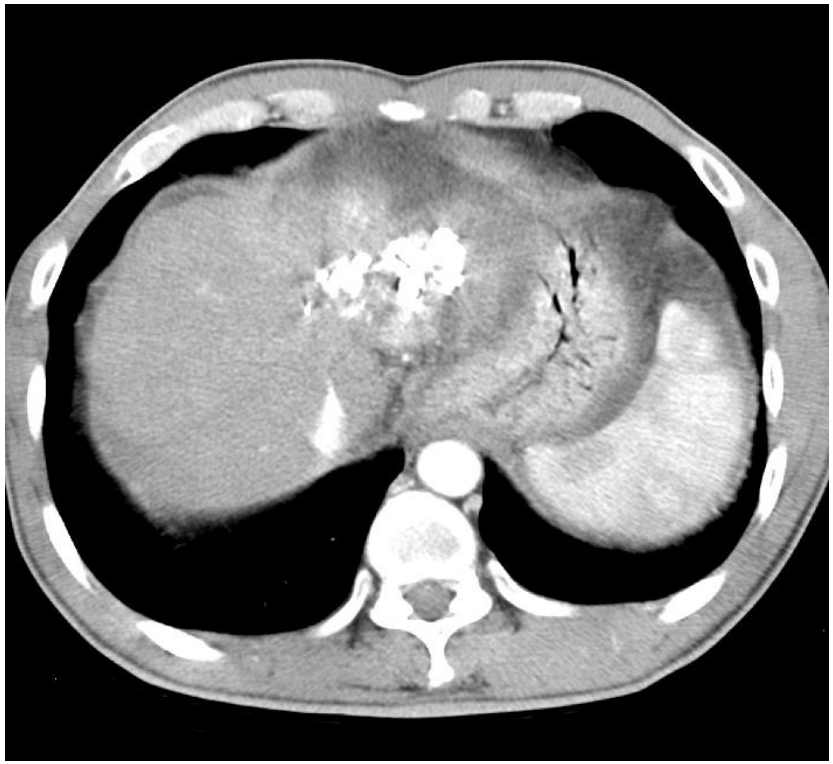
AGC with liver metastasis

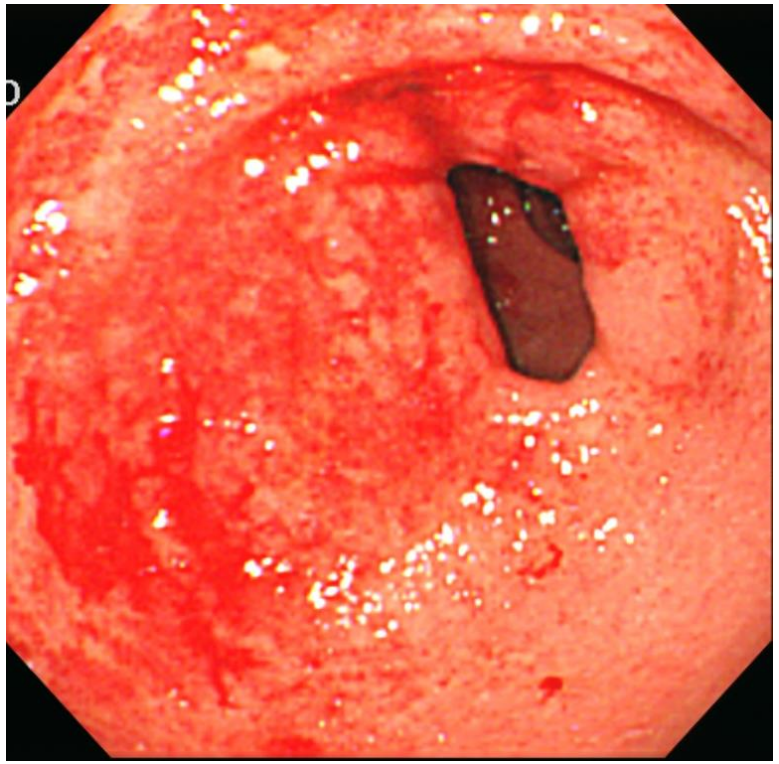
- Bleeding with exposed vessel



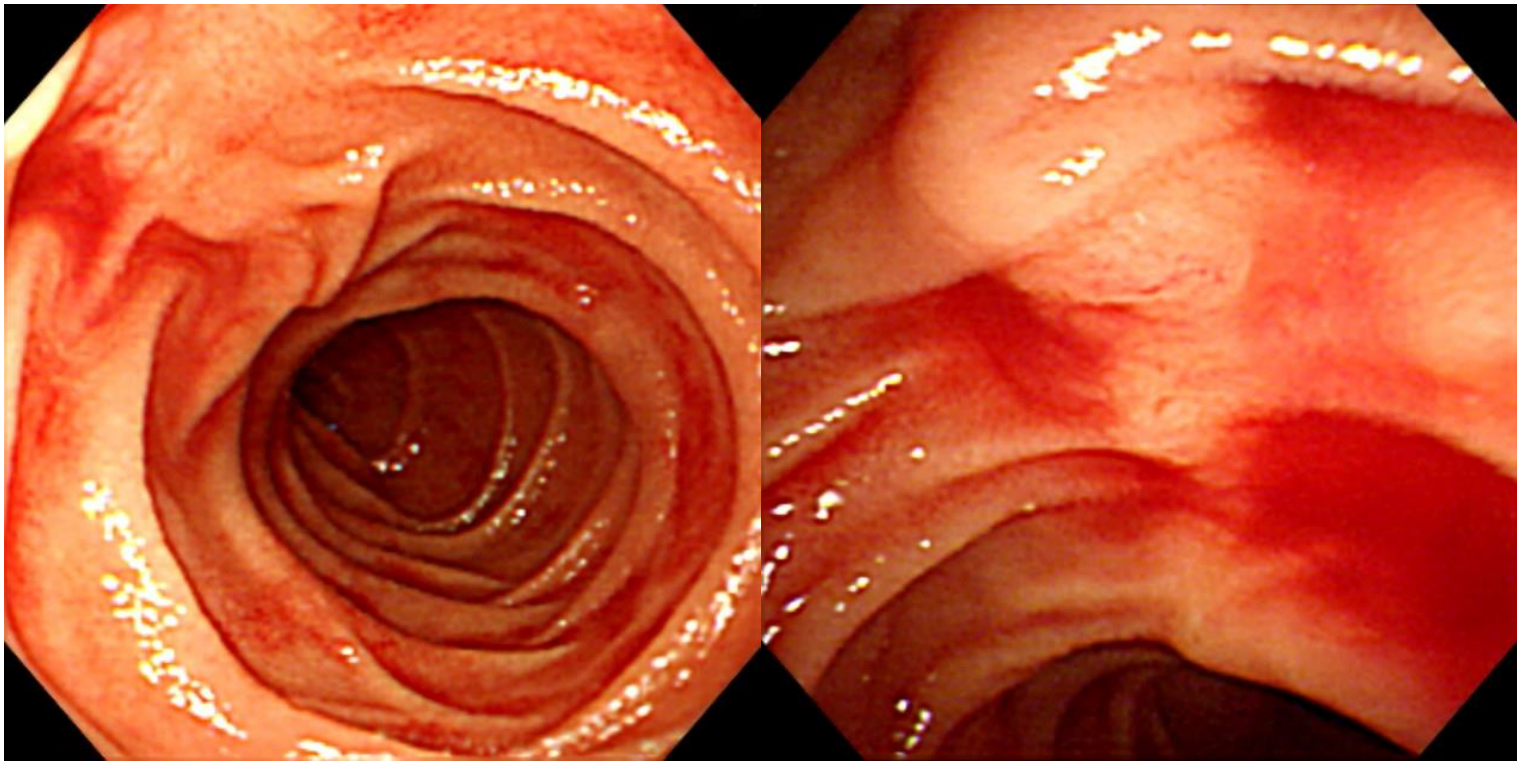


RT-induced hemorrhagic gastritis

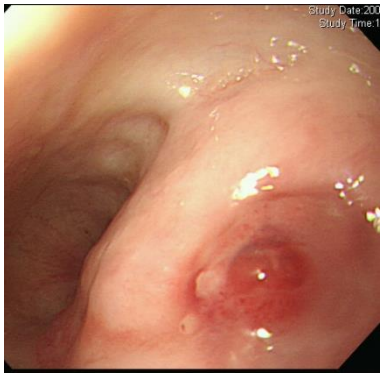


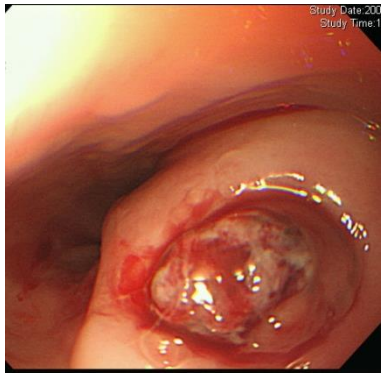


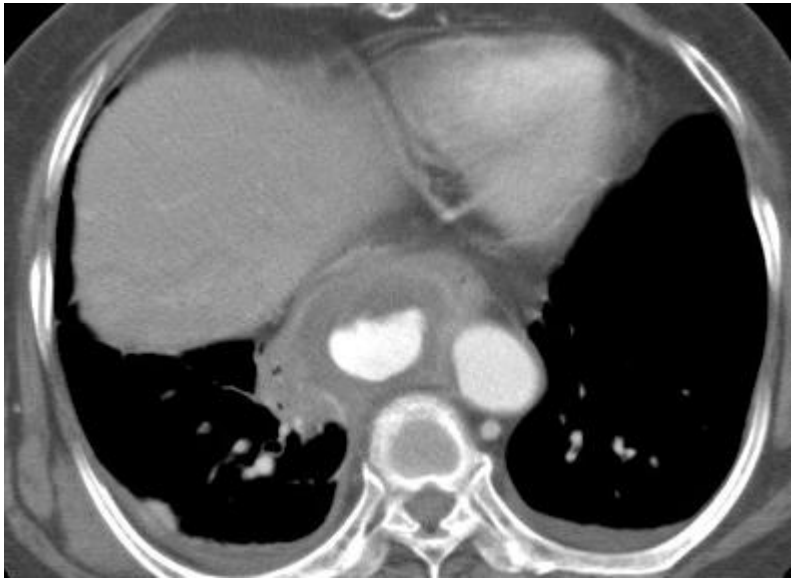
Hemobilia

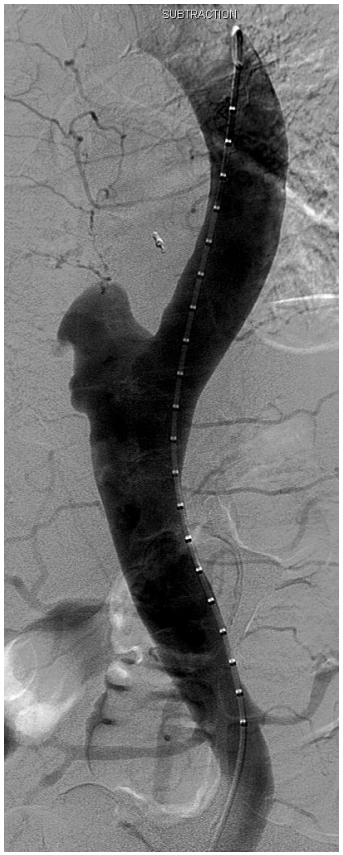


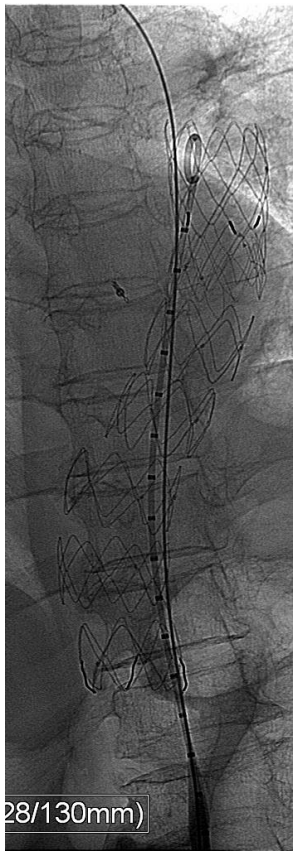
Hematemesis from aorto-esophageal fistula due to aortic aneurysm with

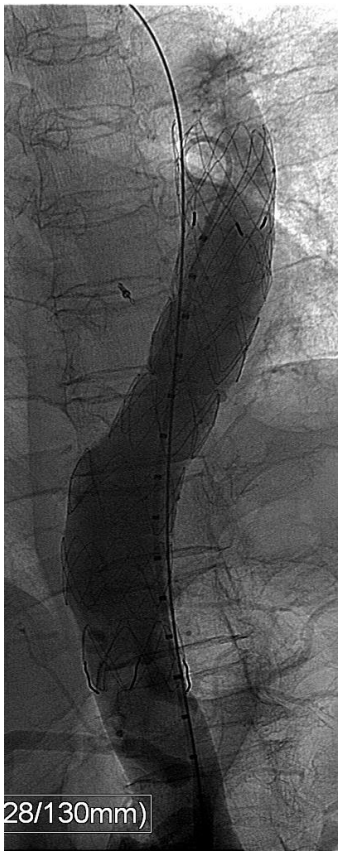




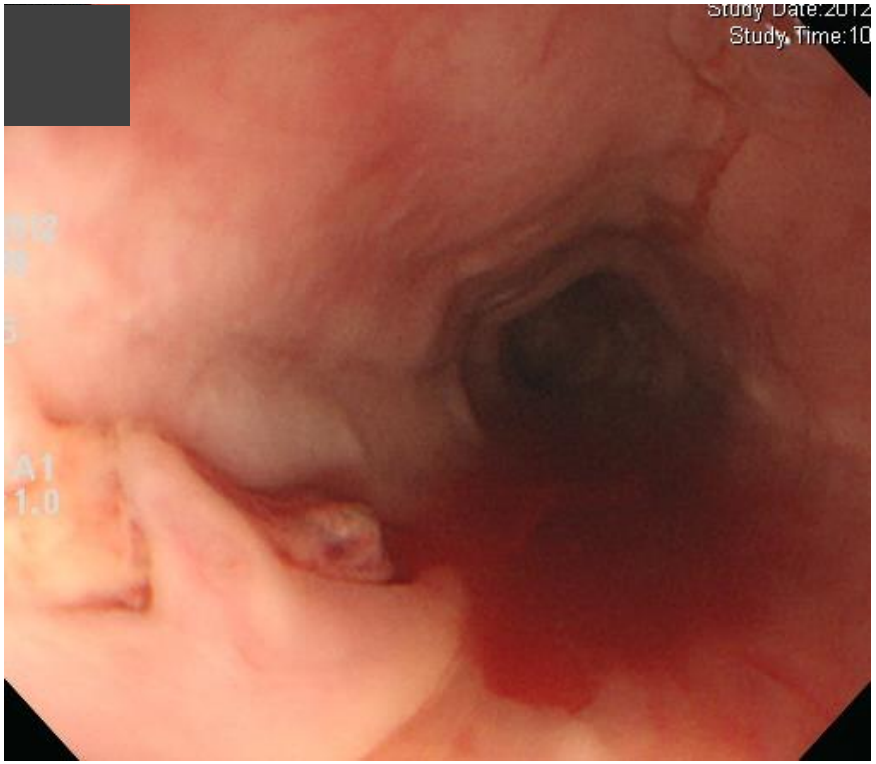




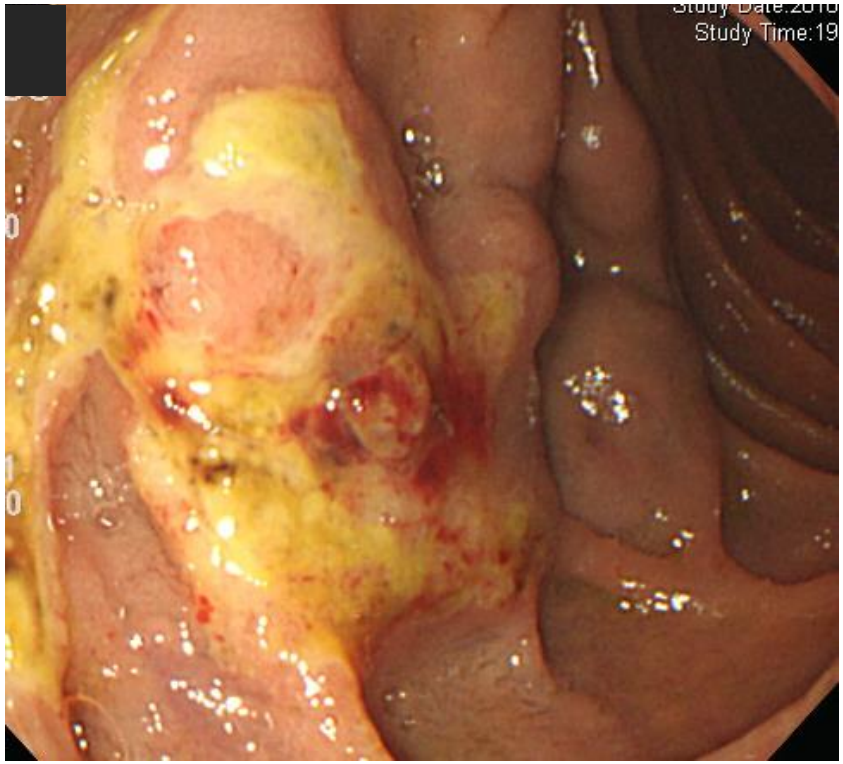


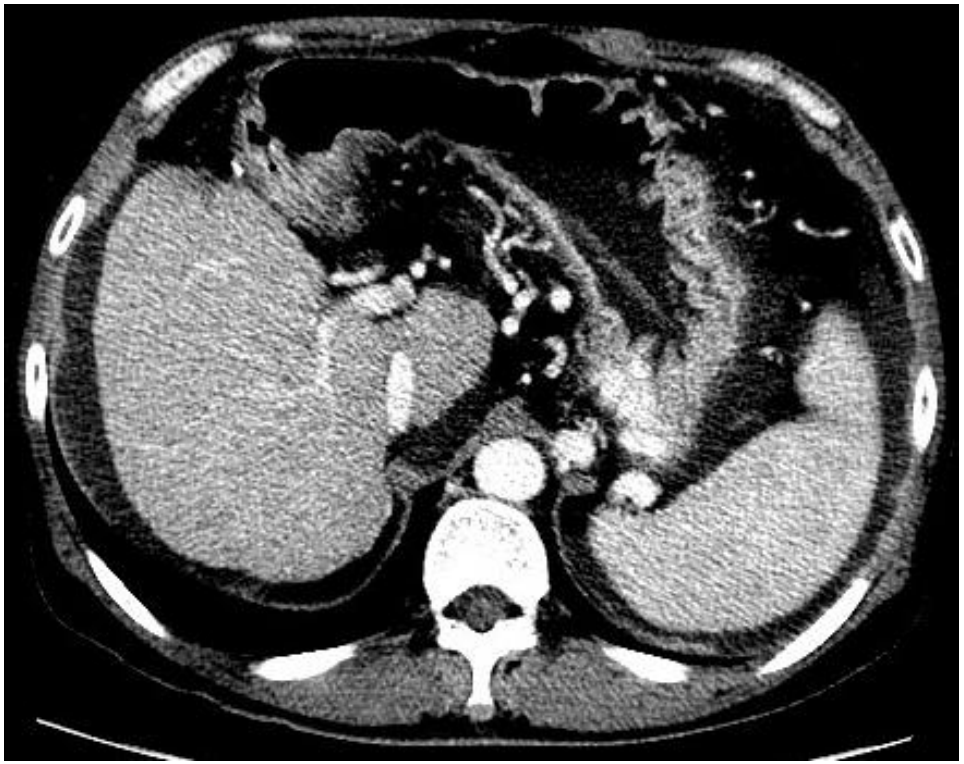


3주 전 생선가시



Decompensated hepatic cirrhosis → fatal *duodenal varix* bleeding





CT: 3 months ago

상부위장관 출혈의 내시경 치료

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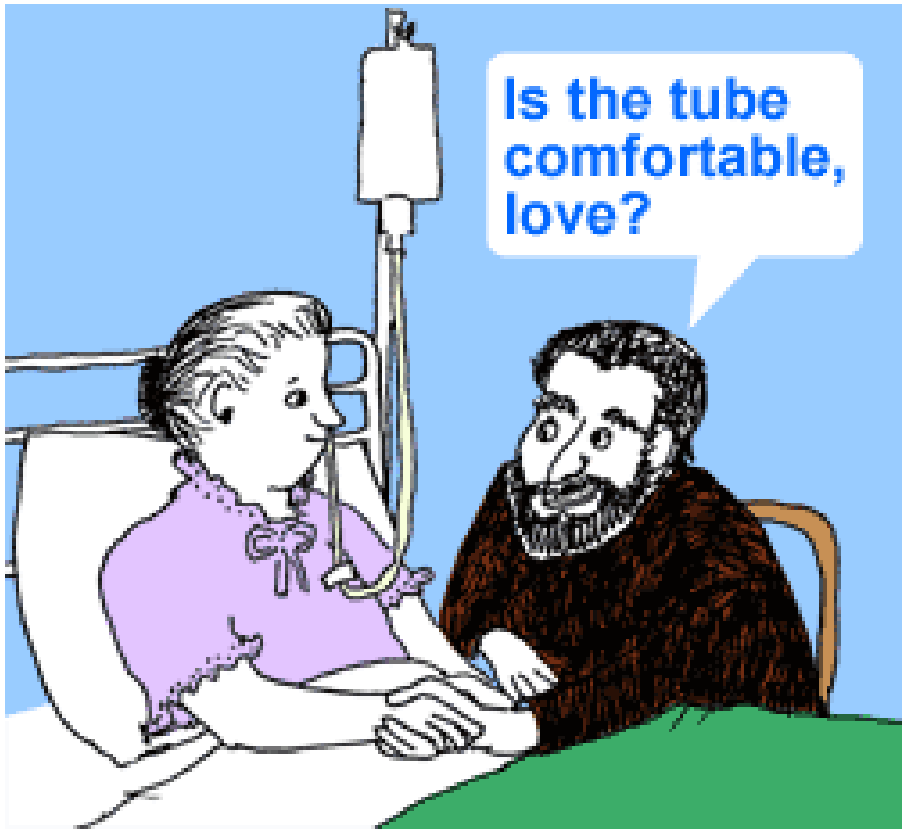
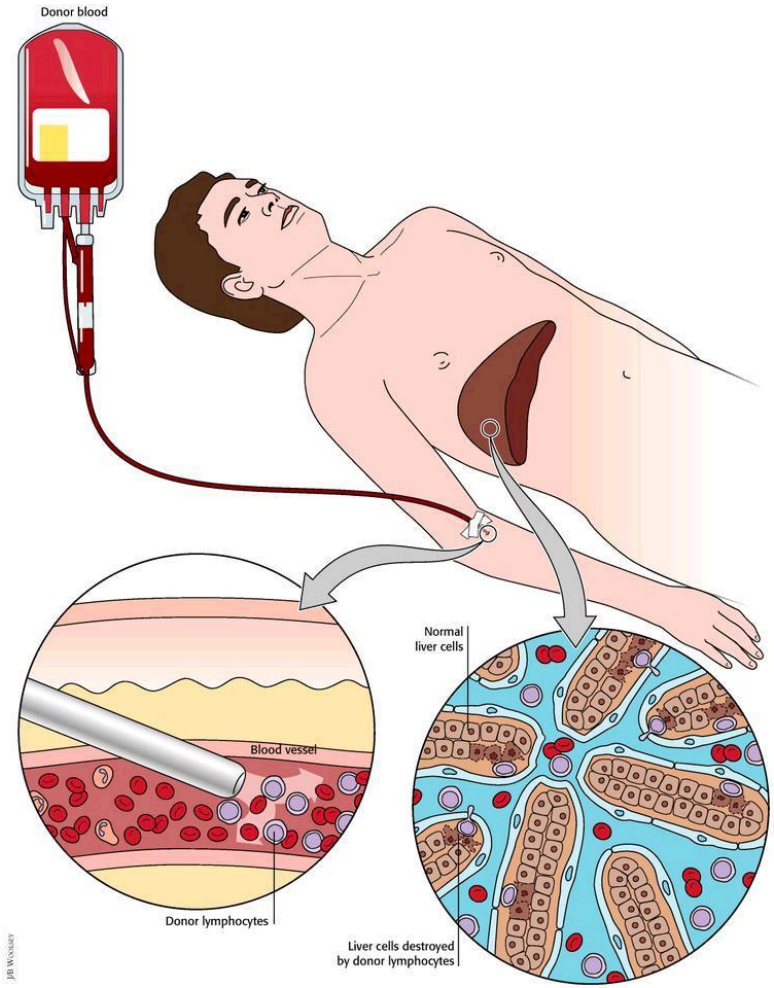
Issue 1: nasogastric tube



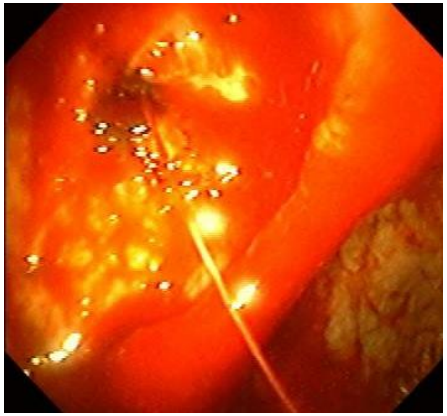
http://www.aphasiahelp.org/information/stroke/13_eating/images/ngt.gif

Issue (2): transfusion

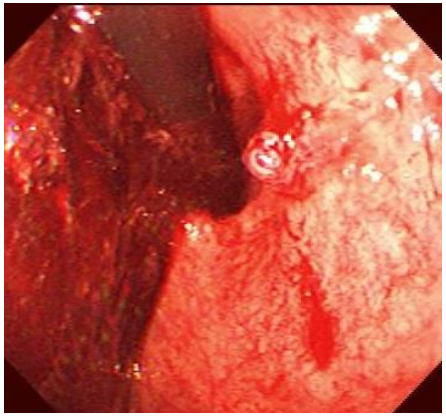


http://nursingcourses.wordpress.com/blood-transfusion-fundamentals-for-nurses/

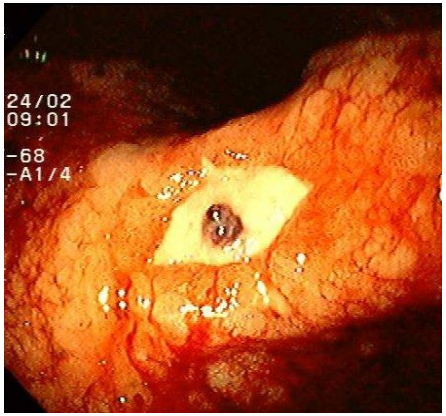
Rebleeding risk by Forrest classification



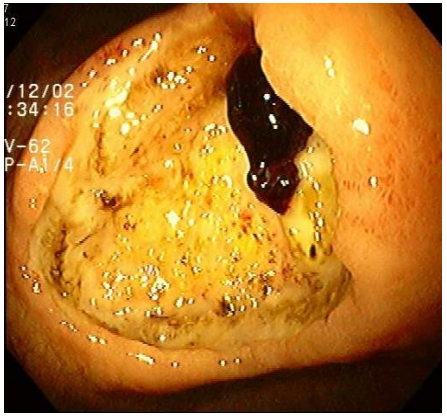
Ia, pumping



Ib, oozing



IIa, exposed vessel

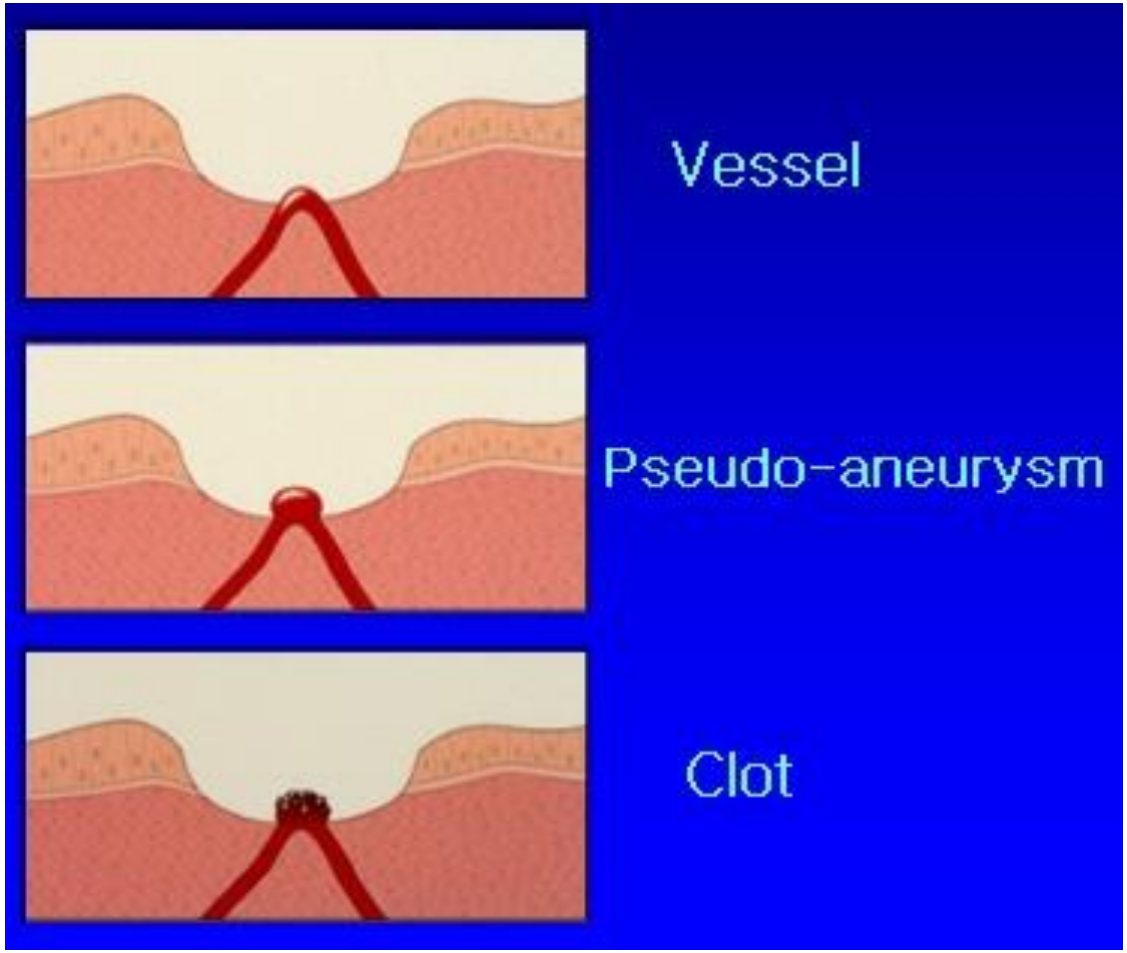


IIb, adherent clot

Endoscopic stigmata of recent hemorrhage	Prevalence, percent	Risk of rebleeding on medical management, percent
Active arterial bleeding	10	90
Non-bleeding visible vessel	25	50
Adherent clot	10	25 to 30
Oozing without visible vessel	10	10 to 20
Flat spot	10	7 to 10
Clean ulcer base	35	3 to 5

Adapted from Katschinski, B, Logan, R, Davies, J, et al, Dig Dis Sci 1994; 39:706.

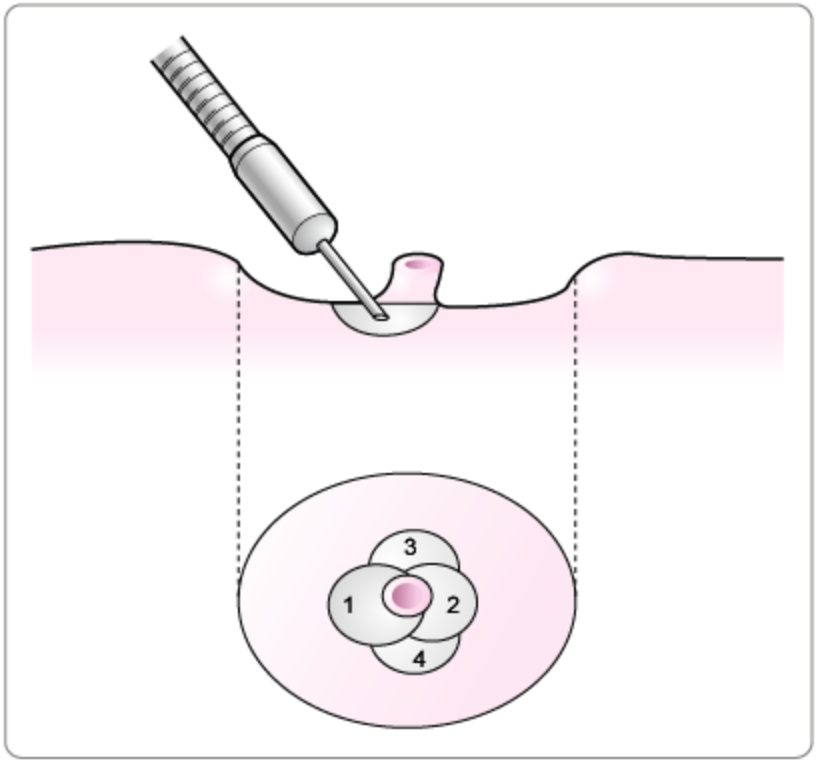
Exposed vessel and adherent clot



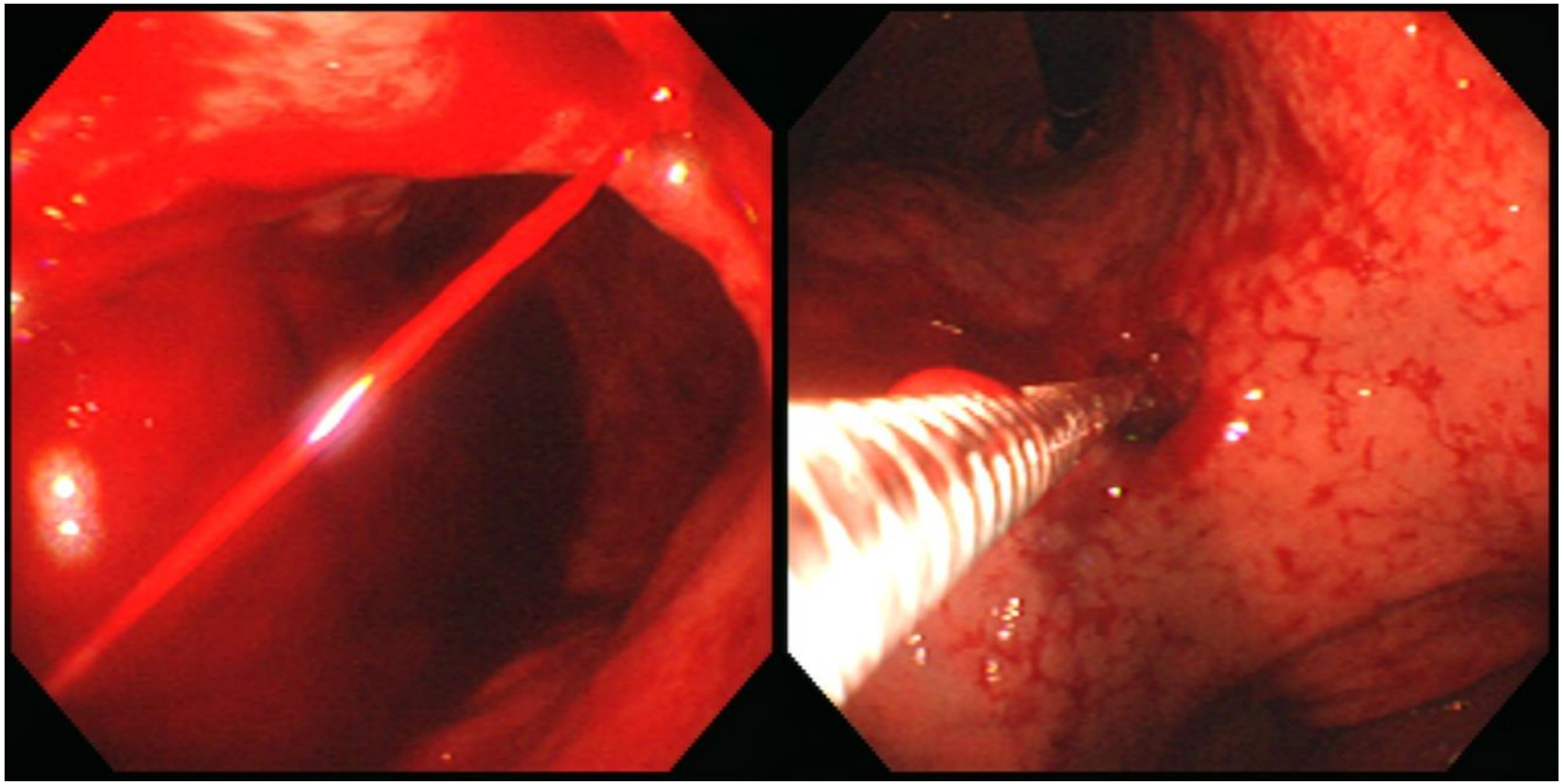
Methods of endoscopic hemostasis

- Electrocauterization
  - Bipolar catheter
  - Heat probe
  - Hot biopsy forcep
- Epinephrine injection treatment
- Endoscopic cliping, APC
- Thrombin
- ALTO spray, Ulcermin spray
- Surgery

Ethanol injection



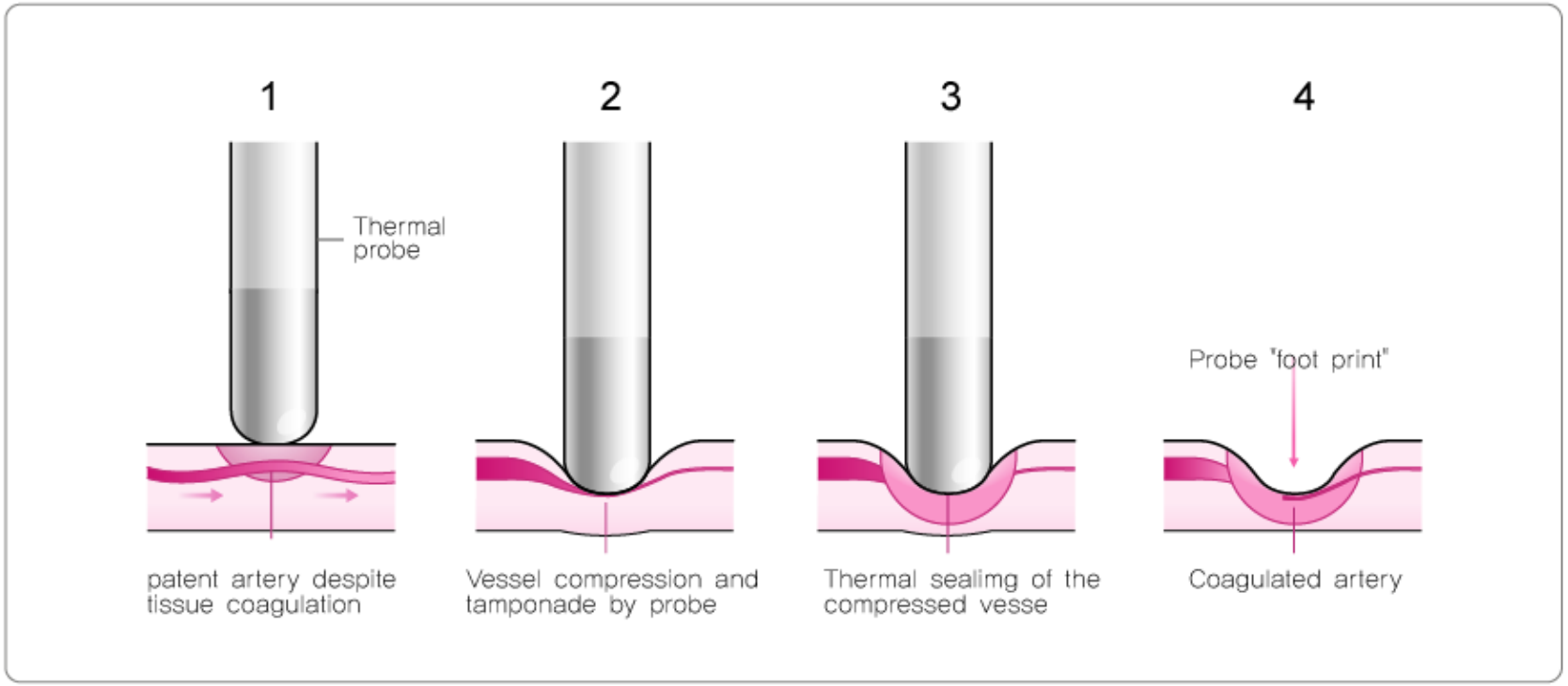
Complication: bleeding (spurting)



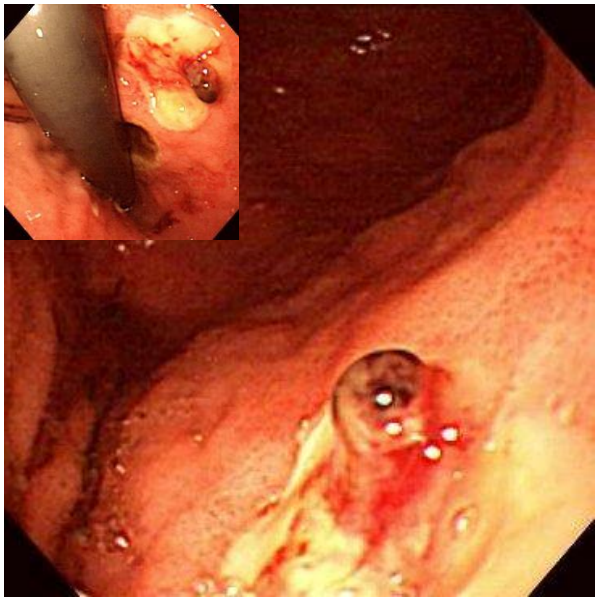
Active bleeding

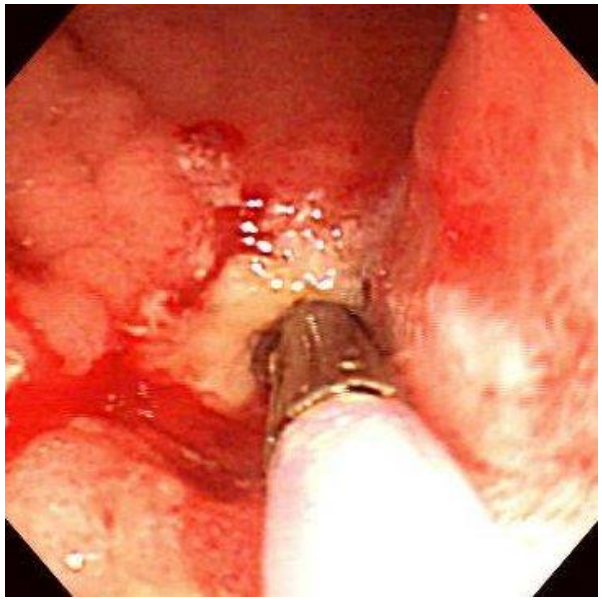
Injection

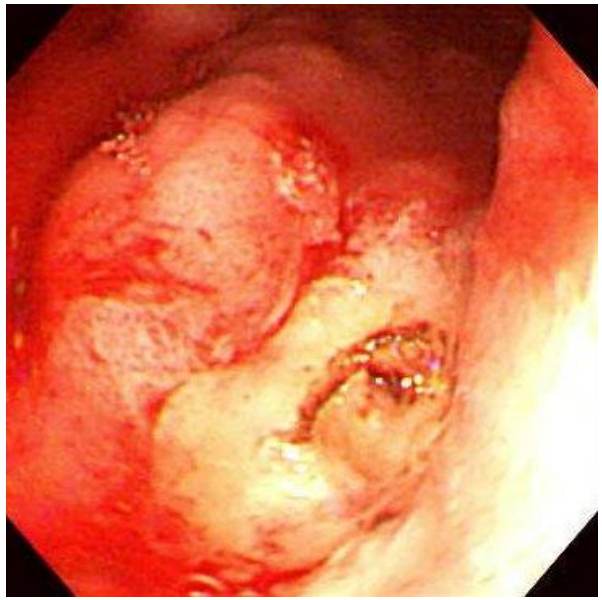
Coaptive coagulation



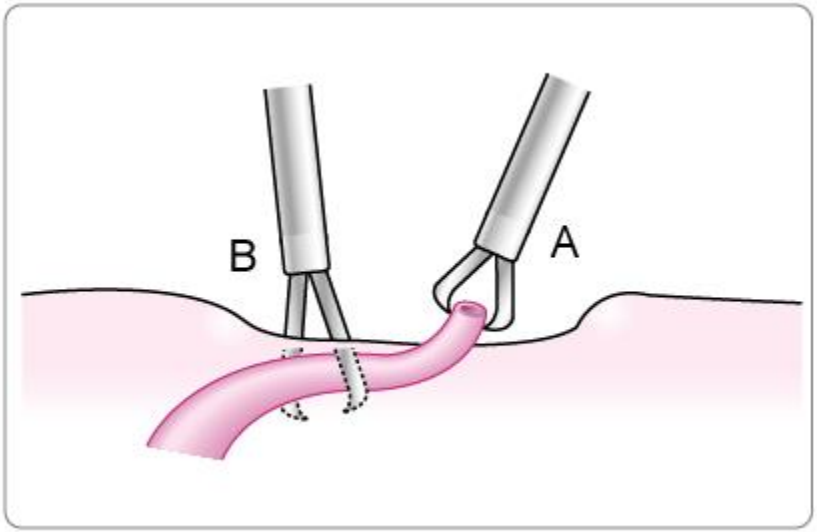
MVR후 warfarin 사용 중 출혈이 있어 heat probe coagulation시행



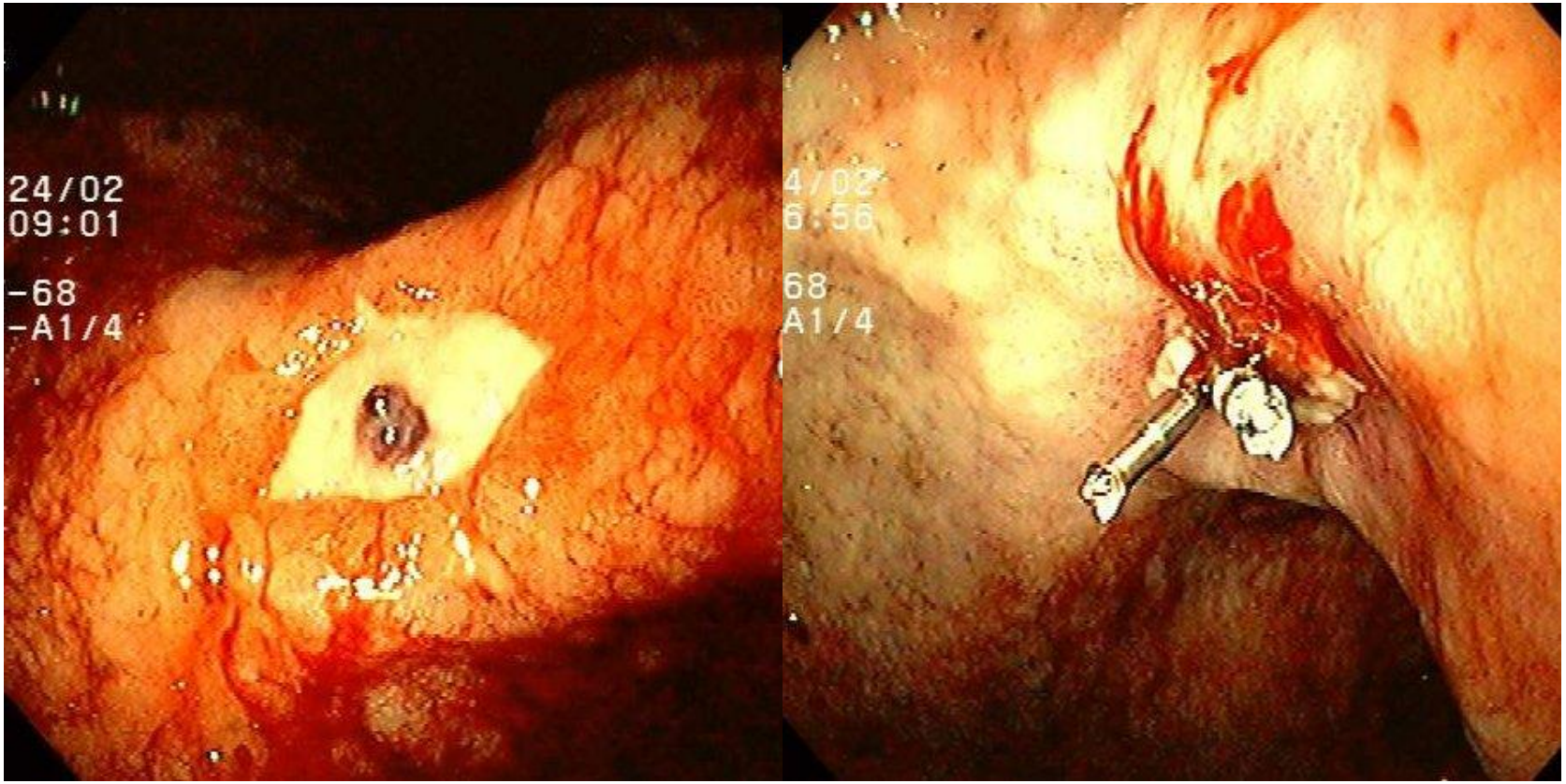




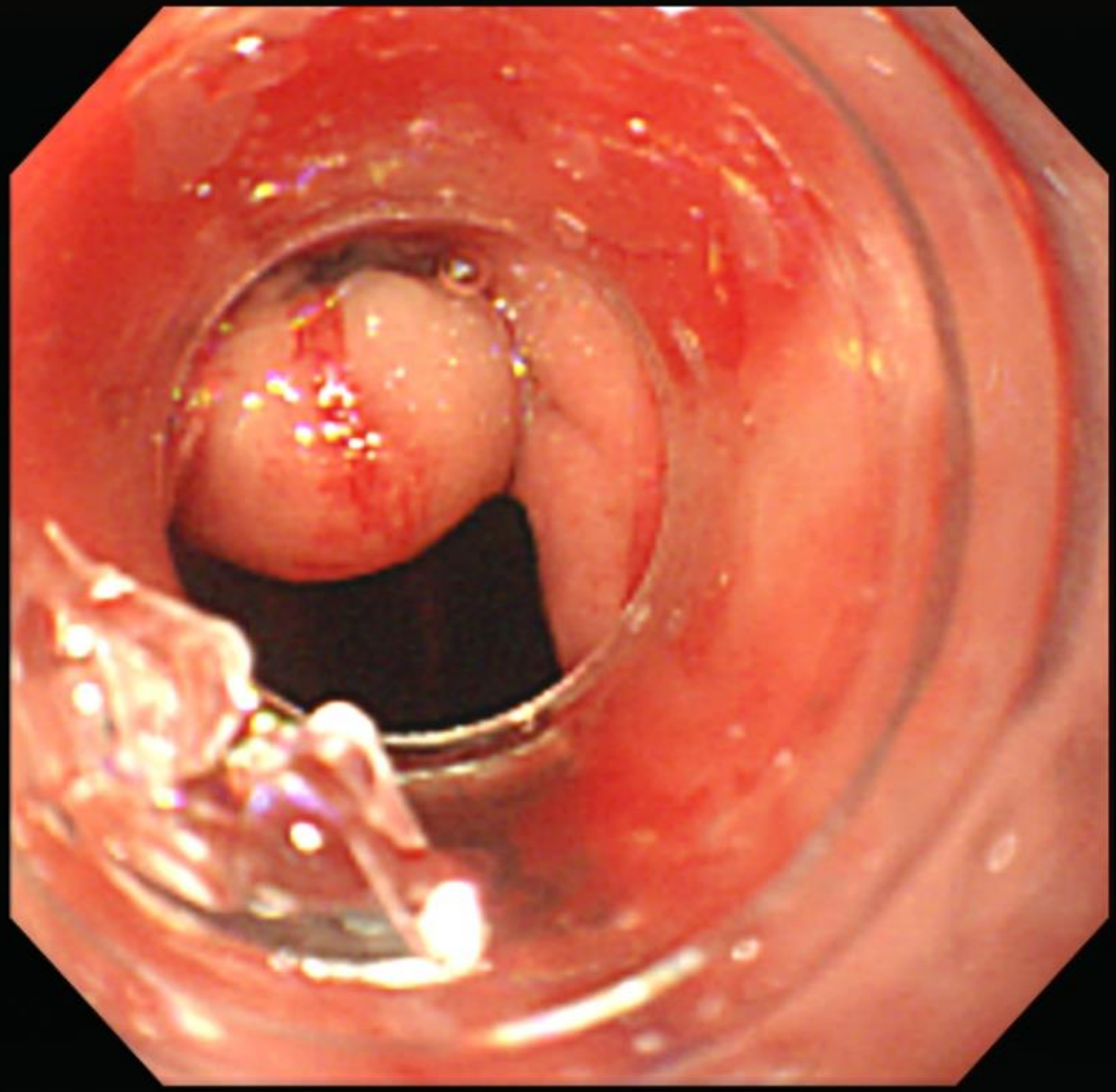
Two types of clip application



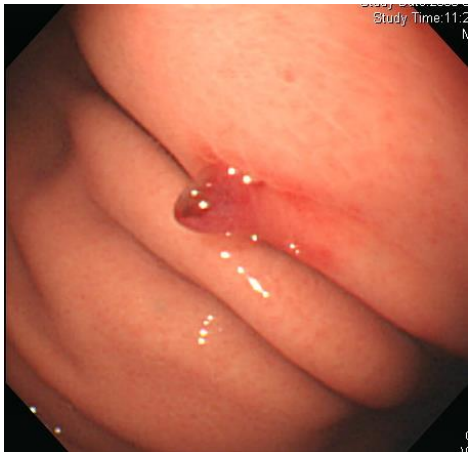
Hemoclipping for exposed vessel

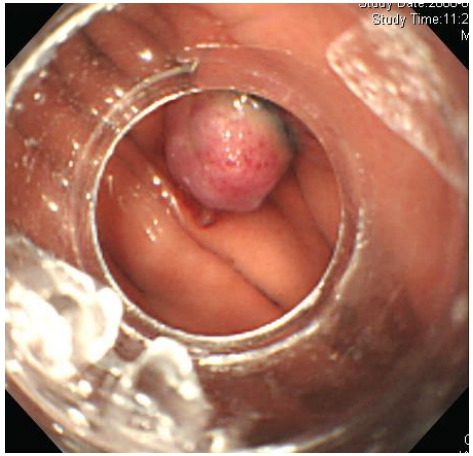


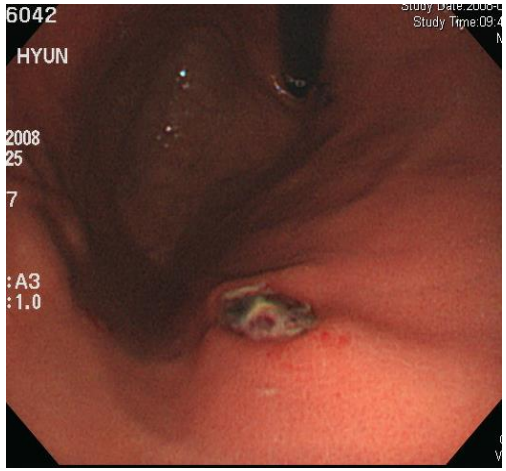
Band ligation for cardia variceal bleeding



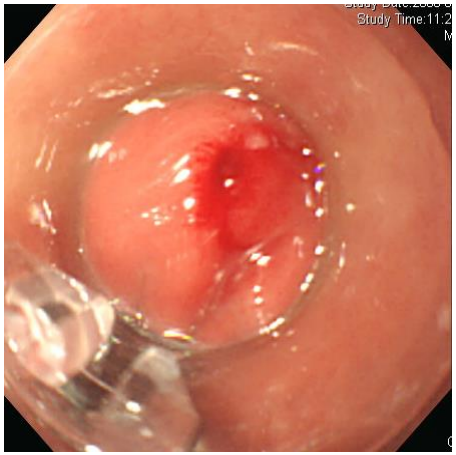
Band ligation for Dieulafoy lesion

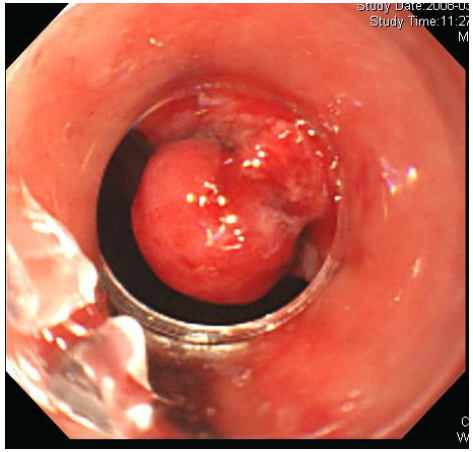


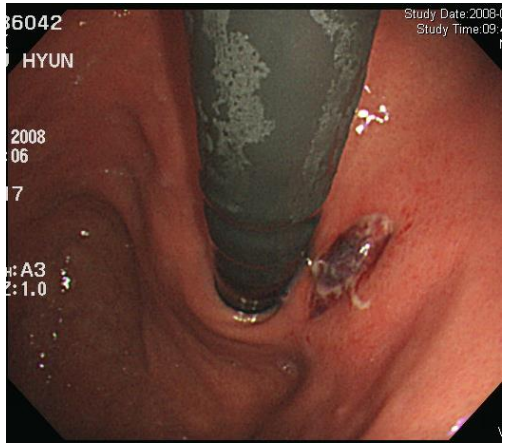




AW of high body : Dieulafoy's lesion

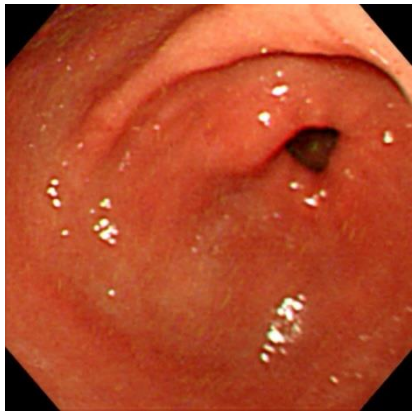


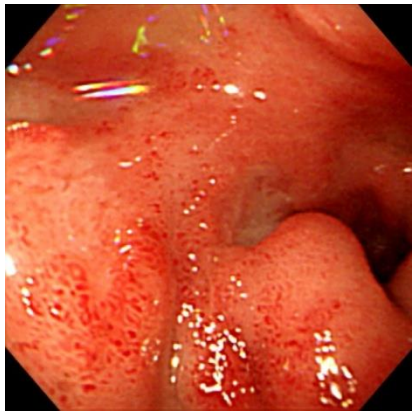


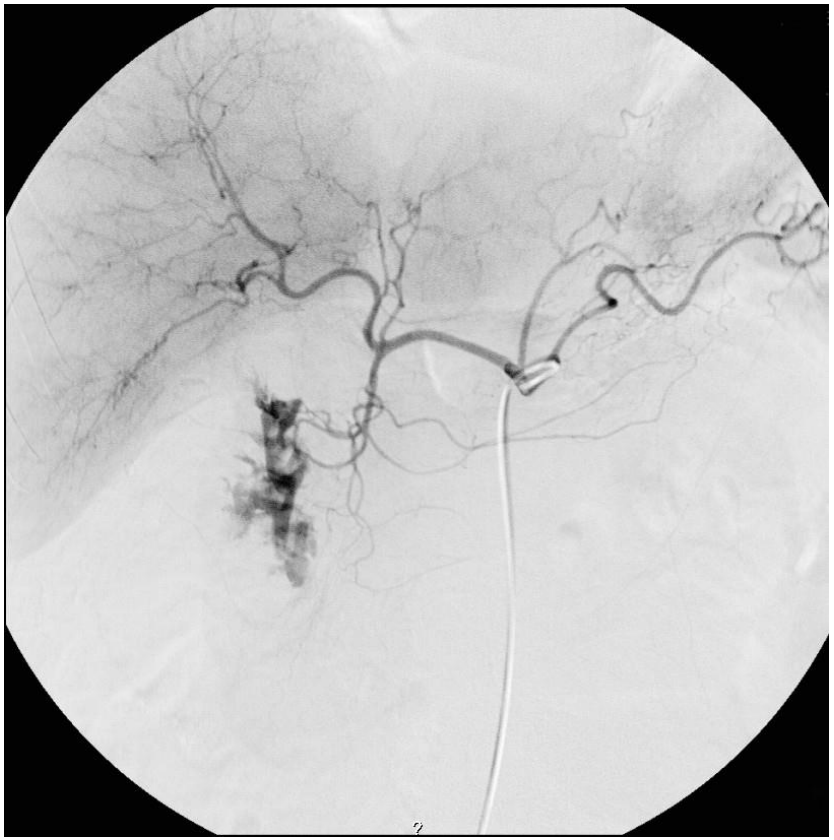


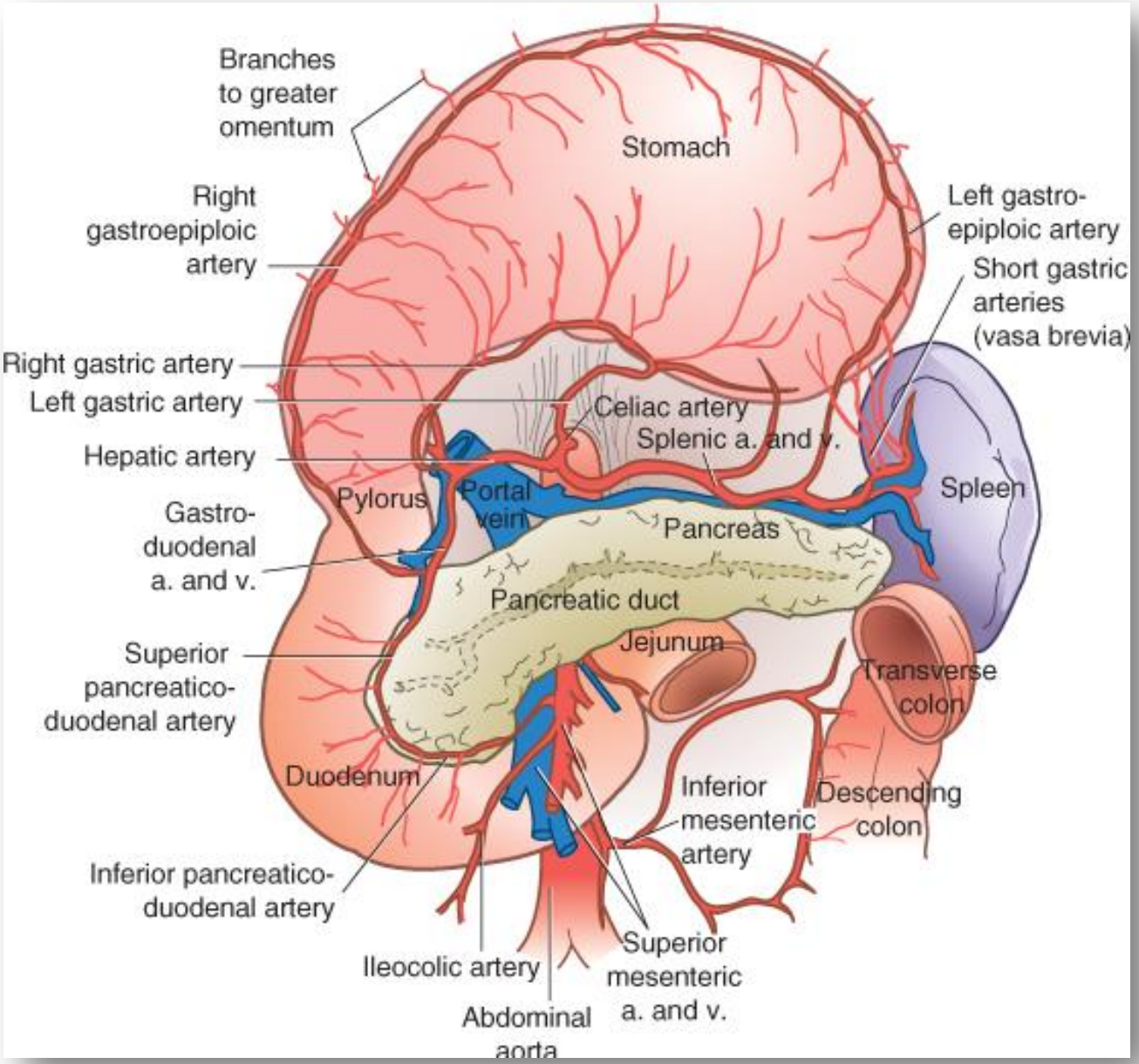
Cardia: r/o MW synd.

십이지장 궤양이 있으나 angiography를 해서 십이지장2-3부에서 출혈병소 확인

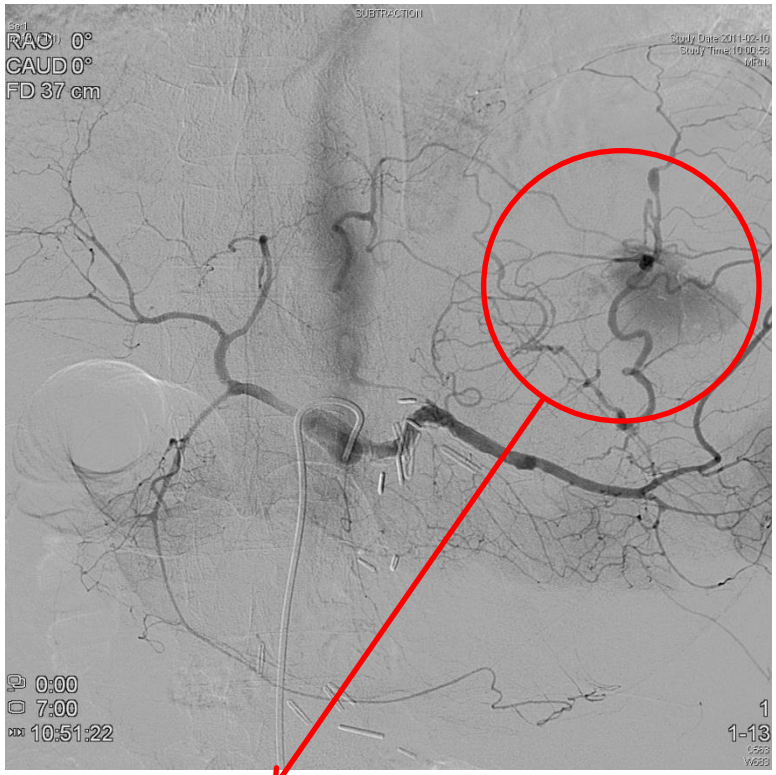




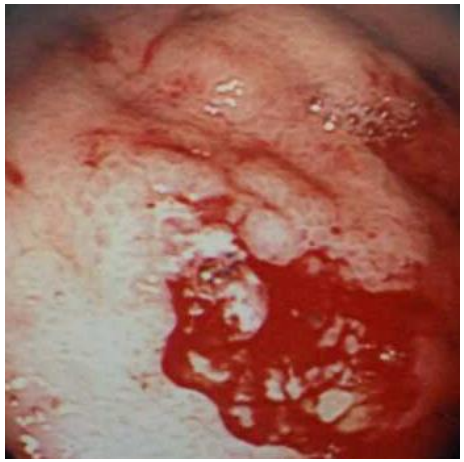


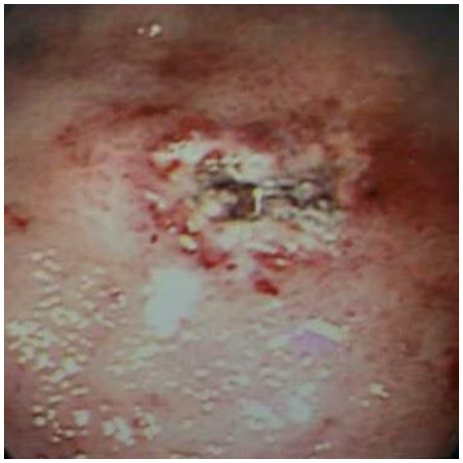

Branches to greater omentum
Stomach
Right gastroepiploic artery
Left gastro-epiploic artery
Short gastric arteries (vasa brevia)
Right gastric artery
Left gastric artery
Celiac artery
Splenic a. and v.
Hepatic artery
Pylorus
Portal vein
Spleen
Gastro-duodenal a. and v.
Pancreas
Pancreatic duct
Jejunum
Superior pancreatico-duodenal artery
Transverse colon
Duodenum
Inferior mesenteric artery
Descending colon
Inferior pancreatico-duodenal artery
Ileocolic artery
Superior mesenteric a. and v.
Abdominal aorta

Hemodialysis 중인 CRF 환자가 쇽과 의식장애를 동반한 대량출혈로 내시경을 하였으나 위내 혈액이 너무 많아 병소를 찾지 못함. 즉시 혈관조영술로 출혈부위를 찾아 색전술을 하였음. Vital은 안정되었으나 출혈이 지속되어 다음 날 내시경을 하였고 성공적으로 지혈함



Extravasation을 보였던 출혈병소



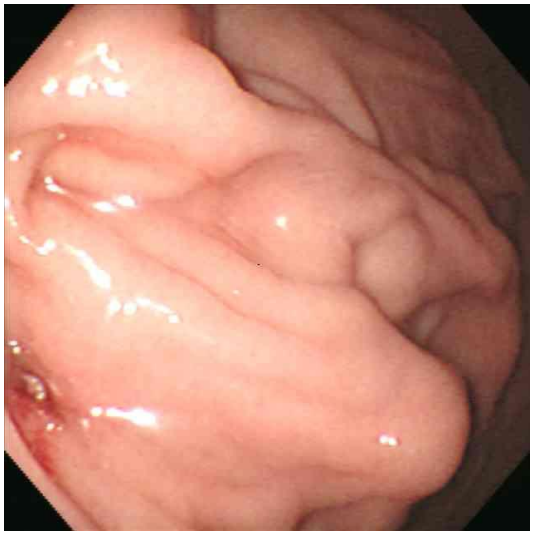


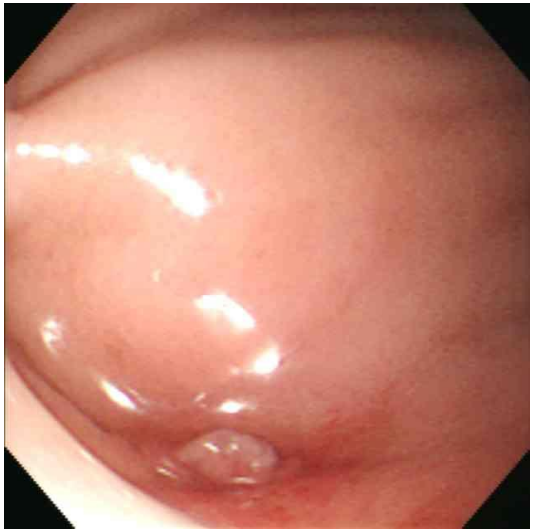
Pseudoaneurysm in pancreatitis

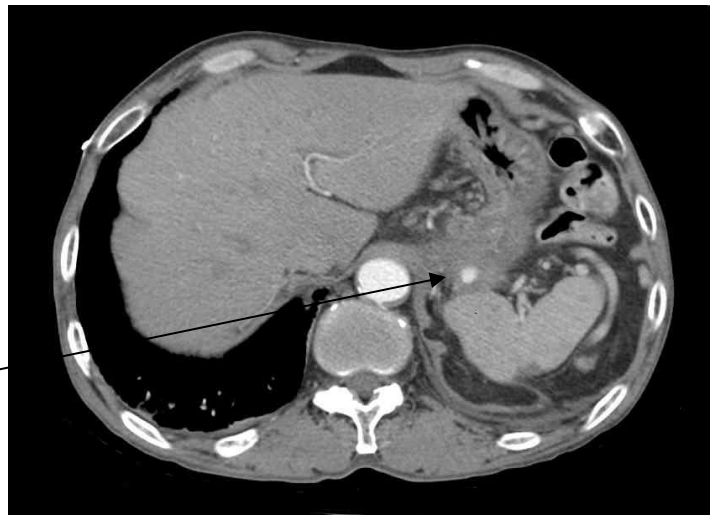
- 가성동맥류: 만성췌장염의 17%, 급성췌장염 10%
- 비동맥 > 위십이지장동맥 > 췌십이지장동맥 > 췌동맥 > 위동맥 > 간동맥
- 가성동맥류 출혈을 의심해야 하는 경우
  - 복통이 지속되거나 갑작스러운 악화
  - Hemodynamic instability, hemoglobin 감소
  - 위장관 출혈이 있으나 명백한 원인을 밝히지 못하는 경우
- Ranson criteria는 가성동맥류 출혈에 의한 사망을 예측하지 못한다

손영해. 대한소화기학회지 2003;42:436-439

Gastric bleeding from aneurysm

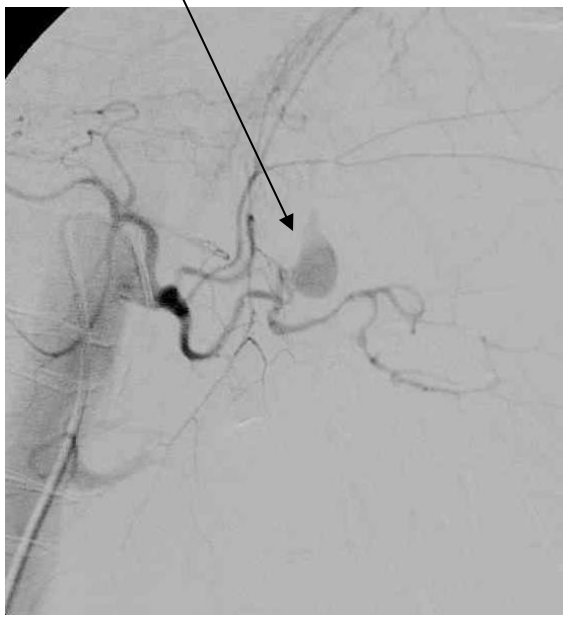


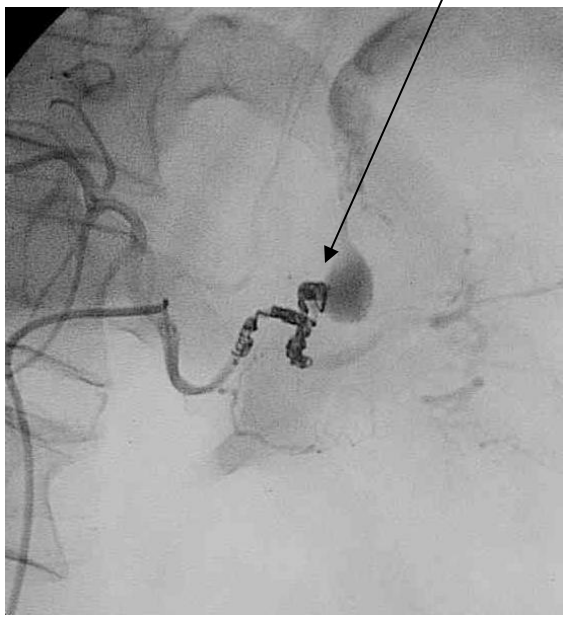




aneurysm

coiling



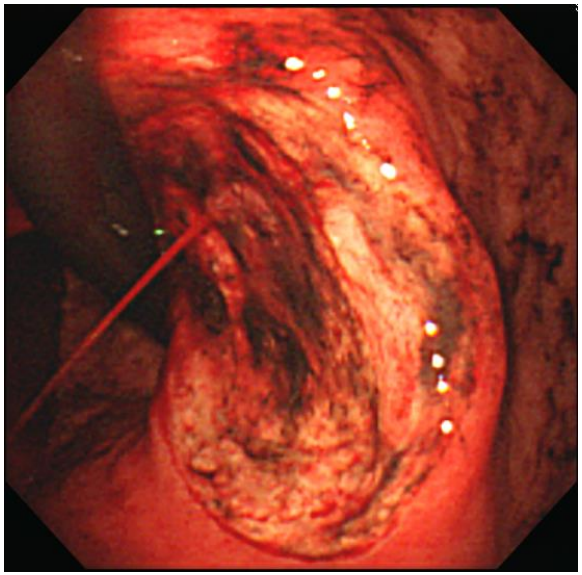


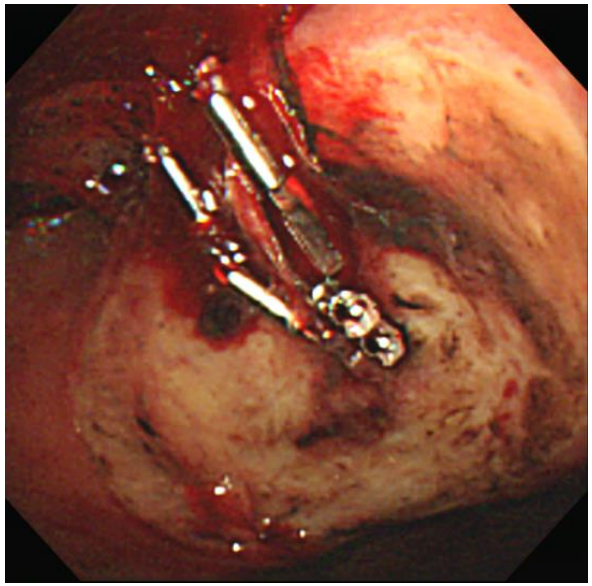
몇 마디 더...

성균관대학교 의과대학 내과 이준행

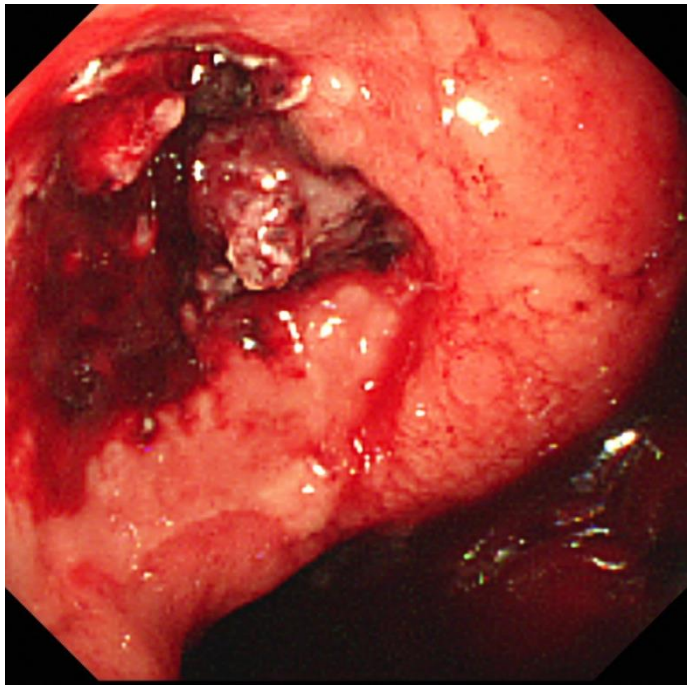
항상 좋은 결과가 나오지는 않는다.

- 71/M with melena
- CHF 환자로 2주전부터 dyspnea 악화되고 general weakness, poor oral intake로 CCU로 입원.
- Decompensated HF로 manage 중 melena 발생
- Heart failure 진행으로 사망



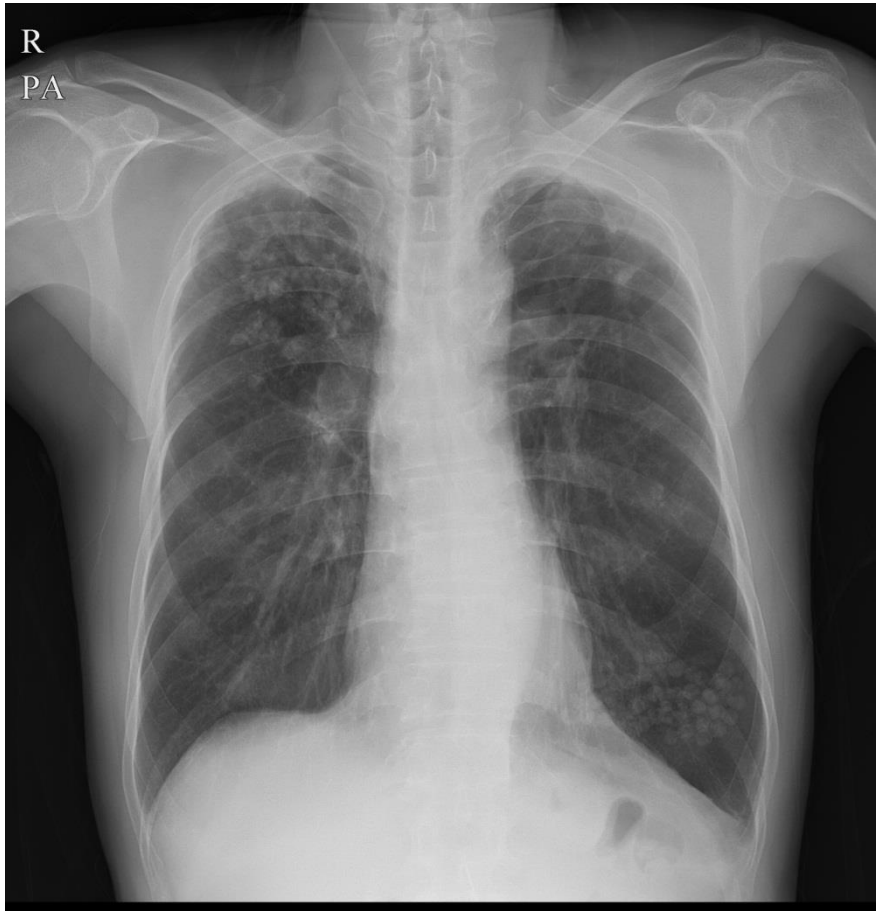


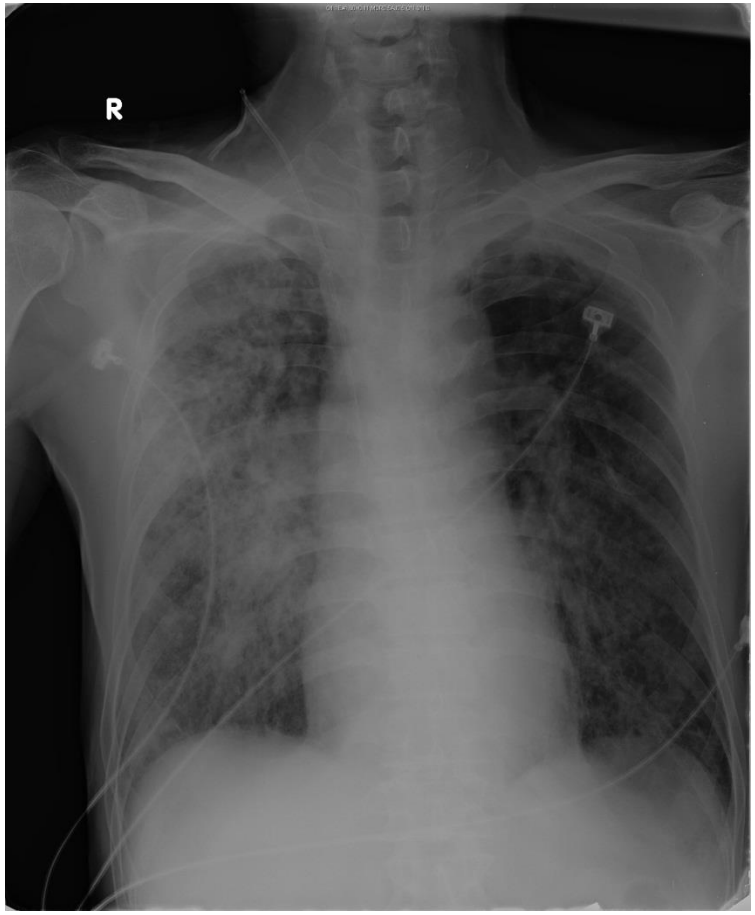
출혈성 소화성 궤양 → 반복출혈로 수술



수술 소견: Ulcer는 stomach의 HB PW, LC side에 위치하고 있었으며 pancreas와 firm 하게 adhesion 되어 있었음 – 박리 시 pancreas injury가능성(특히 splenic artery) 클 것으로 보여 pancreas쪽에 붙은 ulcerative wall을 절제 후 Bleeding site는 suture시행하여 control 하였으며 wall defect는 primary repair 시행함

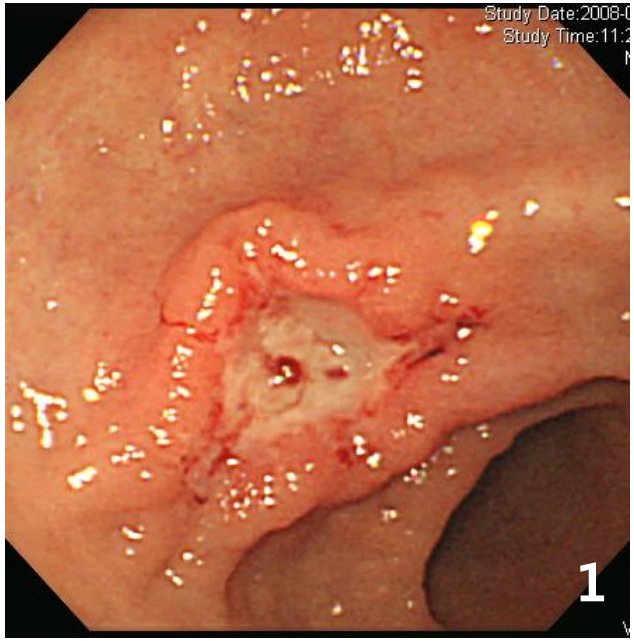
만성 빈혈환자 수혈/수액 후 pulm. edema

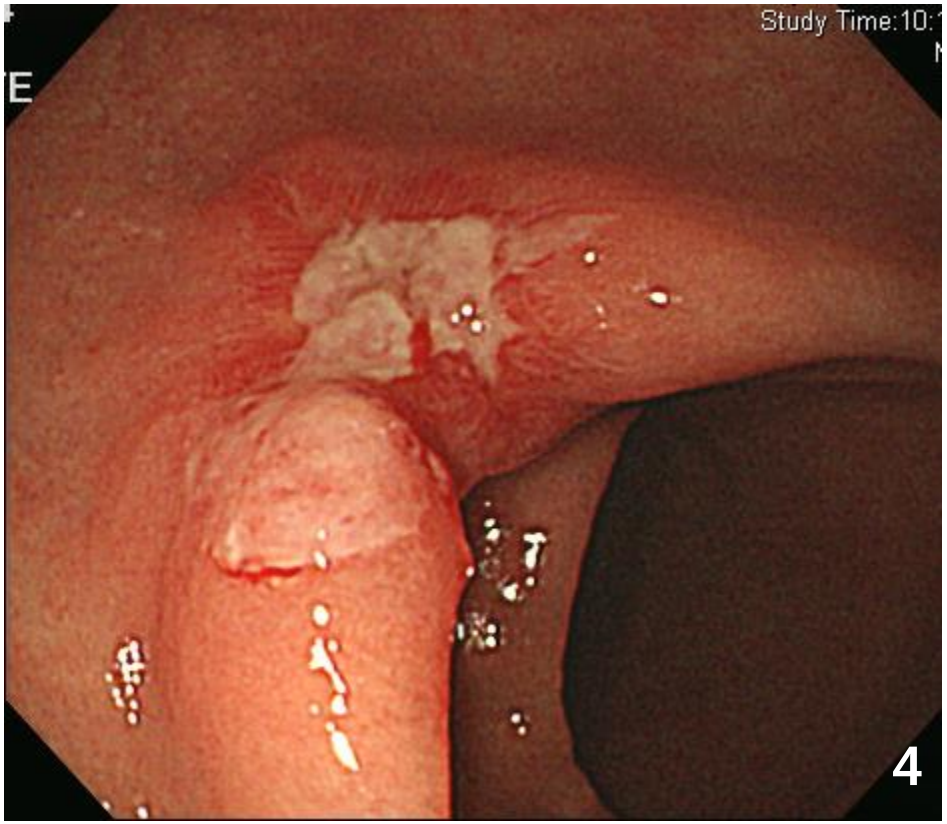


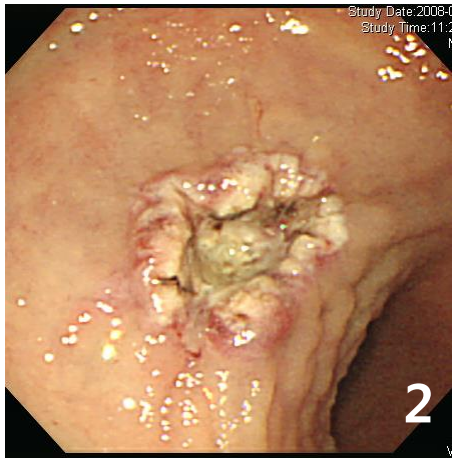


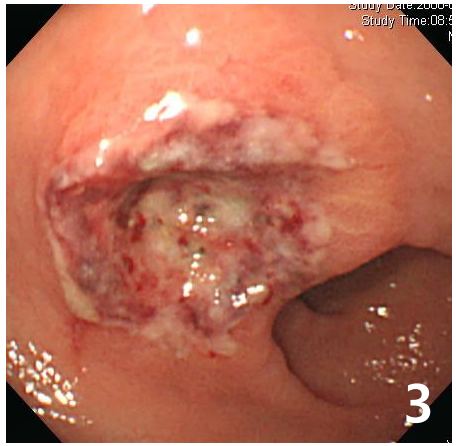
Bleeding으로 내원하여 지혈술

- 첫 조직검사에는 암으로 나오지 않았으나 추적검사에서 암으로 확인

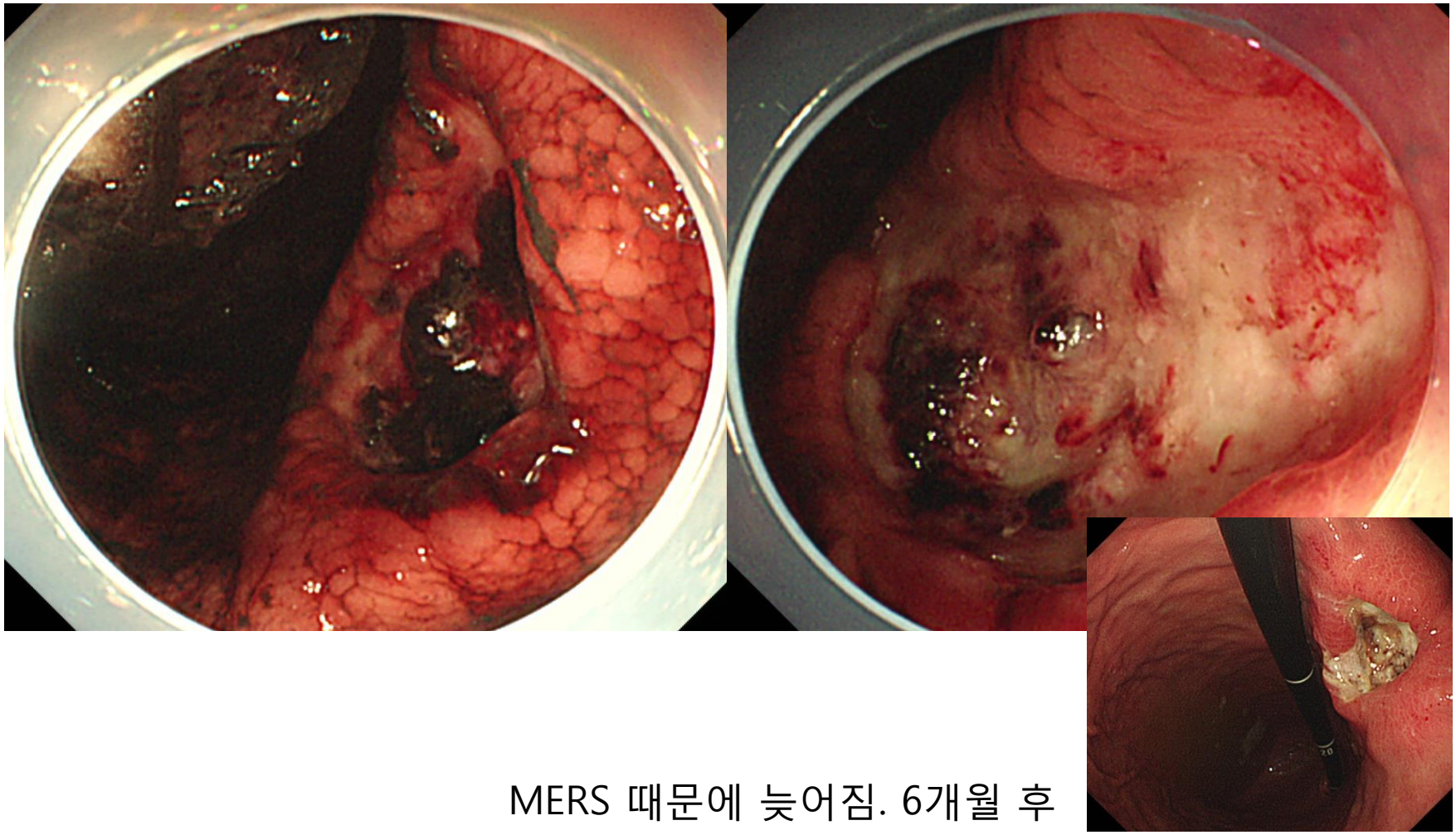






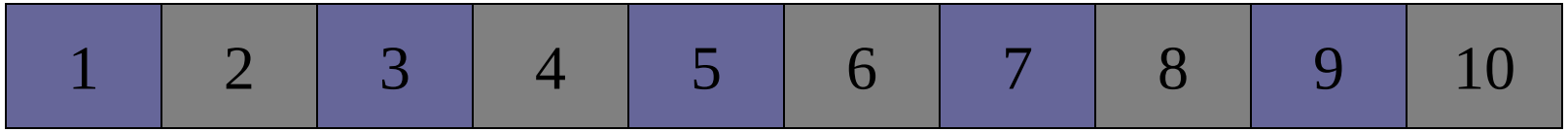


첫 조직검사 음성으로 BGU bleeding 의심 하였으나 추적내시경에서 암으로 나옴



MERS 때문에 늦어짐. 6개월 후

과거 사용하던 timetable



Initial EGD +/- endoscopic treatment

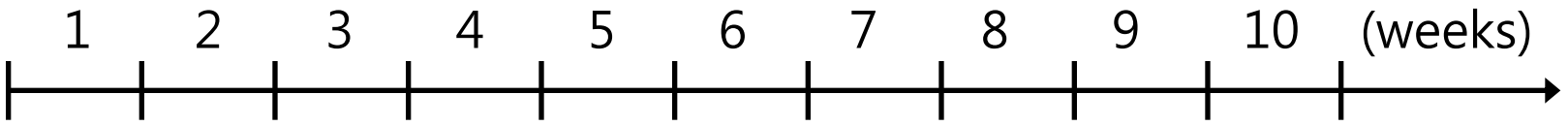
Follow-up EGD with biopsies for histology and *H. pylori*

Follow-up EGD with histology and *H. pylori*

PPI

IV → oral

H. pylori eradication treatment (prn)



Initial EGD +/- hemostasis (if possible, histology and CLOtest)

Second-look EGD (only if clinically indicated)

Follow-up EGD with histology

High dose continuous intravenous PPI for 72 hours

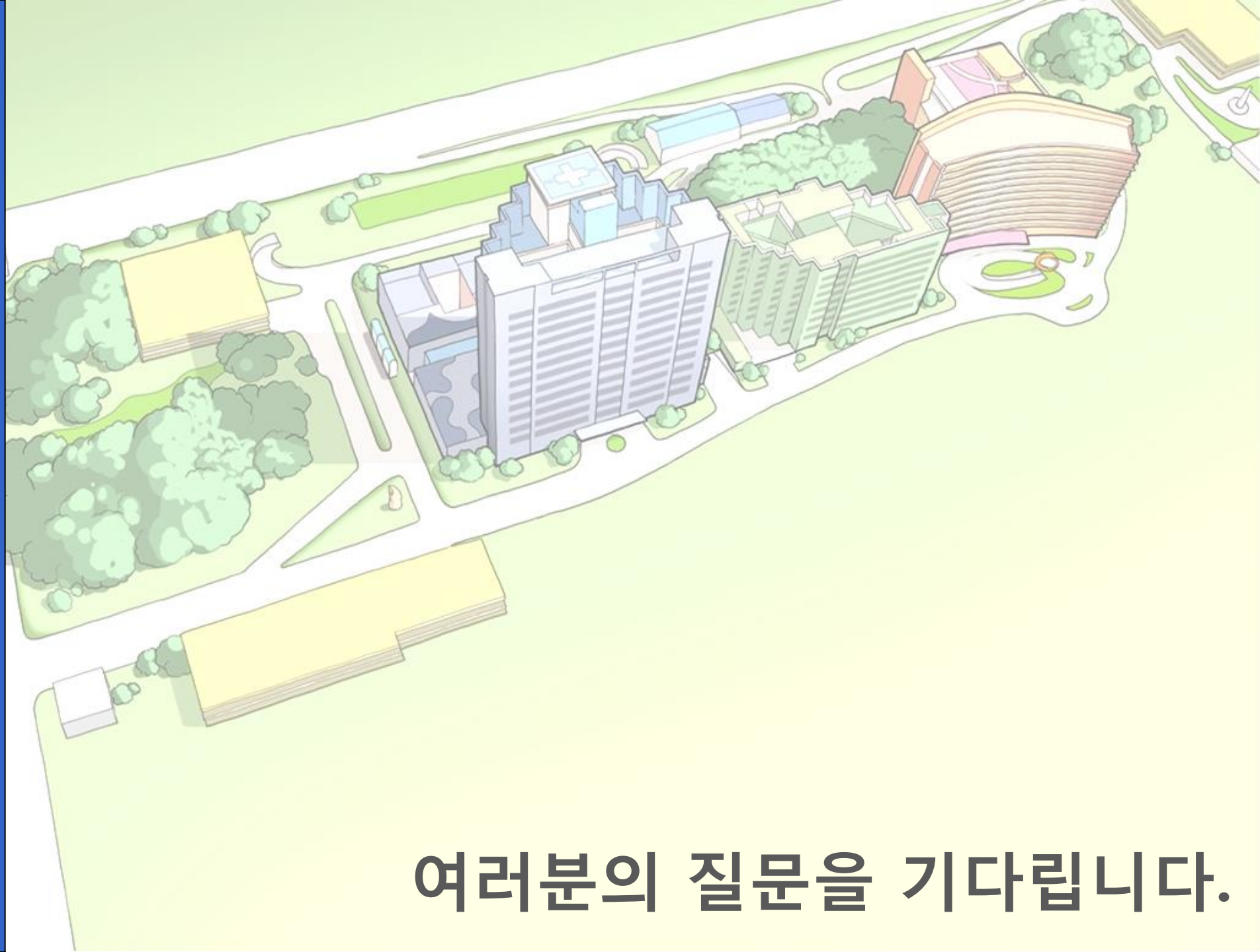
Standard dose PPI

H. pylori eradication (starting at first OPD visit)

Urea breath test

내과 전공의/임상강사에게 드리는 부탁

- 출혈이 의심되면 항상 윗년차, 임상강사, 교수들께 연락을 해 주세요.
- Unstable하면 즉시 **SMART 팀**을 호출해 주세요.
- 조직검사 결과를 챙겨주시기 바랍니다.
- 헬리코박터 투약은 첫 외래에서 하고 있습니다. PPI 투약 하고 2주 이내로 외래 follow up 잡아주십시오.
- 수술도 궤양 치료 중 하나임을 잊지 말아주세요.



여러분의 질문을 기다립니다.