

Session II

A Case of Efficacy of Endoclot for Acute Upper Gastrointestinal Bleeding in Advanced Gastric Cancer Patient

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1. Case presentation

70세 남자 환자가 지속적인 소화불량과 상복부 불편감으로 타원에서 내시경 검사를 하고 위암 의증 하에 전원 되었다. 한 달간 3 kg의 체중감소와 위암 가족력이 있는 환자로 위내시경 검사와 복부 CT를 진행했고, 진행성 위암을 진단했다. 항암화학요법으로 FOLFOX 치료를 하려고 했으나, 환자 및 보호자가 거부하여 보존적 치료만 하다가 토혈을 하고 응급실 내원하여 응급내시경을 통해 Cancer bleeding이 진단되었다.

2. Diagnosis

진행성 위암 환자의 암성 출혈

3. Therapy and Clinical Course

응급내시경 시행시 Cancer에서 oozing 양상의 출혈이 지속적으로 있으나, 명확한 출혈점을 찾을 수 없어 지혈하지 못했다. Embolization을 응급으로 시행하였으나, Lt. Gastric A. 만 선택적으로 embolization 시행했다. 3병 일째 추적내시경을 하여 oozing 양상의 지속적인 출혈이 있는 Cancer site에 Endoclot을 도포하였고, 이후 안정되어 FOLFOX Chemotherapy 를 시행했다.

4. Conclusion

본 증례는 진행성 위암을 진단받고 치료를 거부하던 환자가 Cancer bleeding으로 life-threatening한 상황이었지만, Endoclot으로 Endoscopic bleeding control을 한 후 항암화학요법 치료를 하여 생존 기간을 연장시킨 증례로서 보고하는 바이다.

Key Words: 진행성 위암, Cancer bleeding, Endoclot

5. References

1. YS Cho: New endoscopic techniques in treating gastrointestinal bleeding, *Gastrointest Interv* 2018; 7:131-135.
2. Beg Sabina, et al.: EndoClot in the management of non-variceal upper gastrointestinal bleeding. *Endosc Int Open* 2015;03:E605-E609.

 **Case Presentation**

74/M

Chief complaint

Hematemesis

 **Present illness**

2018.05.14) 저녁 식사 후 종이컵 한 컵 정도, 선홍색의 토혈을 하고 응급

실 내원함.

initial BP 82/52 측정됨.

■ Social History / Family History

Alcohol (-)

Smoking (-)

Herb (-)

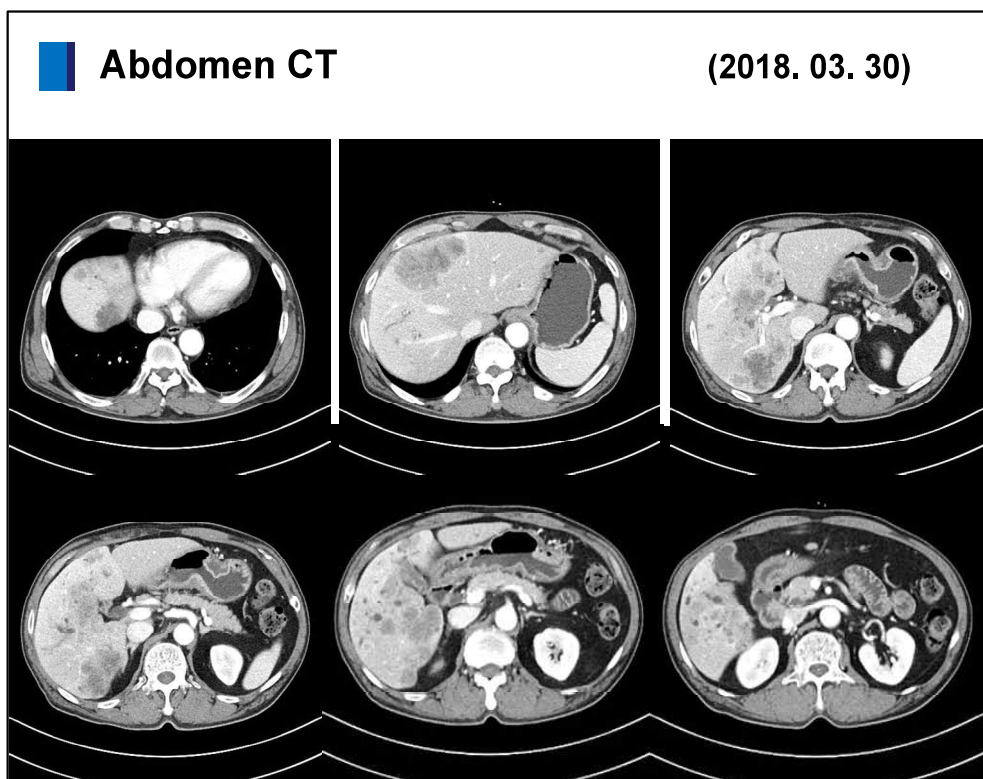
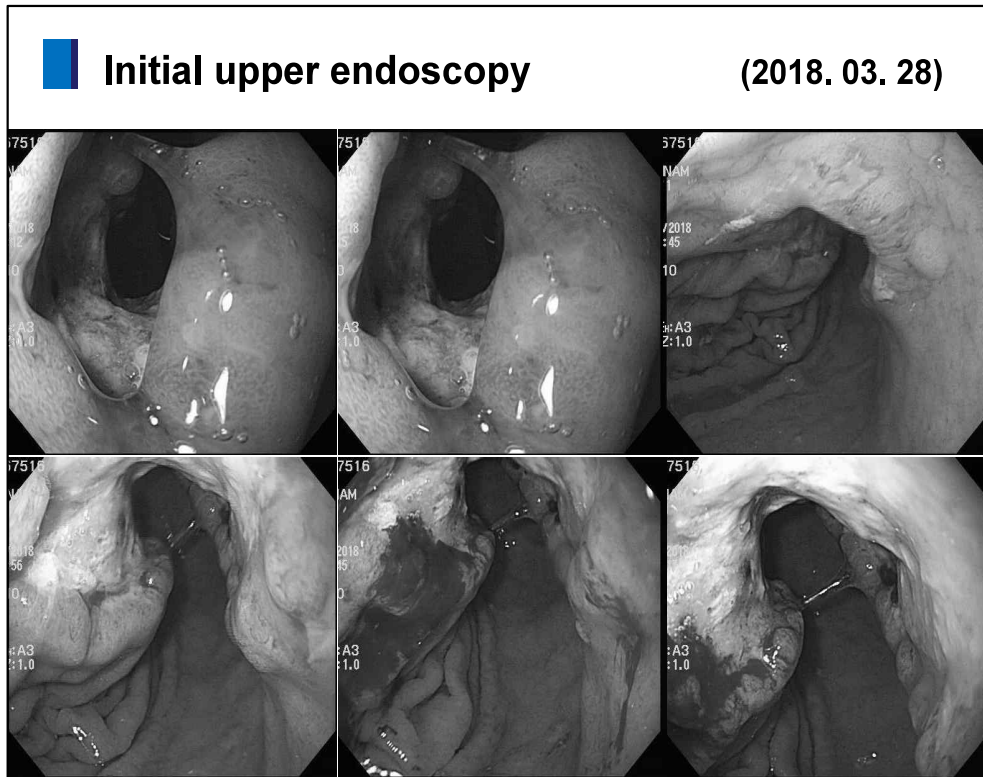
Familial Hx. : 아버지 위암.

■ Past medical history

2018.03.28) 식후 포만감 지속되고 소화불량 있어 타원에서 내시경 검사

시행 후 이상 소견으로 본원으로 의뢰되어 내원.

한달 간 3 kg 체중감소, 상복부의 불편감 호소.



Past medical history

2018.04.03) Stomach, endoscopic biopsy :

Tubular adenocarcinoma, moderately differentiated.

Immunohistochemical stain for c-erb-B2; (-)

2018.04.05) 항암치료를 계획하여 FOLFOX 투약 예정임을 설명했으나 환자

및 보호자 모두 항암치료를 거부하고 보존적인 치료만을 원함.

Review of systems

• General Appearance

- Generalized weakness/Fatigue (+/-)
- Poor oral intake/Polydipsia (+/-)

• Cardiovascular

- Palpitation (-)
- Chest pain/Discomfort (-/-)

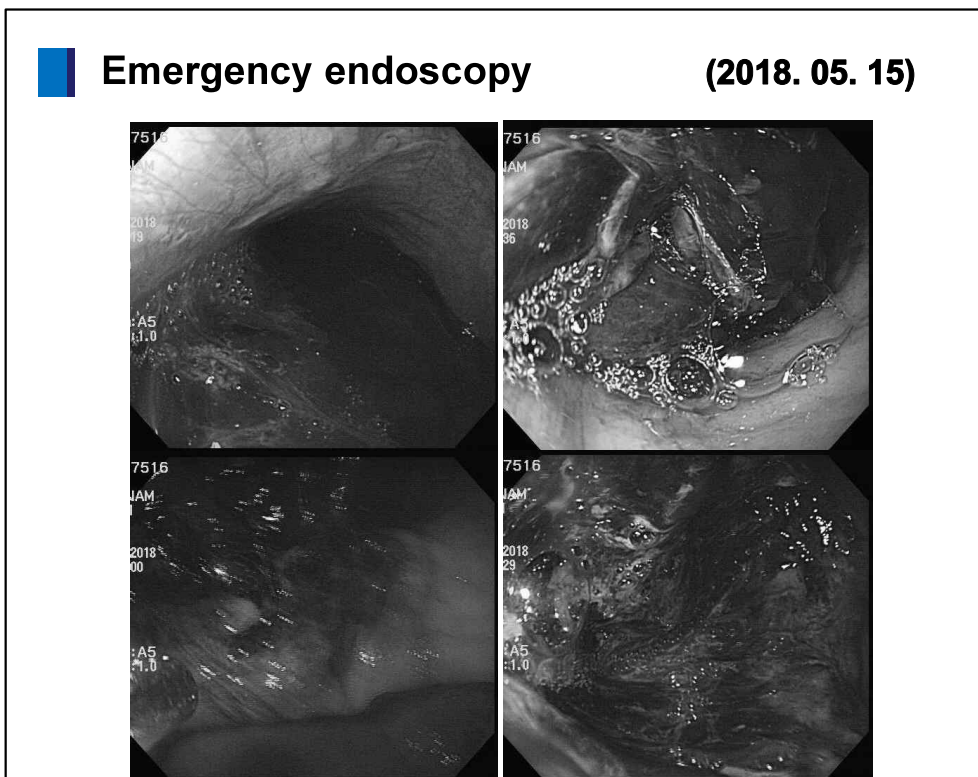
Gastrointestinal

- Anorexia/Nausea/Vomiting (+/-/+)
- Diarrhea/Constipation (-/-)
- Abdominal pain/Discomfort (-/+)
- Abdominal distension (-)
- Melena/Hematochezia (-/-)

Initial V/S

82/52 mmHg-91/min-20/min-36.0°C

Initial Lab data		(2018. 05. 15)	
Complete blood count		Serum chemistry	
WBC	25100	TP / Alb	3.9 / < 1.6 (g/dL)
Hb	4.6 (g/dL)	Glucose	203 (mg/dL)
Hct	13.8 (%)	Total bilirubin	0.90 (mg/dL)
MCV	85.3 (fL)	Total chol.(n)	78 (mg/dL)
Platelet	375K	AST / ALT	129 / 38 (IU/L)
Seg.Neutrophil	83.3 (%)	ALP	219 (IU/L)
Coagulation test		BUN / Cr	50.0 / 1.57(mg/dL)
aPTT	17.6 (sec)	Na / K / Cl	133.7 / 4.85 / 100.6 (mEq/L)
PT	13.7 (sec)	Total Ca / P	7.9 / 4.6 (mg/dL)
PT (INR)	1.2 (ratio)	LDH	1303 (IU/L)



Present illness

2018.05.15) 응급 위내시경을 했지만 Cancer bleeding으로 지혈술을 하지 못했고 Angiography를 시행함.

Angiography: Subtle hypervascularity around lesser curvature
Embolization of Left Gastric artery and right gastroepiploic A

Microcatheter를 Left Gastric artery에 진입하여 Gelfoam과 Microcoil을 이용하여 Embolization을 시행하고 추가로 right gastroepiploic A에 진입하여 Gelfoam으로 additional embolization을 시행함.

Left Gastric Artery와 연결된 Right Gastric artery의 Embolization을 위해서 Microcatheter를 진입하려고 노력하였으나, 아직 arterial diameter가 작아 진입이 불가능함.

Angiography

(2018. 05. 15)



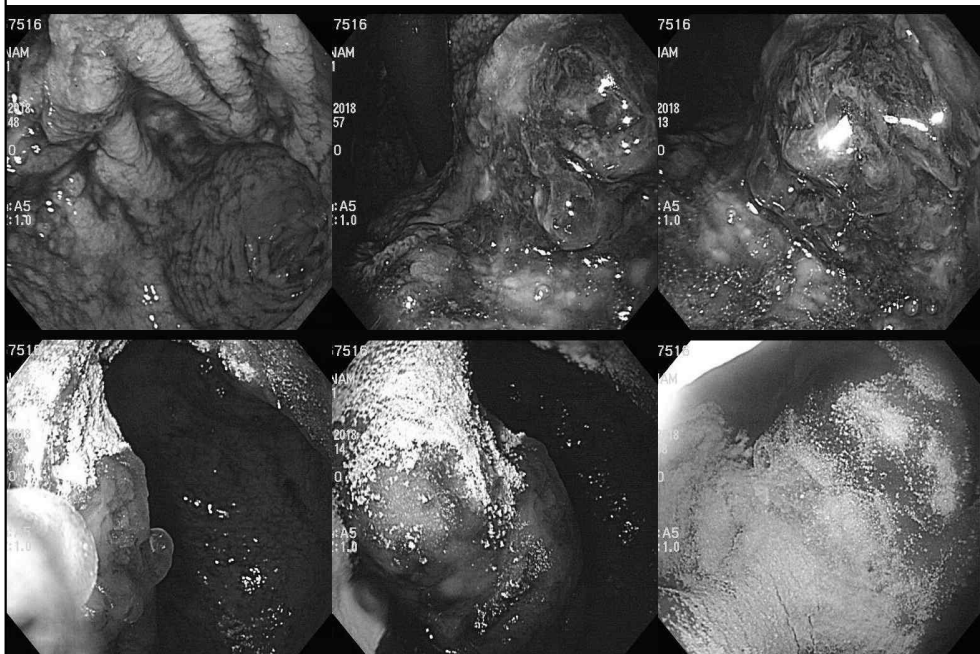
Hospital day

2018.05.15) Embolization 후 입원하여 T/F 하면서 Hb f/u

Hb			AST	ALT	ALP	BUN	Cr
2018-05-18	8.3	2018-05-18	45	40	733	22.5	0.57
2018-05-17	8.9	2018-05-17	83	48	449	34.8	0.59
2018-05-16	6.3 (2pint T/F)	2018-05-16	254	67	253	32.4	0.58
2018-05-15 15:52	7.3	2018-05-15	221	41	141	43	0.97
2018-05-15 07:00	8.5	2018-05-14	129	38	219	50.0	1.57

F/u endoscopy

(2018. 05. 18)



■ Hospital day

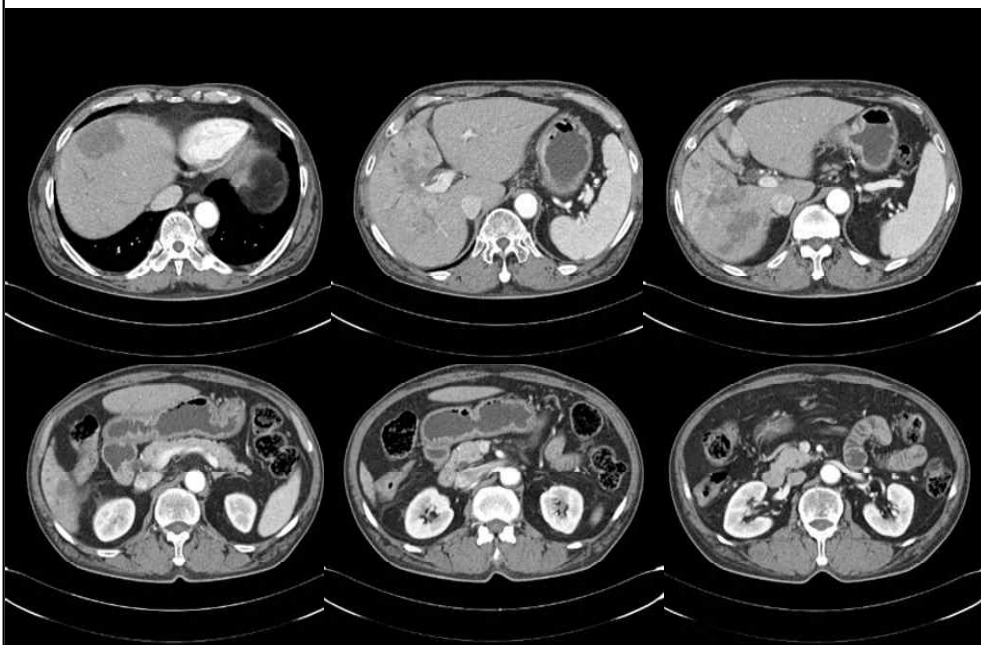
2018.05.24) 더 이상 출혈 없고 환자 안정된 상태로 보호자 및 환자를 설득하

여 FOLFOX chemotherapy start

2018.07.11) FOLFOX 항암치료 3차 시행 후 반응평가 CT 시행.

■ Abdomen CT

(2018. 07. 11)



Review

- The EndoClot polysaccharide hemostatic system is a noncontact endoscopic device that has recently been developed and sprays hemostatic powder.
- Dehydration process increases the concentration of platelets, red blood cells, and coagulation proteins (thrombin, fibrinogen, etc.) and forms a gelled, adhesive matrix that acts as a mechanical barrier to prevent bleeding.

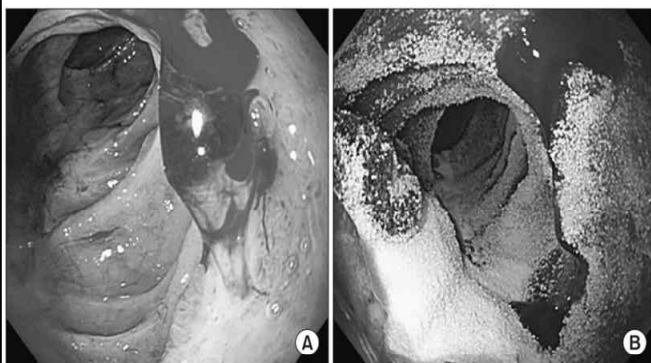


Fig. 3. Endoscopic application of EndoClot (EPI). (A) Duodenal ulcer with active bleeding. (B) Endoscopic appearance of EndoClot when applied to a bleeding lesion.

Y S Cho. New endoscopic techniques in treating gastrointestinal bleeding, *Gastrointest Interv* 2018;7:131-135

Review

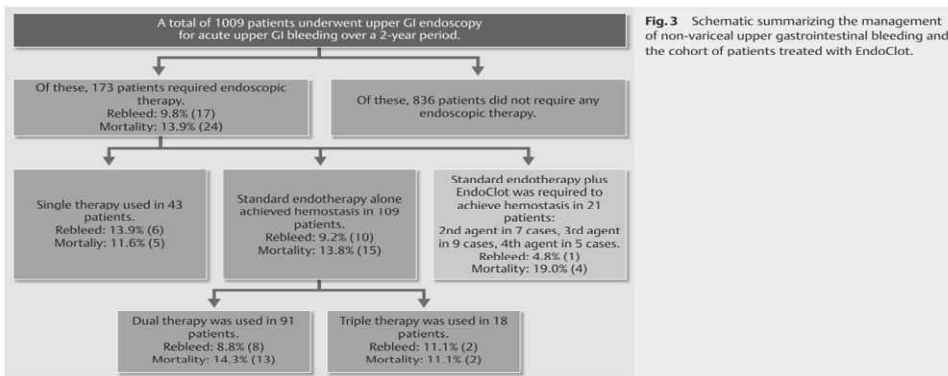


Fig. 3 Schematic summarizing the management of non-variceal upper gastrointestinal bleeding and the cohort of patients treated with EndoClot.

Patient characteristics	Dual therapy	Triple therapy	Standard therapy plus EndoClot
Mean age, y	73.2	66.7	72.7
Male-to-female ratio	2.5:1	2:1	2:1
Patients, n	91	18	21
Underlying pathology			
Duodenal ulcer	66	14	14
Gastric ulcer	17	4	2
Esophageal ulcer	5	-	1
Mallory-Weiss tear	3	-	2
Other	-	-	2
30-day rebleed rate, %	8.8	11.1	4.8
30-day mortality rate, %	14.3	11.1	19.0

Table 1 Baseline characteristics of the populations treated with conventional hemostasis vs. EndoClot.

Beg Sabina et al. EndoClot in the management of non-variceal upper gastrointestinal bleeding. *Endosc Int Open* 2015; 03: E605-E609

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