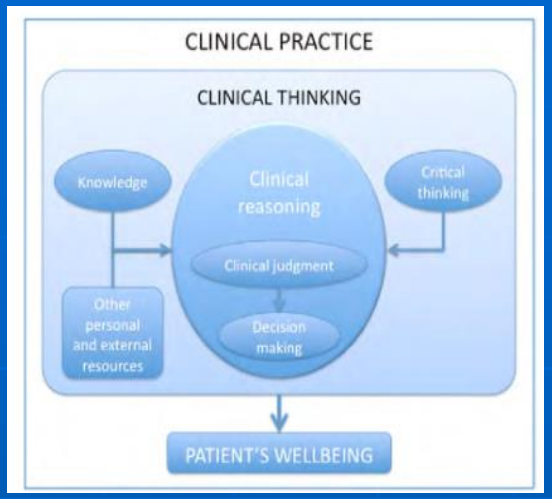
生病的故事



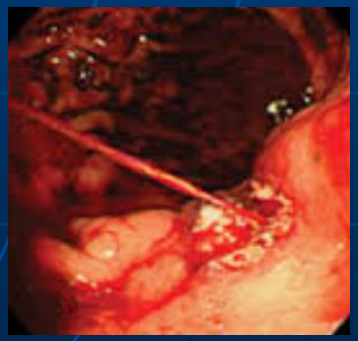
從發病到就醫的歷程
Symptoms-Dx And Rx.

PGY1必修課程--上消化道出血

Upper GI bleeding (2025)

Cheng-Yi WANG

2025.12.26



病人為中心
Patient-centered care

2025-2026年教學的重點是
Stories of the disease 生病的故事

- 1. 故事裡的主角不同,原因各異,症狀也差異.
- 2.仔細問病史--找出症狀的原因(深入訪談), 先知量
- 厲害嗎 ?—fainting, hypotension, shock?
- 量大嗎、半碗,普通飯,-一大碗100ml-250 ML-500 ml.
- 持續。多久一次,last attack? Estimated blood
- loss (EX. 250 mLX4=1,000 ml.)
- PH: same episode ? endoscopy, previous CBC,
- blood transfusion? Shock?
- 3. 併存疾病及用藥
- CAD + stent, pacemaker+ anticoagulant
- Aspirin for prevention of stroke.

Stories of the disease.
-臨床推理

- 瞭解病情-problems
- 知道病因,(roots)
- 病人有無潛在之危險問題(risks)

原因:
1.Peptic ulcer, and life stress
2.Medicine, aspirin, NASID----
3.Food,nutrients
4.Alcohol-drinking
5.Procedure-biopsy
6.Others

1. Management of disease
2. Understand risk potential—risk evaluation
3. Expectation of clinical progress.
4. Explanation to the family

Assessment and planning

History taking from the patient and the family members.
Watch the expression of the patient—tachycardia, hypotension and consciousness---also frequency/amount of tarry stool passage
Review previous records and lab data, medications.

綜合判斷

RR-SOAP

- Present condition,
- Changes?
- Continuous bleeding or cease bleeding
- Blood transfusion
- Surgical consultation
- →Operation
- death

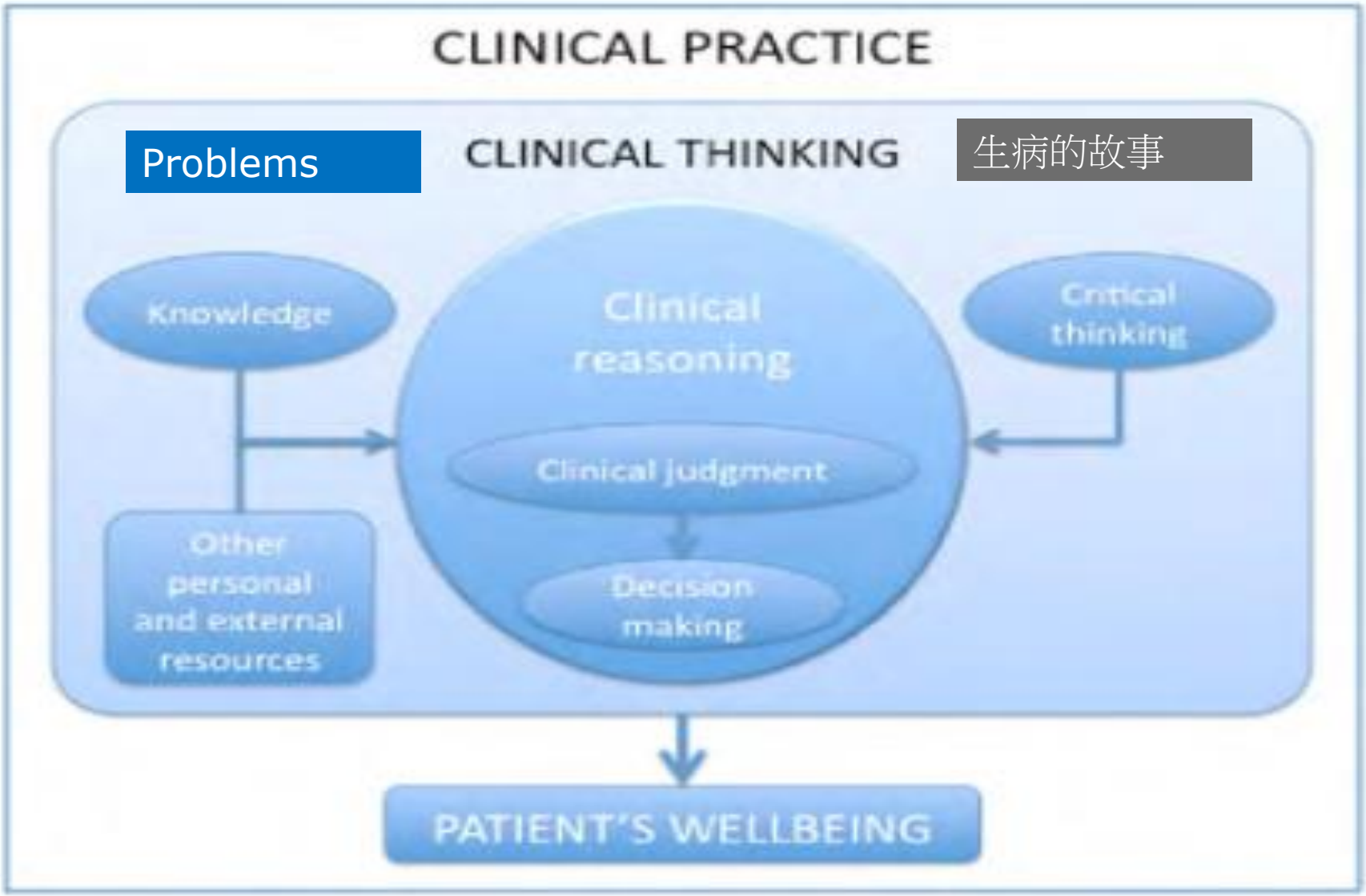
Rebleeding-Forrest classification

- Outcome--prognosis

Follow up check

1. Symptoms: tarry stool or hematemesis--stop bleeding
2. Pulse and BP
   hypovolemia
   tachycardia >100/min.
   考慮輸血
3. Hospitalization—ICU
   Endoscopy to find the site of bleeding and to stop it.
4. Operative approach.

診療的過程


CLINICAL PRACTICE
Problems
CLINICAL THINKING
生病的故事
Knowledge
Clinical reasoning
Critical thinking
Clinical judgment
Other personal and external resources
Decision making
PATIENT'S WELLBEING

故事裡的主角不同,原因各異,症狀也差異

- 從發病到就醫的歷程
- Symptoms-Dx And Rx.

1.清醒->自己決定(就醫〉
2.清醒, 但衰弱->家人協助送醫
3. 昏迷不醒,一事->送醫急救-

Time to Emergency,
半夜(11 -pm-5 am)
一定比較緊急及危險

- 某種原因 known or unknown
- Symptoms onset—time
- Feeling-experience
- Symptoms—distress
- 解決問題-自行用藥/忍耐-
- 就醫-就近診所,
- 熟習的醫院
- "大”醫院(Medical center)急診

2025.12月起至明年(2026)1-2月天氣轉涼

- 大陸冷氣團來襲防10度低溫 周末高山有望迎降雪 @.氣象專家:
- 長住熱帶氣候者對冷最為敏感

- Stress.
- Acid secretion增加
- 腰酸背疼增加
- NSAID使用增加

- 環境因素

UGI bleeding案例增加---> ES 人數大增、
特別是寒流來襲之後,
年年如此,是典型的現象

問題表現:消化道出血 symptoms

- 上消化道
- Hematemesis,
- Fresh blood vomiting
- Coffee ground vomiting
- Melena , Tarry stool, fainting
- Chronic severe anemia

大出血時也可能肛門下血

- 下消化道
- Fresh bloody stool
- Bleeding per anum
- Bloody diarrhea
- Bloody mucoid stool
- Bloody mucopurulent stool
- Fainting, severe anemia , pallor,
- Tachycardia

Upper or lower gi bleeding

- Symptoms:
- BUN/Cr. > 30 → upper Gi bleeding
- normal ratio (10-20)→lower gi
- bleeding
- (Wang CY et al, 1973)

World J Gastroenterol. 2015 May 28;21(20):6246-51. doi: 10.3748/wjg.v21.i20.6246.

Laboratory test variables useful for distinguishing upper from lower gastrointestinal bleeding.

Tomizawa M[1], Shinozaki F[1], Hasegawa R[1], Shirai Y[1], Motoyoshi Y[1], Sugiyama T[1], Yamamoto S[1], Ishige N[1].

Author information

1 Minoru Tomizawa, Department of Gastroenterology, National Hospital Organization Shimoshizu Hospital, Chiba 284-0003, Japan.

Hemoglobin (P = 0.023), total protein (P = 0.0002), and lactate dehydrogenase (P = 0.009) were significantly lower in the Upper group than in the Lower group. Blood urea nitrogen (BUN) was higher in the Upper group than in the Lower group (P = 0.0065). Logistic regression analysis revealed that **BUN was most strongly associated with the diagnosis of upper** vs lower GI bleeding. ROC analysis revealed a threshold **BUN value of 21.0 mg/dL, with a specificity of 93.0%.**

以証據醫學的觀點看消化道出血之診療-1

- 以証據醫學的觀點看--大便黑而且稀軟
- 1.眼見為真:看到出血.症狀
- Hematemesis--- due to ruptured varices(fresh blood vomiting)
- Tarry stool -→check stool 0B(++++)
- -→upper gi bleeding due to bleeding peptic ulcer
- Blood + gastric acid → hematin-→tarry
- Coffee ground vomiting

以証據醫學的觀點看消化道出血之診療-2

- 1. 眼見為真:看到出血.症狀
- 2.眼見為真,看到出血—endoscopy

  正在噴血,是出血,而且是這一部位在出血.

  -→正確的判斷

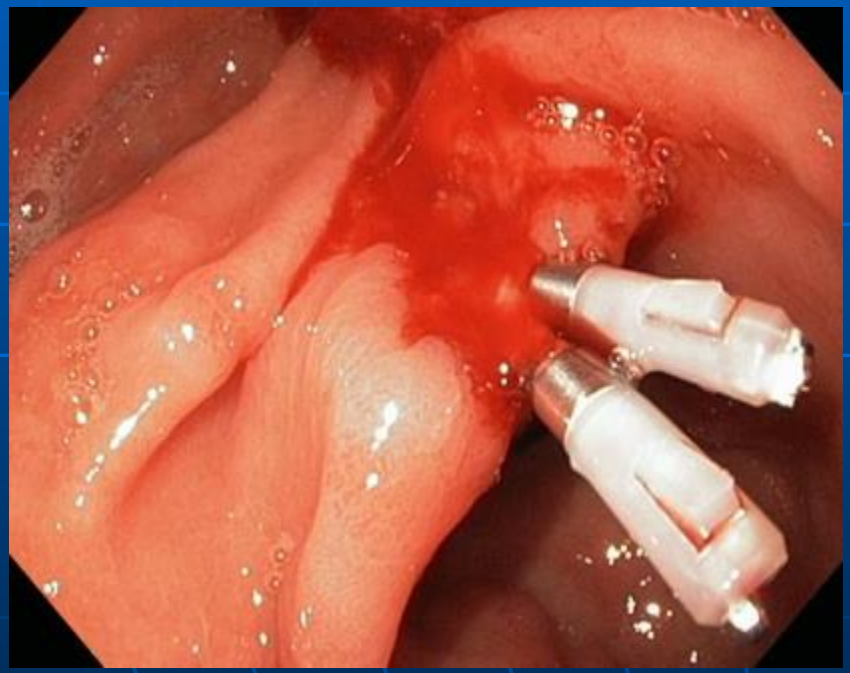
以証據醫學的觀點看
消化道出血之診療-3, 止血的方法及效果

- 3. Endoscopic treatment現場止血.停止出血. 是真效果.
  Effective. 是好的治療方法
- by Bosmin injection
- Bosmin spray
- APC(laser)
- Hemoclips application
  Heater probe application.

UGI bleeding

Peptic Ulcer Bleeding

- 5% of emergency admissions
- 80% stop spontaneously
- 10% of patients die
- Rebleeding increases mortality by 10x



Endoscopic clipping

得到結論: Endoscopy is useful----

- 1. 看到出血,又止血
- 住
- →endoscopy is useful in diagnosis and treatment of gi bleeding.
- 無庸置疑

- 2.何時作最好呢?
- 最安全,
- 最有效看到出血之部
- 位及原因
- 達到止血之效果

不同的報告不同的結果

- → large series
- National statistics.
- Meta-analysis結果
- Guidelines

@@Emergent endoscopy 不是越快越好

- 某醫院院內同仁出血(hematemesis)-→17分內作內視鏡對嗎?
- Much blood in the stomach → aspiration pneumonia,(>20%) or Suffocation而死亡(活生生的案例。太敏感了,未作 case report. 只有消息靈通人士,耳語相傳才知道)
- 但:警員吃下一碗有大頭釘的水-→NTUH, 30分內作endoscopy拿出大頭針-→解決問題了
- 太晚檢查進入小腸後就麻煩了.

Aspiration pneumonia after endoscopy

- **Incidence and predictors of aspiration pneumonia in endoscopic sedation** K Friedrich [1]et al : (Germany):
- Z Gastroenterol 2013; 51 - K265
- 24.441 patients received endoscopic sedation
- 15.690 patients completed 24 hours after the endoscopic procedure.
- 829 of the 15.690 patients reported newly developed **coughing** the day after the examination (5.3%). In 130 out of the 829 patients we observed either concomitant coughing and **shortness of breath** (n = 107),
- **@@. 0.8% of the examined patients showed indicative symptoms of aspiration pneumonia 24 hours after the endoscopic procedur**e.

Old age (very elderly, 85 or more)是危險因素

- Endosc Int Open. 2018 Feb; 6(2): E224 – E229.
- (L477) Complications and outcomes of routine endoscopy in the very elderly
- Ryoichi Miyanaga,[1] et al (Japan)

表 4

與常規內窺鏡檢查相關的不良事件的發生率和類型。

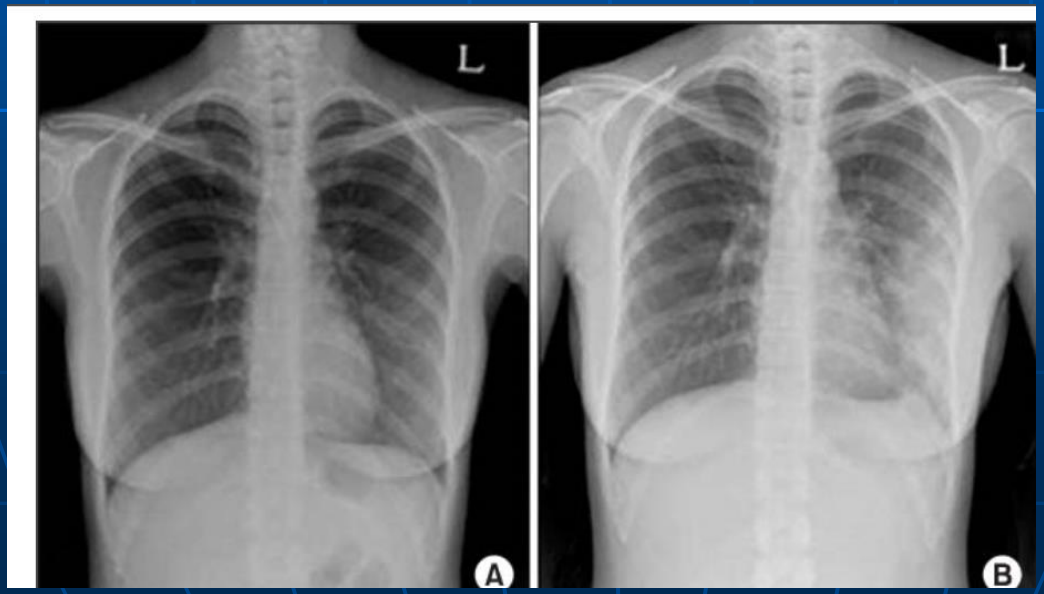
	非常年長	青年組	P值
不良事件總數，n (%)	16 (6.3 %)	11 (1.1%)	< 0.01
• 低血壓，n (%)	2 (0.8%)	2 (0.2%)	
• 低氧血症，n (%)	9 (3.5 %)	7 (0.8%)	
• 嚴重的腹部症狀，n (%)	5 (2.0 %)	4 (0.5%)	
• 出血，n (%)	1 (0.4%)	0 (0 %)	
• 穿孔，n (%)	0 (0 %)	0 (0 %)	
• 死亡，n (%)	0 (0 %)	0 (0 %)	

從 2014 年 1 月到 2014 年 9 月，分別有 5,586 和 2,484 名患者接受了 EGD 和 CS 手術。
該隊列中非常年長(85 歲以上)的人接受了 188 次 EGD 和 76 次 CS 。此外，對照組分別進行了 609 次 EGD 和 262 次 CS 。

ADR 事件在非常年長者較多見。

Aspiration pneumonia after UGI endoscopy

- **A Case of Aspiration Pneumonia after Upper Gastrointestinal Endoscopy.** Oun Ouk Nam et al(Korea): Korean J Helicobacter Up Gastrointest Res. 2014 Sep;14(3):215-218.



Aspiration pneumonia : common in urgent endoscopy for ugi bleeding

- **Pulmonary aspiration during emergency endoscopy in patients with upper gastrointestinal hemorrhage**
- B Lipper [1], D Simon, F Cerrone
- [1]Department of Medicine, Albert Einstein College of Medicine, Bronx Municipal Hospital Center, NY.
- Crit Care Med. 1991 Mar;19(3):330-3. doi: 10.1097/00003246-199103000-00008.
- (L478)

20 % (6/30)

Endotracheal intubation 不減少 aspiration, 但減少死亡

- **Endotracheal intubation for airway protection during endoscopy for severe upper GI hemorrhage.**
- Rudolph SJ,et al (US) : Gastrointest Endosc. 2003 Jan;57(1):58-61. (L479)
- Endotracheal intubation was routine for airway protection before or during EGD when there was hematemesis, altered mentation, unstable cardiopulmonary status, or large amounts of blood in the proximal GI tract, or before endoscopic treatment of lesions at high risk for bleeding
- Did not significantly change the relatively high frequency of acquired pneumonia or cardiopulmonary events, but may have prevented the rare fatal episode of massive aspiration. (compared : 1988 and 1992)
- **In 1992 there were no fatal episodes of aspiration during EGD (2.0% vs. 0%; p = 0.21), no emergent post-EGD endotracheal intubation (6.0% vs. 0%; p < 0.05), and fewer in-hospital cardiopulmonary arrests (12.9% vs. 5.0%; p < 0.05).**

Gastrointest Endosc. 2017 Sep;86(3):500-509.e1. doi: 10.1016/j.gie.2016.12.008. Epub 2016 Dec 21.

Association of prophylactic endotracheal intubation in critically ill patients with upper GI bleeding and cardiopulmonary unplanned events.

Hayat U[1], Lee PJ[2], Ullah H[1], Sarvepalli S[1], Lopez R[3], Vargo JJ[2].

Author information

1 Medicine Institute, Cleveland Clinic, Cleveland, Ohio, USA.
2 Department of Gastroenterology and Hepatology, Digestive Disease and Surgery Institute, Cleveland Clinic, Cleveland, Ohio, USA.
3 Department of Quantitative Health Sciences, Cleveland Clinic, Cleveland, Ohio, USA.

(L935)

20% (intubated) >6%

Patients aged 18 years or older who presented at Cleveland Clinic between 2011 and 2014 with hematemesis and/or patients with melena with consequential hypovolemic shock were included.
Results : Two hundred patients were included in the final analysis. The baseline characteristics, comorbidity scores, and prognostic scores were similar between the 2 groups. The overall cardiopulmonary unplanned event rates were significantly higher in the intubated group compared with the nonintubated group (**20% vs 6%, P = .008**), which remained significant (P = .012) after adjusting for the presence of esophageal varices.

CONCLUSIONS:

PEI (prophylactic endotracheal intubation) before an EGD for brisk UGIB in critically ill patients is associated with an **increased risk of unplanned cardiopulmonary events.** The benefits and risks of intubation should be carefully weighed when considering airway protection before an EGD in this group of patients.

Acta Anaesthesiologica Taiwanica
Volume 48, Issue 2, June 2010, Pages 94-98

CASE REPORT

Unexpected Pulmonary Aspiration During Endoscopy Under Intravenous Anesthesia

Po-Jung Lai [a, b], Fa-Chang Chen [a], Shung-Tai Ho [a], Chen-Hwan Cherng [a], Szu-Tzu Liu [b], Che-Hao Hsu [a]

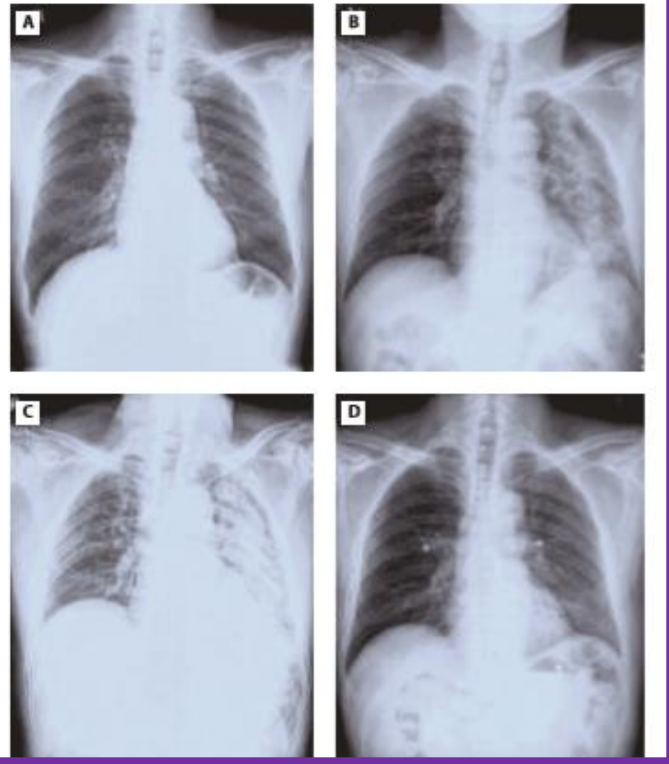
[a] Department of Anesthesiology, Tri-service General Hospital/National Defense Medical Center, Taipei, Taiwan, R.O.C
[b] Department of Anesthesiology, Songshan Armed Forces General Hospital, Taipei, Taiwan, R.O.C

Received 27 April 2009, Revised 27 January 2010, Accepted 1 February 2010, Available online 17 July 2010.

Show less

https://doi.org/10.1016/S1875-4597(10)60021-5

Intravenous anesthesia is commonly used during endoscopy. This approach greatly improves patient satisfaction with pain control. The risks of anesthesia are usually focused on the cardiopulmonary effects of anesthetics. The risk of pulmonary aspiration is often overlooked, unless there are other risk factors that may increase the incidence of pulmonary aspiration. Here, we report a patient with unexpected aspiration pneumonia after gastroscopy under intravenous anesthesia. We suggest that pulmonary aspiration should be taken into consideration as a risk associated with anesthesia for gastroscopy.



Fatal events in endoscopy

- **Adverse Event Fatalities Related to GI Endoscopy (L482)**
- Eric Swei [1], J Christie Heller [1], Frank Scott [1], Augustin Attwell [2]
- [1]Division of Gastroenterology and Hepatology, Denver Health Medical Center,
- Dig Dis Sci. 2022 May;67(5):1753-1760.
- /s10620-021-06981-9. Epub 2021 Apr 15.

28/146010 (0.18%)

結果： 從 2011 年 1 月到 2020 年 1 月，共進行了 146,010 次胃腸道內窺鏡檢查。患者年齡中位數為 70 [51-78]，其中 57% 為男性。確定了 31 例死亡，其中 28 例歸因於內窺鏡檢查，與endoscopy相關的死亡率為 **0.018%**。
程序包括 11 個 EGD、1 個結腸鏡檢查、2 個柔性乙狀結腸鏡檢查、6 個 ERCP、7 個上 EUS 和 1 個 PEG-J 管放置。
死亡的具體原因包括
4名患者的誤吸（14%）aspiration.
7名患者（25%）發生心臟驟停或心肌梗塞；
9 名患者（32%）穿孔；
4名患者（14%）出血；
3名患者（11%）無穿孔的膽管炎或敗血症；
1名患者（3.6%）患有急性胰腺炎。

Conclusion :

- In conclusion, this case reminds us that, even in a healthy patient, **endoscopy under sedation carries the risk of pulmonary aspiration**. Therefore, we should be aware of unexpected aspiration pneumonia and should be particularly cautious when performing endoscopy in combination with anesthetic agents. Tilting the head upwards and the prescription of PPIs or H2 antagonists may prevent severe aspiration. The risk of aspiration should be included in the preoperative evaluation and should be explained to the patient as a possible risk of the procedure.

胰高血糖素樣勝肽-1受體激動劑（GLP-1 RA）常用於糖尿病治療，但與胃排空延遲相關，

Impact of Glucagon-Like Peptide-1 Receptor Agonists on Retained Gastric Contents During Esophagogastroduodenoscopy: A Propensity Score-Matched Study
Hiroyuki Hisada [1] [2] et al (Japan) Dig Endos,,2025 Dec;37(12):1340-1347.doi: 10.1111/den.70016. Epub 2025 Aug17.

2020年1月至2023年12月期間接受篩檢性上消化道內視鏡檢查（EGD）的1324例糖尿病患者。採用傾向性評分配對法，比較了148例接受GLP-1受體激動劑（GLP-1 RA）治療的患者和148例未接受GLP-1 RA治療的患者。我們評估了GLP-1 RA的使用與EGD期間發生胃食道逆流（RGC）之間的關係。

與非GLP-1受體激動劑組相比，GLP-1受體激動劑組的RGC發生率較高，配對前（12.0% vs. 3.7%，$p < 0.001$）及配對後（12.2% vs. 3.4%，$p = 0.009$）皆是如此。
GLP-1受體激動劑組的重複EGD檢查較常見；然而，未觀察到EGD後發生吸入性肺炎的案例。

結論： 在亞洲人群中，糖尿病患者使用GLP-1受體激動劑會顯著增加上消化道內視鏡檢查（EGD）期間發生**胃食道逆流（RGC）的風險**。採取預防措施，例如建議患者在EGD**前一天採用流質飲食**，可能有助於降低臨床實務的風險。

無法作成結論:urgent endoscopy 越快越好,→好與壞/或對與錯,需接受檢驗

- Case reports
- Complication of emergent endoscopy in upper GL bleeding
- Diagnosis and treatment of gi bleeding by emergent endoscopy
- National report
- Multi-center report.
- Single Center report
- Meta-analysis
- Consensus meeting of academic society.

- 3. 何時作?
- Indication and contraindications.
- Inform consent–clear information and effective communication.
- Technique training–
- Guidelines and supervision

本 臨床規範. 提供參考,以提昇診療品質

- Guideline presents recommendations for the step-wise management of patients with overt upper gastrointestinal bleeding.
- 依據學會(ACG, AGA, Japan,)、醫療保險單位(NICE)SIGN, Taiwan consensus (2014) 及個人之經驗 (From 1972)
- 本 臨床規範. 提供參考,以提昇診療品質
- 註: SIGN: 2008 Scottish Intercollegiate Guidelines Network (SIGN) guideline

最新的 guidelines for non-variceal upper gi bleeding-1

- **Guidelines for endoscopic managements of non-variceal upper gastrointestinal bleeding** (Fujishiro M et al, Japan Gi endoscopy society): Dig Endosc. 2016 Feb 22
- **Diagnosis and management of nonvariceal upper gastrointestinal hemorrhage: European Society of Gastrointestinal Endoscopy (ESGE) Guideline.** Gralnek IM[1] et al Endoscopy. 2015 Oct;47(10):a1-46.

- **Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline - Update 2021 (L474)**

Ian M Gralnek[1,2], Endoscopy. 2021 Mar;53(3):300-332. doi: 10.1055/a-1369-5274. Epub 2021 Feb 10.

- **ACG Clinical Guideline: Upper Gastrointestinal and Ulcer Bleeding** (L476, L475) Loren Laine[1,2], Alan N Barkun[3], John R Saltzman[4], Myriam Martel[2], Grigorios I Leontiadis[5], (

Am J Gastroenterol. 2021 May 1;116(5):899-917, doi: 10.14309/ajg.0000000000001245.

最新的 guidelines for non-variceal upper gi bleeding-2

- **Consensus on Control of Risky Nonvariceal Upper Gastrointestinal Bleeding in Taiwan with National Health Insurance.**
- Bor-Shyang Sheu,et al : BioMed Research International
  Volume 2014 (2014), Article ID 563707, 8 pages
- The expert group of the Taiwan UGIB consensus comprised a total of 32 experts, including 10 members in the steering committee and 22 members who accepted the invitation of the steering committee.
- Consensus meeting in Taichung in July 2013.

Gi bleeding, 四問(Q1-Q4)

- **Q1**.確定是出血嗎?一嘔鮮血、吐咖啡或解黑便、stool nature and OB TESTS,-→Upper GI or Lower GI
- **Q2,出血嚴重嗎? CBC**: (Hb<8 gm/dl)
- vital signs—shock ? **Pulse:>92/min**.
- frequency and amount
- CBC (Hb. and MCV)
- **Q3,如何查出血點** :Endoscopy, angio, **CT?**
- **Q4**, 治療:Medical or surgical (when?)

Revised concept : management before endoscopy

- According to ESGE and ACG newest guidelines, 2021.

- 1. ESGE recommends in patients with acute upper gastrointestinal hemorrhage (UGIH) the use of the Glasgow–Blatchford Score (GBS) for pre-endoscopy risk stratification. Patients with GBS ≤ 1 are at very low risk of rebleeding, mortality within 30 days, or needing hospital-based intervention and can be safely managed as outpatients with outpatient endoscopy.

- Taiwan consensus : risk score :ABCDE
- *Statement I-2. The pre-endoscopy **Rockall score** is a useful tool to identify high-risk patients who need further endoscopic therapy and radiologic and surgical interventions* (agreement: 90%, level of evidence: 2b, and recommendation: B).

Variable[2]	Score 0	Score 1	Score 2	Score 3
Age	<60	60- 79	>80	
Shock	No shock	Pulse >100 BP >100 Systolic	SBP <100	
Co-morbidity	Nil major		CHF, IHD, major morbidity	Renal failure, liver failure, metastatic cancer
Diagnosis	Mallory-Weiss	All other diagnoses	GI malignancy	
Evidence of bleeding	None		Blood, adherent clot, spurting vessel	

- 2. ESGE recommends that in patients with acute UGIH who are taking low-dose aspirin as monotherapy for secondary cardiovascular prophylaxis, aspirin should not be interrupted. If for any reason it is interrupted, aspirin should be re-started as soon as possible, preferably within 3–5 days.
- **Low dose aspirin**可以繼續使用,如已停用.**3-5**天內可再使用。

2021觀點最大的改變

- 3, ESGE recommends that following hemodynamic resuscitation, early (≤24 hours)(12-24 hrs) upper gastrointestinal (GI) endoscopy should be performed.
- 4. ESGE **does not recommend** urgent (≤12 hours) upper GI endoscopy since as compared to early endoscopy, patient outcomes are not improved.
- @血壓穩定之後即可作Early endoscopy.
- @不建議在12小時以內作Urgent endoscopy

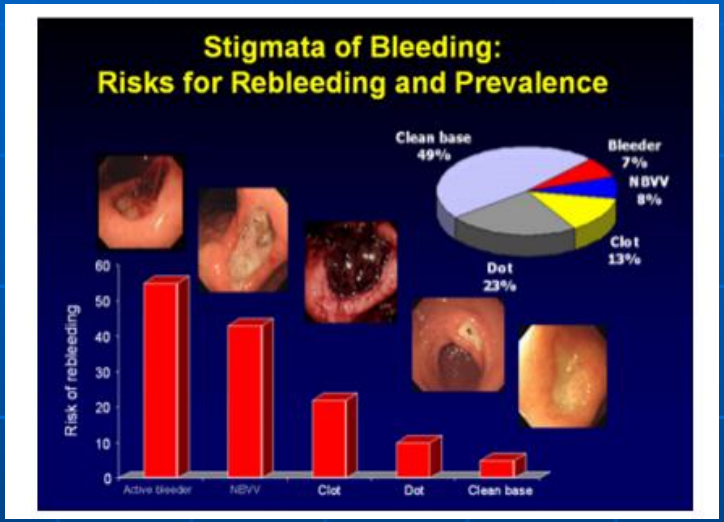
對於因明顯上消化道出血（UGIB），建議在就診後24小時內進行上消化道內視鏡檢查

- 對於因明顯上消化道出血（UGIB）入院或接受觀察的患者，建議在就診後24小時內進行上消化道內視鏡檢查（EGD）。
- 建議在24小時內進行EGD的原因在於，多項觀察性研究表明，縮短住院時間可帶來潛在的經濟效益，降低死亡率並減少手術需求。 研究表明，入院1天內進行內視鏡檢查與縮短住院時間相關，並可能降低手術需求和死亡風險。
- 在一項大型全國性回顧性隊列研究中，對於高風險患者（美國麻醉醫師協會評分III至IV級），**過早（<12小時）或過晚（>36小時）進行內視鏡檢查均會增加死亡風險。**
- 一項納入6474例上消化道出血患者的全區隊列研究表明，與緊急上消化道內視鏡檢查（<6小時）和延遲上消化道內視鏡檢查（24-48小時）相比，6至24小時內進行上消化道內視鏡檢查可降低死亡率。
- 一項大型隨機對照試驗（RCT）比較了急性上消化道出血高風險患者（格拉斯哥-布拉奇福德評分≥12）在就診後6小時內進行緊急上消化道內視鏡檢查與6至24小時內進行緊急上消化道內視鏡檢查的療效，結果顯示，在30天死亡率或再次出血方面，兩組之間無差異。

Rena Yadlapat et al：Quality indicators for upper GI endoscopy, **QUALITY INDICATORS** Volume 101, Issue 2P236-260February 2025

Endoscopy hemostasis: double. For active bleeder.

- 5. ESGE recommends for patients with actively bleeding ulcers (FIa, FIb), combination therapy using epinephrine injection plus a second hemostasis modality (contact thermal or mechanical therapy).



For Forrest IIa lesions: monotherapy or double

- 6 ESGE recommends for patients with an ulcer with a nonbleeding visible vessel (FIIa), contact or noncontact thermal therapy, mechanical therapy, or injection of a sclerosing agent, each as monotherapy or in combination with epinephrine injection.

出血不停時也可採的的止血方式

- 7. ESGE suggests that in patients with persistent bleeding refractory to standard hemostasis modalities, the use of a **topical hemostatic spray/powder** or cap-mounted clip should be considered.
- Weak recommendation, low quality evidence.

一再出血時建議Hemoclips/TAE

- 8.ESGE recommends that for patients with clinical evidence of recurrent peptic ulcer hemorrhage, use of a cap-mounted clip should be considered. In the case of failure of this second attempt at endoscopic hemostasis, transcatheter angiographic embolization (TAE).
- Strong recommendation, moderate quality evidence.

PPI 要用high dose

- 9. ESGE recommends high dose proton pump inhibitor (PPI) therapy for patients who receive endoscopic hemostasis and for patients with FIIb ulcer stigmata (adherent clot) not treated endoscopically.
- **(a)** PPI therapy should be administered as an intravenous bolus followed by continuous infusion (e.g., 80 mg then 8 mg/hour) for 72 hours post endoscopy.
- **(b)** High dose PPI therapies given as intravenous bolus dosing (twice-daily) or in oral formulation (twice-daily) can be considered as alternative regimens.
- Strong recommendation, high quality evidence.

如果病人需要anticoagulation therapy 可在止血之後的7天內恢復使用

- 10. ESGE recommends that in patients who require ongoing anticoagulation therapy following acute NVUGIH (e.g., peptic ulcer hemorrhage), anticoagulation should be resumed as soon as the bleeding has been controlled, preferably **within or soon after 7 days of the bleeding event, based on thromboembolic risk**. The rapid onset of action of direct oral anticoagulants (DOACS), as compared to vitamin K antagonists (VKAs), must be considered in this context.
- Strong recommendation, low quality evidence.

輸血目標 CV disease >10gm/dl:

- 11.

Red blood cell (RBC) transfusion strategy

RECOMMENDATION
ESGE recommends, in hemodynamically stable patients with acute UGIH and no history of cardiovascular disease, a restrictive red blood cell (RBC) transfusion strategy with a hemoglobin threshold of ≤7g/dL prompting RBC transfusion. A post-transfusion target hemoglobin concentration of 7–9g/dL is desired. Strong recommendation, moderate quality evidence.

RECOMMENDATION
ESGE recommends, in hemodynamically stable patients with acute UGIH and a history of acute or chronic cardiovascular disease, a more liberal RBC transfusion strategy with a hemoglobin threshold of ≤8g/dL prompting RBC transfusion. A post-transfusion target hemoglobin concentration of ≥10g/dL is desired. Strong recommendation, low quality evidence.

台灣輸血管理好、以**10 gm/dl** 為目標。

Antithrombotic agents: aspirin, low dose,可繼續使用

12. **Pre-endoscopy management of antithrombotic agents (antiplatelet agents and anticoagulants)**

RECOMMENDATION

ESGE recommends that in patients with acute UGIH who are taking low dose aspirin as monotherapy for primary cardiovascular prophylaxis, aspirin should be temporarily interrupted. Aspirin can be restarted after careful re-evaluation of its clinical indication.

Strong recommendation, low quality evidence.

RECOMMENDATION

ESGE recommends that in patients with acute UGIH who are taking low dose aspirin as monotherapy for secondary cardiovascular prophylaxis, aspirin should not be interrupted. If for any reason it is interrupted, aspirin should be restarted as soon as possible, preferably within 3–5 days.

Strong recommendation, moderate quality evidence.

RECOMMENDATION

ESGE recommends that in patients with acute UGIH who are taking dual antiplatelet therapy (DAPT) for secondary cardiovascular prophylaxis, aspirin should not be interrupted. The second antiplatelet agent should be interrupted, but restarted as soon as possible, preferably within 5 days. Cardiology consultation is suggested.

Strong recommendation, low quality evidence.

No Platelets transfusion when using antiplatelet agents

No tranexamic acid.

- 13.

RECOMMENDATION

ESGE does not recommend routine platelet transfusion for patients with acute NVUGIH who are taking antiplatelet agents.

Strong recommendation, low quality evidence.

RECOMMENDATION

ESGE does not recommend the use of tranexamic acid in patients with acute NVUGIH.

Strong recommendation, high quality evidence.

There is no high quality evidence supporting the benefit of routine platelet transfusion in patients who have acute UGIH while taking antiplatelet agents. Moreover, endoscopic hemostasis appears safe in patients with thrombocytopenia [37]. Zakko et al. reported that platelet transfusion in patients with GI bleeding taking antiplatelet medication(s), and in the absence of thrombocytopenia, did not reduce rebleeding, but was associated with higher mortality [38]. However, it would appear reasonable to consider platelet transfusion in patients taking antiplatelet medication(s) and with thrombocytopenia who have severe bleeding.

Several small studies and meta-analyses [39] [40] [41] [42] have suggested benefit from use of tranexamic acid (TXA) in GI bleeding. However, a recent international multicenter RCT (the HALT-IT study), comparing TXA versus placebo in acute GI bleeding, reported no mortality benefit from TXA. Mortality, defined as death due to bleeding within 5 days of randomization, was 4% (222 patients) in the TXA group and 4% (226) in the placebo group (RR 0.99, 95%CI 0.82–1.18). Moreover TXA was associated with a higher number of venous thromboembolic events (48 [0.8%] vs. 26 [0.4%]; RR 1.85, 95%CI 1.15–2.98) [43].

Vit. K antagonists and direct oral anticoagulants

- 14.

RECOMMENDATION

ESGE recommends that, in patients with acute UGIH taking vitamin K antagonists (VKAs) the anticoagulant be withheld.

Strong recommendation, low quality evidence.

RECOMMENDATION

ESGE recommends that, in patients with acute UGIH taking vitamin K antagonists (VKAs) who have hemodynamic instability, low dose vitamin K supplemented with intravenous prothrombin complex concentrate (PCC), or fresh frozen plasma (FFP) if PCC is not available, should be administered. However, this should not delay endoscopy or, if required, endoscopic hemostasis.

Strong recommendation, low quality evidence.

RECOMMENDATION

ESGE recommends that, in patients with acute UGIH taking direct oral anticoagulants (DOACs), the anticoagulant should be withheld and endoscopy not delayed. In patients with severe ongoing bleeding, use of a DOAC reversal agent or intravenous PCC should be considered.

Strong recommendation, low quality evidence

It is important to know the time of the last DOAC dose, since **most DOACs have an 8–12-hour half-life and their effect usually disappears within 24 hours. Hemodialysis is effective to remove dabigatran** from plasma and can help to prevent rebleeding . PCC has also been shown to be effective for reversal of anticoagulation in patients with acute UGIH who are taking DOACs [

No Somatostatin.

- 15.

Somatostatin and somatostatin analogues

RECOMMENDATION
ESGE does not recommend the use of somatostatin, or its analogue octreotide, in patients with NVUGIH. Strong recommendation, low quality evidence.

不放NG tube aspiration.

- 16,

Nasogastric/orogastric tube aspiration and lavage

RECOMMENDATION
ESGE does not recommend the routine use of nasogastric or orogastric aspiration/lavage in patients presenting with acute UGIH. Strong recommendation, moderate quality evidence.

A recent retrospective study and a review both concluded that nasogastric tube (NGT) aspiration does not differentiate upper from lower GI bleeding in patients with melena [73] [74]. Moreover, a randomized, single-blind, noninferiority study comparing NGT placement (with aspiration and lavage) to no NGT placement (n=140 in each arm), failed to show that NGT aspiration could accurately predict the presence of a high risk lesion requiring endoscopic therapy (39% vs. 38%, respectively) [75]. In addition, adverse events (pain, nasal bleeding, or failure of NGT placement) occurred in 34% and there were no observed differences in rebleeding rates or mortality.

Endotracheal intubation before endoscopy-No,

- 17.

Endotracheal intubation

RECOMMENDATION
ESGE does not recommend routine prophylactic endotracheal intubation for airway protection prior to upper endoscopy in patients with acute UGIH. Strong recommendation, high quality evidence.

YES,

RECOMMENDATION selected patients
ESGE recommends prophylactic endotracheal intubation for airway protection prior to upper endoscopy only in selected patients with acute UGIH (i.e., those with ongoing active hematemesis, agitation, or encephalopathy with inability to adequately control their airway). Strong recommendation, low quality evidence.

Prokinetic medication before endoscopy : O.K.

- 18.

Prokinetic medications

RECOMMENDATION
ESGE recommends pre-endoscopy administration of intravenous erythromycin in selected patients with clinically severe or ongoing active UGIH. Strong recommendation, high quality evidence.

In patients with acute UGIH, the quality of the endoscopic examination can be adversely affected by poor visibility in the upper GI tract due to blood, clots and fluids. It is reported that in 3% to 19% of UGIH cases, no obvious cause of bleeding is identified [80] [81]. This may in part be related to the presence of blood and clots impairing endoscopic visualization. Prokinetics may improve gastric mucosa visualization by inducing gastric emptying. Most studies assessing the use of pre-endoscopy prokinetics in UGIH have used erythromycin. Insufficient data were found to make recommendations for the use of metoclopramide [82] [83] [84].

Timing of endoscopy in UGIB:early

- 19.

12-24 hours. Or early

Timing of upper GI endoscopy

RECOMMENDATION

ESGE recommends adopting the following definitions regarding the timing of upper GI endoscopy in acute UGIH relative to the time of patient presentation: urgent ≤12 hours, early ≤24 hours, and delayed >24 hours.

Strong recommendation, moderate quality evidence.

RECOMMENDATION

ESGE recommends that following hemodynamic resuscitation, early (≤24 hours) upper GI endoscopy should be performed.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE does not recommend urgent (≤12 hours) upper GI endoscopy since as compared to early endoscopy, patient outcomes are not improved.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE does not recommend emergent (≤6 hours) upper GI endoscopy since this may be associated with worse patient outcomes.

Strong recommendation, moderate quality evidence.

20.

RECOMMENDATION

ESGE recommends that the use of antiplatelet agents, anticoagulants, or a predetermined international normalized ratio (INR) cutoff level, should not be used to define or guide the timing of upper GI endoscopy in patients with acute UGIH.

Strong recommendation, low quality evidence.

Forrest classification-high or low risk

- 21.

Endoscopic diagnosis

RECOMMENDATION

ESGE recommends the Forrest (F) classification be used in all patients with peptic ulcer hemorrhage to differentiate low risk and high risk endoscopic stigmata.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE recommends that peptic ulcers with spurting or oozing bleeding (FIa or FIb, respectively) or with a nonbleeding visible vessel (FIIa) receive endoscopic hemostasis because these lesions are at high risk for persistent bleeding or recurrent bleeding.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE suggests that peptic ulcers with an adherent clot (FIIb) be considered for endoscopic clot removal. Once the clot is removed, any identified underlying active bleeding (FIa or FIb) or nonbleeding visible vessel (FIIa) should receive endoscopic hemostasis.

Weak recommendation, moderate quality evidence.

For IIC and III,
no endoscopic hemostasis
No routine use of capsule endoscopy

- 22.

RECOMMENDATION

ESGE does not recommend endoscopic hemostasis in patients with peptic ulcers having a flat pigmented spot (FIIc) or clean base (FIII), as these stigmata have a low risk of adverse outcomes. In selected clinical settings these patients may have expedited hospital discharge.

Strong recommendation, moderate quality evidence.

RECOMMENDATION

ESGE does not recommend the routine use of Doppler endoscopic probe in the evaluation of endoscopic stigmata of peptic ulcer bleeding.

Strong recommendation, low quality evidence.

RECOMMENDATION

ESGE does not recommend the routine use of capsule endoscopy technology in the evaluation of acute UGIH.

Strong recommendation, low quality evidence.

Second look endoscopy: not recommended,

- 23.

RECOMMENDATION

ESGE does not recommend routine second-look endoscopy as part of the management of NVUGIH.

Strong recommendation, high quality evidence.

Routine second-look endoscopy is defined as a scheduled repeat endoscopic assessment of a previously diagnosed bleeding lesion usually performed within 24 hours following the index endoscopy [1]. This strategy employs repeat endoscopy regardless of the type of bleeding lesion, perceived rebleeding risk, or clinical signs of rebleeding. However, second-look endoscopy should be reserved for selected patients considered to be at high risk of recurrent bleeding. Previous studies have failed to demonstrate either a clinical or economic benefit of routine second-look endoscopy [157] [158]. More recently, two RCTs from Asia both reported no benefit of routine second-look endoscopy in peptic ulcer hemorrhage [159] [160]. Chiu et al. showed similar rates of rebleeding within 30 days, in 10/153 (6.5%) in a PPI infusion group and in 12/152 (7.9%) in a second-look endoscopy group ($P=0.646$). Moreover, ICU stay, transfusion requirements, need for surgery, and mortality were also not different between the groups. However, patients in the second-look endoscopy group were discharged from hospital 1 day earlier ($P<0.001$) [159]. Park et al. found a higher rate of rebleeding within 30 days in those patients who underwent routine second-look endoscopy (16/158 (10.2%) vs. 9/161 (4.5%), $P=0.13$) [160]. Thus, second-look endoscopy should be reserved for selected patients considered to be at high risk of recurrent bleeding. This includes patients in whom at index endoscopy there was an actively bleeding lesion, poor endoscopic visualization or an incomplete examination, or failure to identify a definitive source of hemorrhage, or when endoscopic hemostasis was considered by the endoscopist to be suboptimal.

Endoscopy for Rebleeding

24.

Management of recurrent bleeding

RECOMMENDATION

ESGE recommends that recurrent bleeding be defined as bleeding following initial successful endoscopic hemostasis.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE recommends that patients with clinical evidence of recurrent bleeding should receive repeat upper endoscopy, including hemostasis if indicated.

Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE recommends that in the case of failure of this second attempt at endoscopic hemostasis, transcatheter angiographic embolization (TAE) should be considered. Surgery is indicated when TAE is not locally available or after failed TAE.

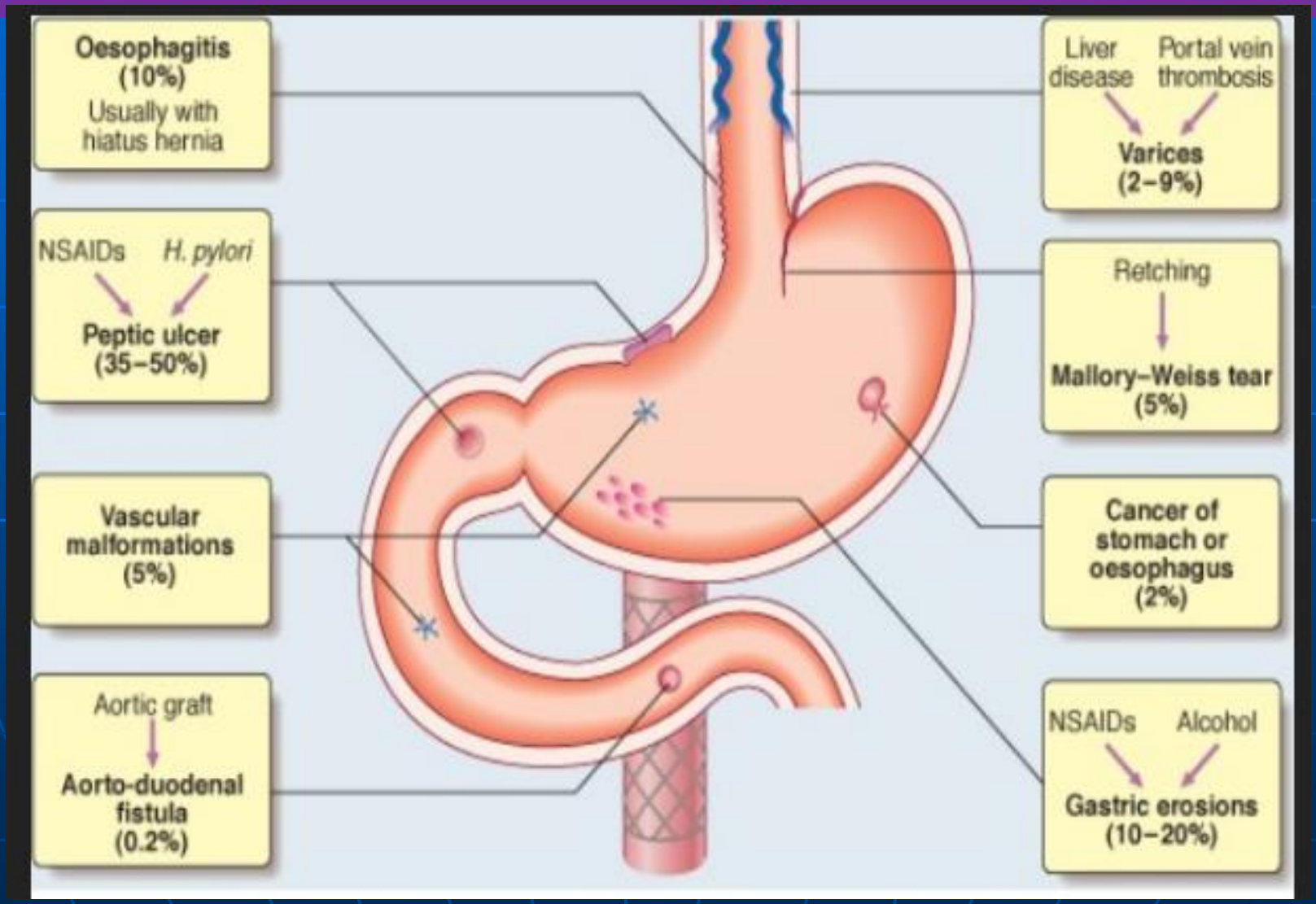
Strong recommendation, high quality evidence.

RECOMMENDATION

ESGE recommends that for patients with clinical evidence of recurrent peptic ulcer hemorrhage, use of a cap-mounted clip should be considered. In the case of failure of this second attempt at endoscopic hemostasis, transcatheter angiographic embolization (TAE) should be considered. Surgery is indicated when TAE is not locally available or after failed TAE.

Strong recommendation, moderate quality evidence.

Upper gi bleeding 出血的原因。



1. Clinical history indicates source of bleeding

- History of liver disease(cirrhosis)→varices
- History of peptic ulcer, hunger pain → peptic ulcer or GERD
- History of taking **NSAID**/aspirin→NSAID induced lesions
- History of BW loss and anorexia→cancer
- History of **unknown origin of bleeding→vascular or small bowel**
- History of vascular surgery→surgical complication
- History of **vomiting** then bleeding→Mallory-Weiss syndrome
- History of **alcohol intake → MW syndrome** /superficial gastritis

2. Dx. Of patients with upper gi bleeding

- 1.Probable source of bleeding,
- suspected from the history, defined by endoscopy
- 2. Severity of bleeding by history and PE
- 3. Vital condition: (vital signs)
- 4. Active bleeding or stop.(history ,PE and
- endoscopy)
- 5.Necessity of **blood transfusion**
- (+CBC)
- 6. Indication of surgery: (綜合判斷)

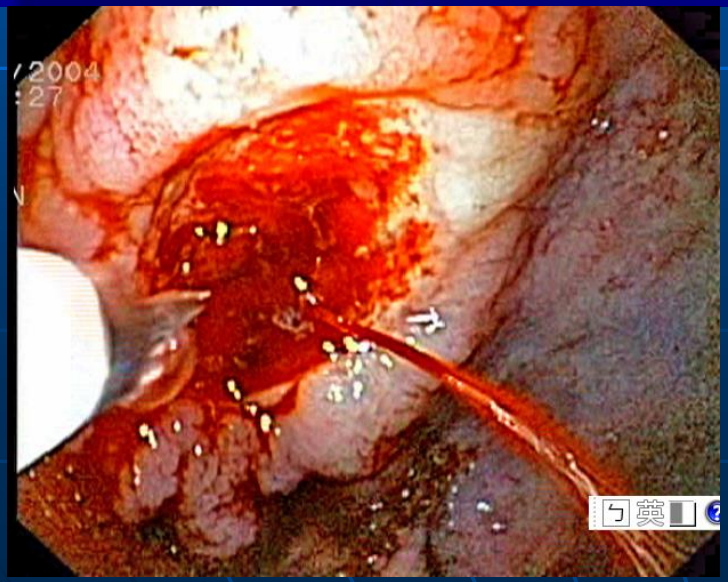
3. Definite dx. Of source of bleeding and etiology

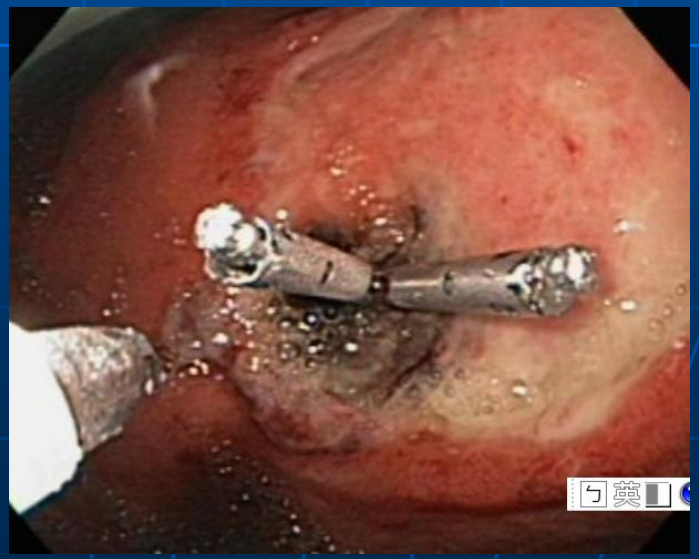
- **Endoscopy**
- Barium meal– only disease without source of bleeding
- **Angiography : definite source of bleeding**
- Surgery: lesions and source of bleeding can be defined.
- Many other methods used in the past to dx. Source of bleeding

4. Approach to Patients With Significant Upper GI Bleeding

- Aggressive fluid resuscitation
- Routine blood tests including type and cross
- Intensive monitoring
- Blood transfusion if needed
- Upper endoscopy to evaluate and treat the cause of bleeding

Clinical experience from 1972





前言—1，Epidemiology

- 1. Ulcers are the most common cause of hospitalization for upper gastrointestinal bleeding (UGIB), and the vast majority of clinical trials of therapy for non-variceal UGIB focus on ulcer disease.

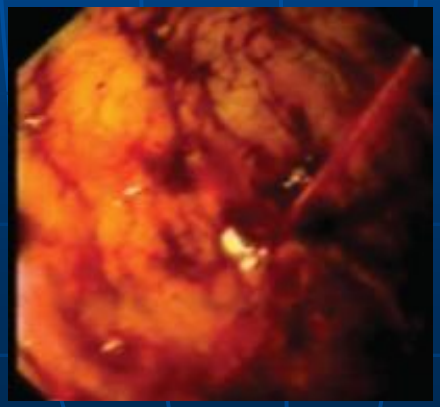


TABLE 1 – Bleeding lesions identified at upper GI endoscopy

Endoscopic finding	Incidence (%)
Duodenal ulcer	37 (21.02)
Esophageal varices	33 (18.75)
Gastric ulcer	25 (14.20)
Erosive/hemorrhagic gastritis	15 (8.52)
Mallory-Weiss syndrome	7 (3.97)
Esophageal erosions	4 (2.27)
Gastric varices	3 (1.70)
Others*	9 (5.11)
No localization**	43 (24.43)

* Others: bulbitis/erosions (3); gastric cancer (2); esophageal ulcer (2); gastric polyps (1); angiodysplasia (1)

** No localization: undetermined diagnosis or normal examination, as previously defined

2. Causes of manifested bleeding

- **Peptic ulcer** > gastritis, drug induced (NSAID) > variceal bleeding.
- Uncommon: Mallory Weiss syndrome,
- Cancer, hemobilia,
- Dieulafoy's lesion-----
- By History and by endoscopy.

Causes of upper Gi bleeding

- 1. Esophageal diseases—varices, ulcer, Mallory-Weiss lesions, cancer
- 2. **Stomach** lesions, ulcer, cancer, hemorrhagic gastritis, varices, Dieulafoy lesion, GIST ---
- 3**. Duodenal lesions** – DU, carcinoid, Duodenal erosions,--

  Hook worm
- 4. **Hemobilia**

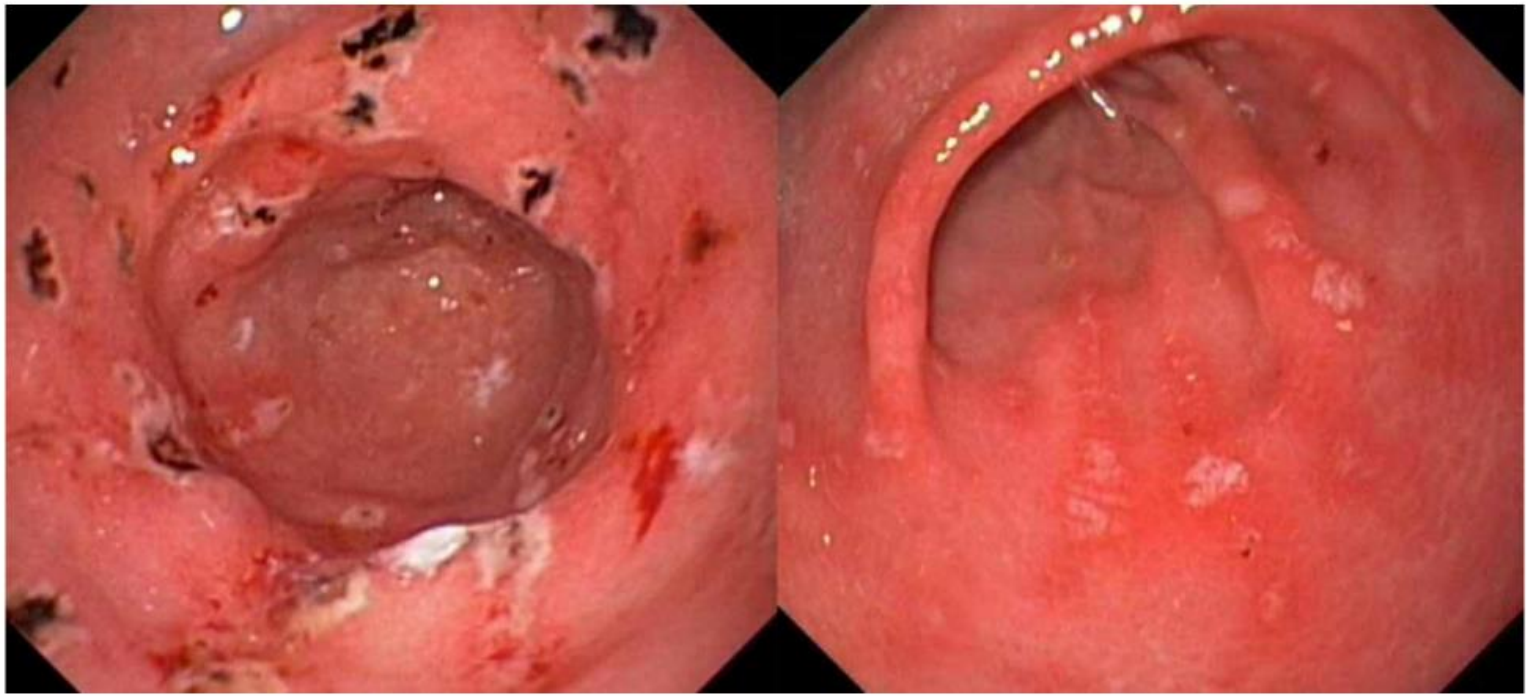
病例1, 45歲男性已婚,生意2014.11.10 晚因解出大量的黑便,昏倒在廁所而前來急診

- 兩週前因腰疼,醫師建議吃止痛藥Napton..兩天後,即有陣陣的上腹痛。
- (十一月十日)半夜(大約11 月11日1-2am)起床上廁所,即有頭暈及眼花的現象,排出大量黑色油狀的大便之後,
- 隨即昏倒在廁所內,之後才送.達本院.
- 大量黑色油狀的大便 →Tarry stool + fainting
- NSAID 是原因嗎?

- NAPTON F.C.275MG (NAPROXEN

NSAID related upper gi bleeding

NSAID gastritis – erosions covered with hematin in the antrum



Major Risk Factors for Upper GI Clinical Events With NSAID Use

Risk Factor	Risk Increase
Prior upper GI clinical event	2.5- to 4-fold
Older age	2- to 3.5-fold (>65 years)
Anticoagulation (eg, warfarin)	3-fold
Corticosteroid therapy	2-fold
High-dose/multiple NSAIDs (eg, NSAID + low-dose aspirin)	2- to 4-fold (vs aspirin alone)

Laine L. *Rev Gastroente*

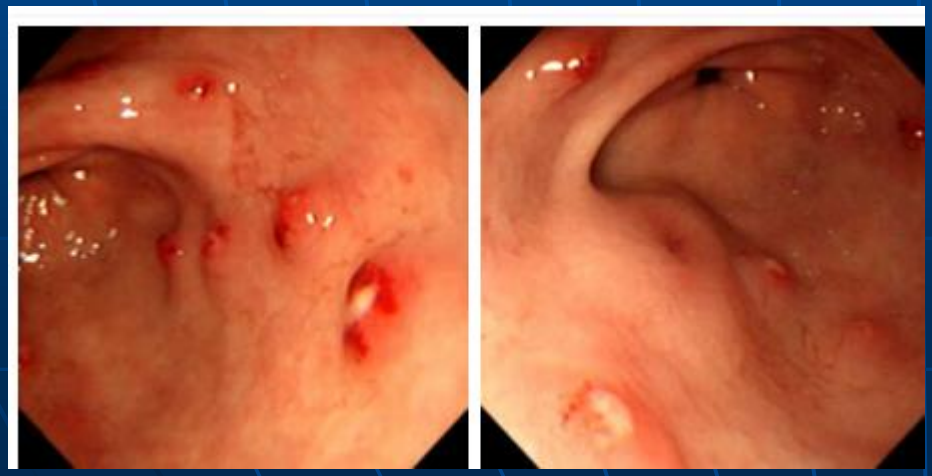
NASID GI toxicity

Patients at increased risk for NSAIDs GI toxicity

High risk	1. History of complicated ulcer especially recent 2. Multiple (> 2 risk factors)
Moderate risk (1 – 2 risk factors)	1. Age > 65 years 2. High dose NSAID therapy 3. Previous history of uncomplicated ulcer 4. Concurrent use of aspirin 5. Concurrent use of corticosteroids 6. Concurrent use of anticoagulants
Low risk	No risk factors

Erosive gastritis

Erosive Gastritis mit Hämatinauflagerungen



Chronic erosive gastritis of the antrum with nodules presenting a central erosion and hemorrhagic borders.

@@查出血原因-→ Endoscopy 確定 site/nature of bleeding

- History-→ first time bleeding
- Hunger pain→ peptic ulcer
- Liver disease (especially cirrhosis)→ varices
- **NASID** -→2014.10.29
  2014.10.31 pain →NASID
  2014.11..4 一週
  then 2014.11.10 tarry stool
- Alcohol → superficial gastritis
- Stress, (business : O.K.,) family life : O.K.

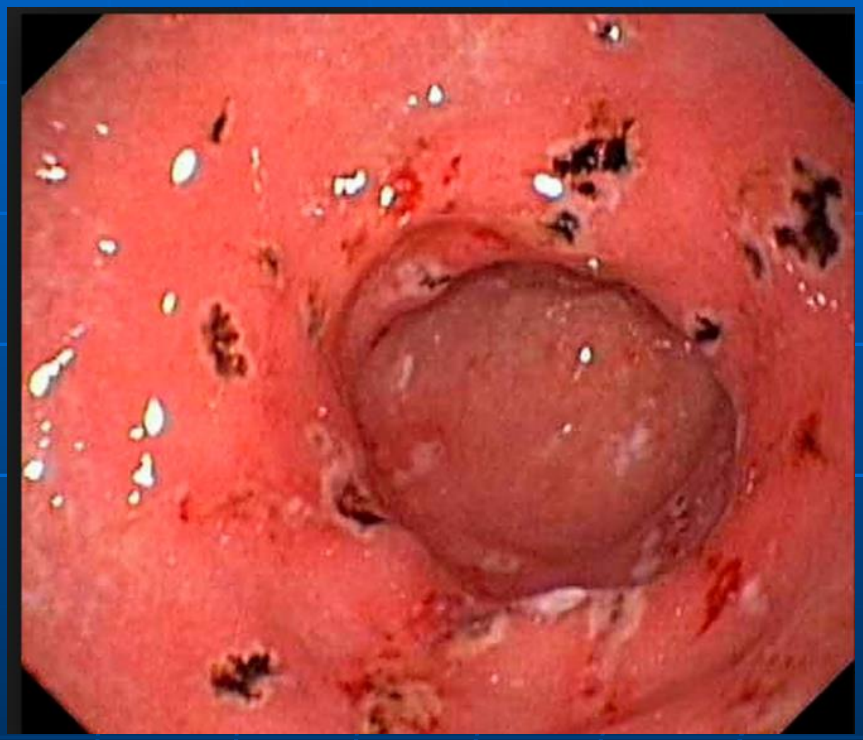
關鍵處在(1) History (2) Endoscopy

- @@服藥史:
- 2014.10.29 腰酸背疼 pain
- 2014.10.31 LMD →NASID

  2014.11..4 吃完

  一週 後2014.11.10

  發生tarry stool



Case 2

- 台中市張姓男子**習慣服用止痛藥**，近兩個月卻經常感到上腹悶痛，且有解黑色大便的情形，甚至嘔出黑褐色的嘔吐物。衛福部台中醫院發現他有胃潰瘍併出血的情形，經止血的處置並持續使用藥物，才恢復健康。醫師建議長期服用止痛劑或阿斯匹靈的人，若上腹不適，應定期接受胃鏡檢查，才能預防出血及再發。
- *2017-01-07 19:22聯合報 記者蘇木春*

必需詢問:服用 NASID?
服用NSAID 的人很多,1/3-1/4 人口

Table 2: NSAID-related deaths and admissions to hospital

Event	UK	USA	Canada
Annual NSAID prescriptions	25 million	70 million	10 million
NSAID-related admissions	12,000	100,000	3,900
NSAID-related deaths	2,600	16,500	365

Pharmacoepidemiol Drug Saf. 2018 Nov;27(11):1223-1230. doi: 10.1002/pds.4663. Epub 2018 Sep 19.

Comparative safety of NSAIDs for gastrointestinal events in Asia-Pacific populations: A multi-database, international cohort study.

Lai EC[1,2,3], Shin JY[4], Kubota K[5], Man KKC[6], Park BJ[4,7], Pratt N[8], Roughead EE[8], Wong ICK[9], Kao Yang YH[1,9], Setoguchi S[3,10,11].

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4 Department of Preventive Medicine, Seoul National University College of Medicine, Seoul, South Korea.
5 Department of Pharmacoepidemiology, University of Tokyo, Tokyo, Japan.

We identified 9879 patients in Japan, 70 492 in Taiwan, 263 741 in Korea, and 246 in Hong Kong who initiated an NSAID, and 44 013 patients in Australia, a predominantly Caucasian population. The incidence of gastrointestinal hospitalization was 25.6 per 1000 person-years in Japan, 32.8 in Taiwan**, 11.5 in Korea, 484.5 in Hong Kong, and 35.6 in Australia. Compared with diclofenac, the** risk of gastrointestinal events with loxoprofen was significantly lower in Korea (hazards ratio, 0.37; 95% CI, 0.25-0.54) but not in Japan (1.65; 95% CI, 0.47-5.78). The risk of gastrointestinal events with mefenamic acid was significantly lower in Taiwan (0.45; 95% CI, 0.26-0.78) and Korea (0.11; 95% CI, 0.05-0.27) but not Hong Kong (2.16; 95% CI, 0.28-16.87), compared with diclofenac.

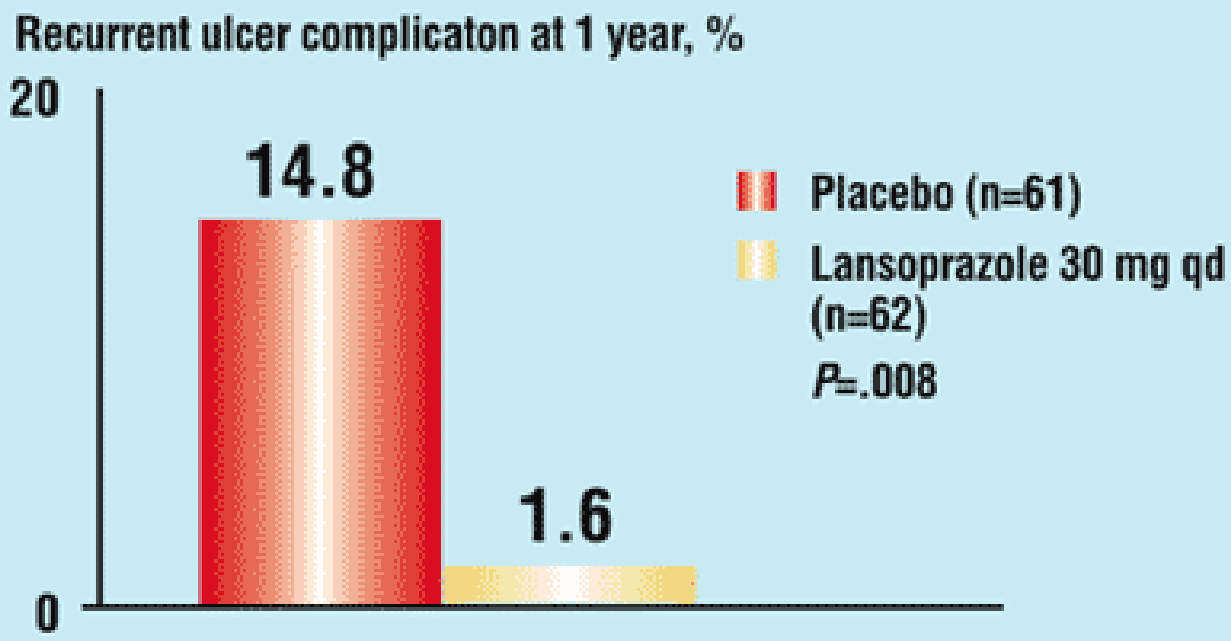
CONCLUSIONS:

Compared with diclofenac, loxoprofen was associated with a lower risk of gastrointestinal hospitalizations in Korea and mefenamic acid with a lower risk in Taiwan and Korea.

如果加 PPI→減少潰瘍的發生

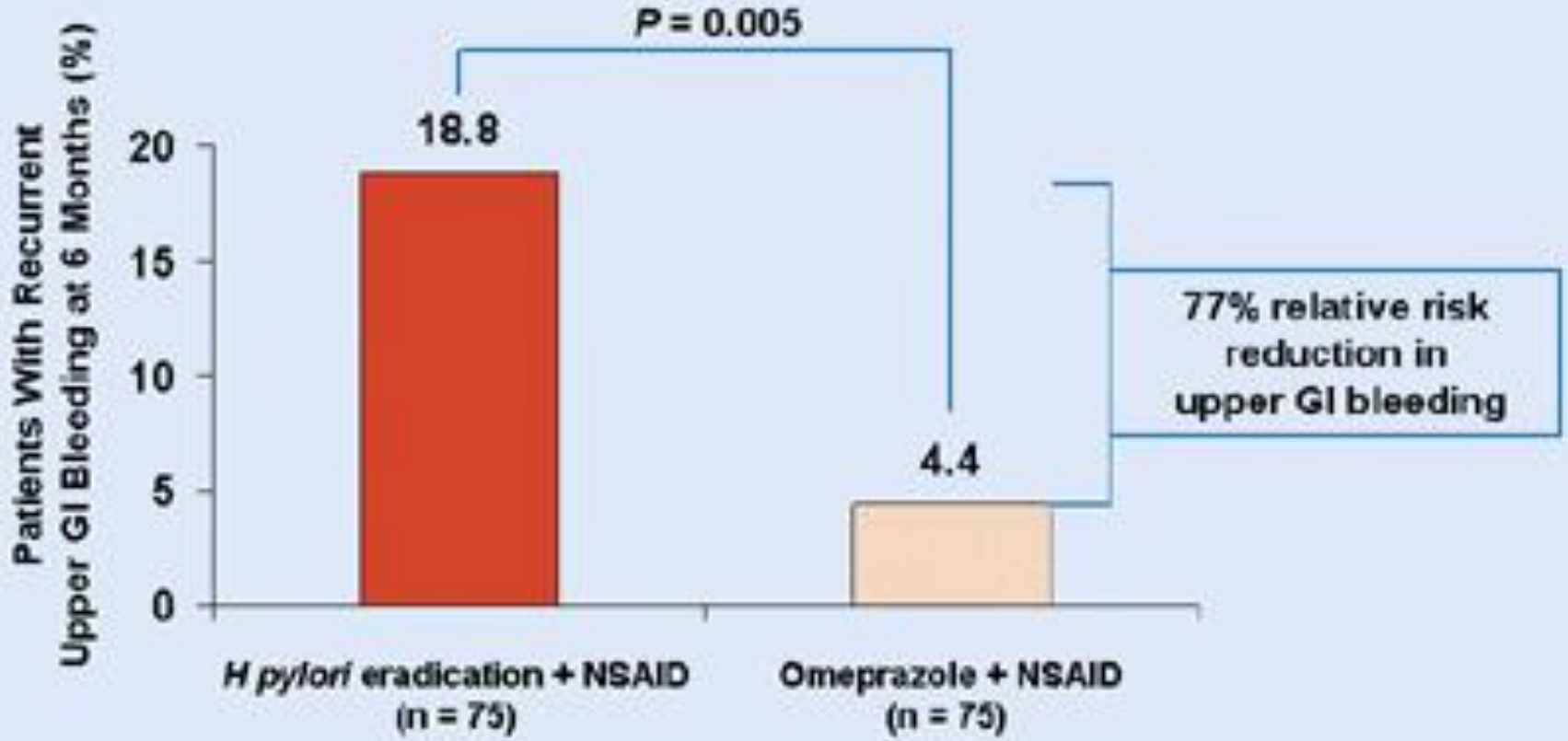
Figure 8. **PPIs Prevent ASA-Associated Ulcers**

- Patients with complicated ulcers on low-dose ASA
- *H pylori* treated; ASA restarted; randomized to lansoprazole/placebo

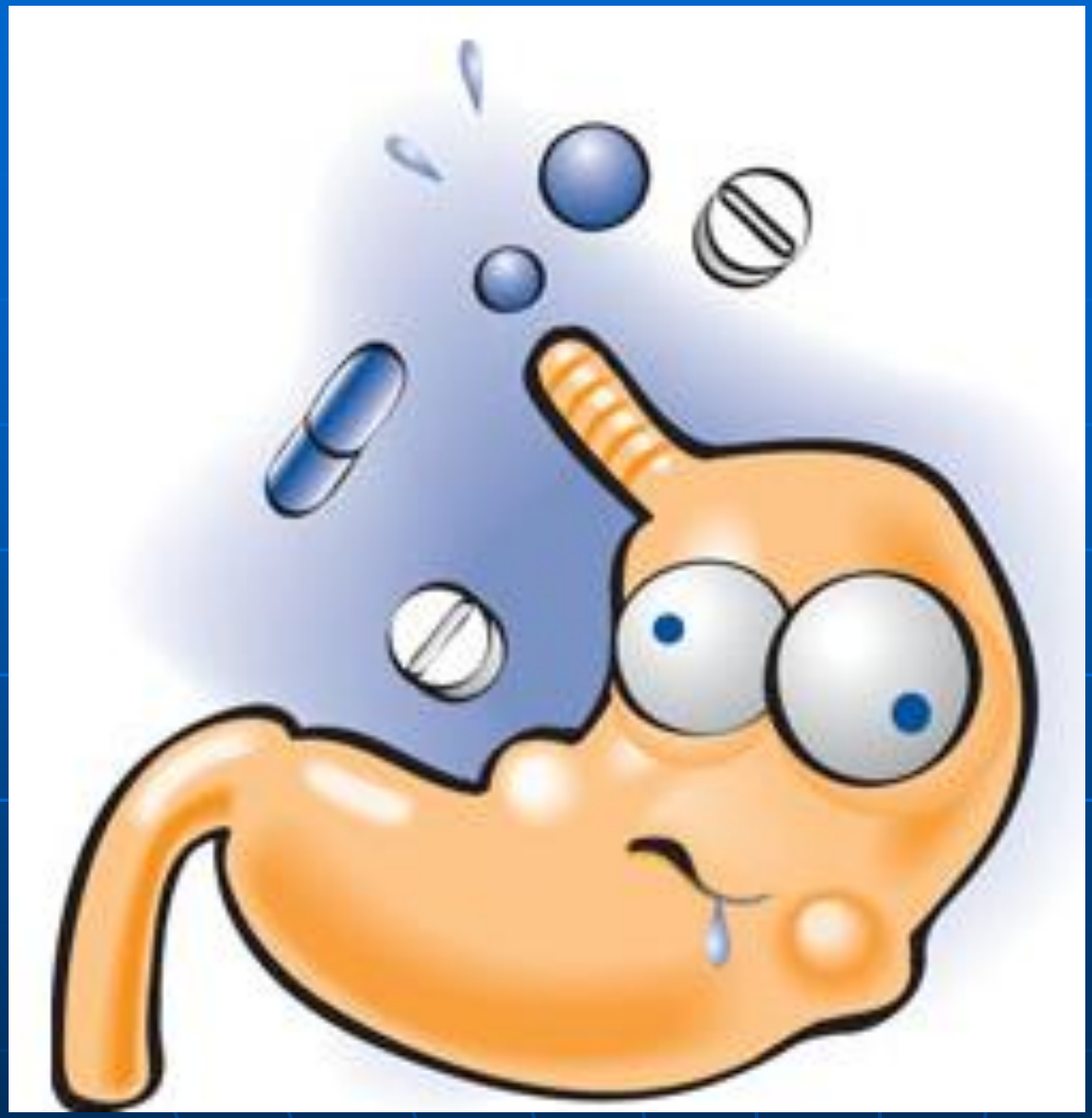


Source: Lai et al. *N Engl J Med*. 2002;346:2033.

PPI Prevents Recurrent Ulcer Bleeding in NSAID Users



Chan et al. *N Engl J Med*. 2001;344:967-973.



注意事項

- Taking NSAIDs with a meal will reduce the risk for NSAID

NSAID and UGI bleeding

Curr Med Res Opin. 2017 Oct;33(10):1815-1820. doi: 10.1080/03007995.2017.1338178. Epub 2017 Jul 5.

Non-steroidal anti-inflammatory drug related upper gastrointestinal bleeding: types of drug use and patient profiles in real clinical practice.

Sostres C[1,2,3,4], Carrera-Lasfuentes P[3], Lanas A[1,2,3,4].

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:

Our analysis included 3785 cases and 6540 controls, including 1270 cases (33.55%) and 834 controls (12.75%) reporting recent use (<30 days) of NSAIDs including high-dose acetylsalicylic acid (ASA).
NSAID use was associated with increased risk of upper GI bleeding, with an adjusted relative risk of 4.86 (95% CI, 4.32-5.46). NSAID (65.15%) or high-dose ASA use (65.83%) preceding upper GI bleeding was most often short-term. In over half of cases (63.62%), the upper GI bleeding event was not preceded by dyspeptic warning symptoms.

NSAID and aspirin users.

- **Epidemiology of non-steroidal anti-inflammatory drugs consumption in Spain. The MCC-Spain study.**
- Gómez-Acebo I[1,2], Dierssen-Sotos T[3,4], de Pedro M[4,5 et al:] BMC Public Health. 2018 Sep 21;18(1):1134.

Four thousand sixty participants were selected using a pseudorandom number list from Family Practice lists in 12 Spanish provinces.

1. Women consumed more non-aspirin NSAIDs (38.8% [36.7-41.0]) than men (22.3 [20.5-24.2]), but men consumed more aspirin (11.7% [10.3-13.2]) than women (5.2% [4.3-6.3]).

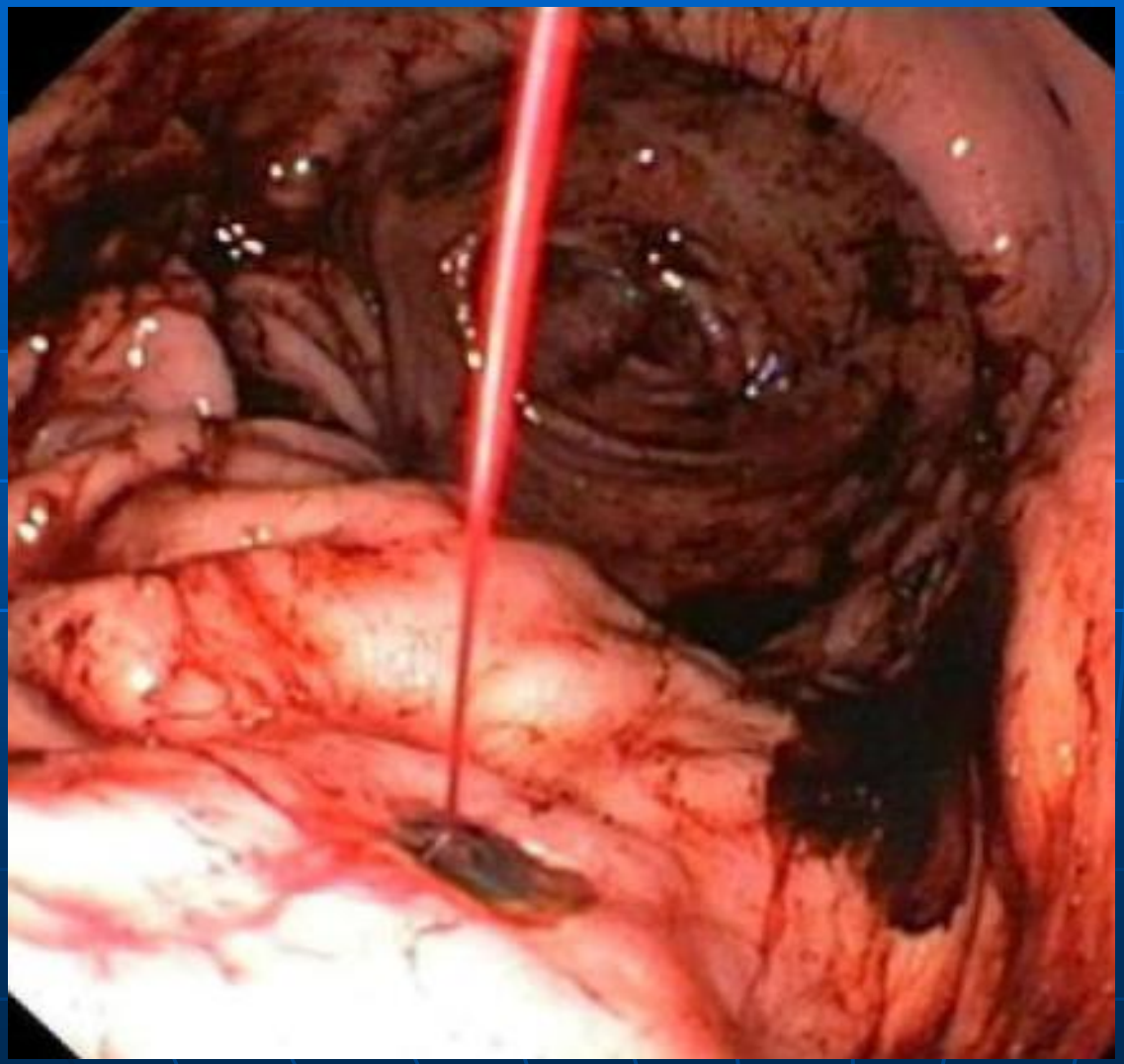
2. Consumption of non-aspirin **NSAIDs decrease with age** from **44.2%** (39.4-49.1) in younger than 45 to 21.1% (18.3-24.2) in older than 75, but the age-pattern for **aspirin usage was the opposite**.

Aspirin was reported by about 11% patients, as being twice as used in men (11.7%) than in women (5.2%); its consumption increased with age from 1.7% (< 45 years old) to 12.4% (≥75 years old). Aspirin was strongly associated with the presence of cardiovascular risk factors or established cardiovascular disease, reaching odds ratios of 15.2 (7.4-31.2) in women with acute coronary syndrome, 13.3 (6.2-28.3) in women with strokes and 11.1 (7.8-15.9) in men with acute coronary syndrome.

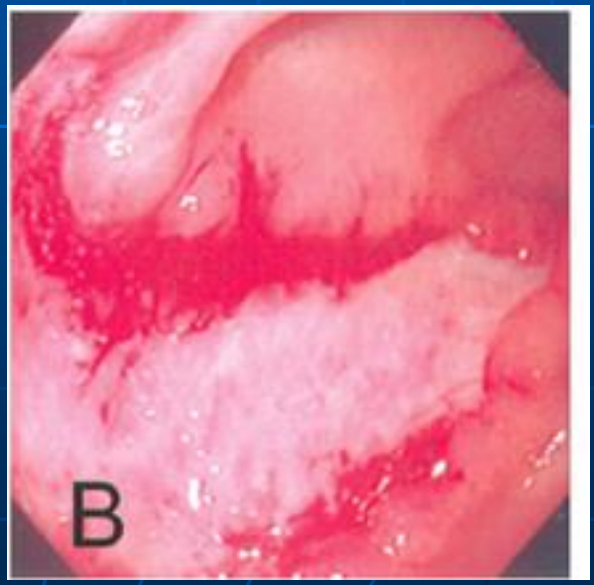
GI bleeding 之複雜性

- 1. 出血的病因—來自消化道之各種病變
- 2. 病變的形成有不同的原因
  EX. varices---cirrhosis
  -------portal hypertension
  ---------pancreatic cancer with
  splenic vein thrombosis.
- 3. 不同位置的病變處理方法不同.(esophageal and cardiac varices)
- 4. 出血有輕有重, 嚴重時危及生命。
  及時處理(包括診斷及止血)是基本原則. 必要時要輸血. Op.
- 5. Re-bleeding 之可能性

Case 3, bleeding from GU

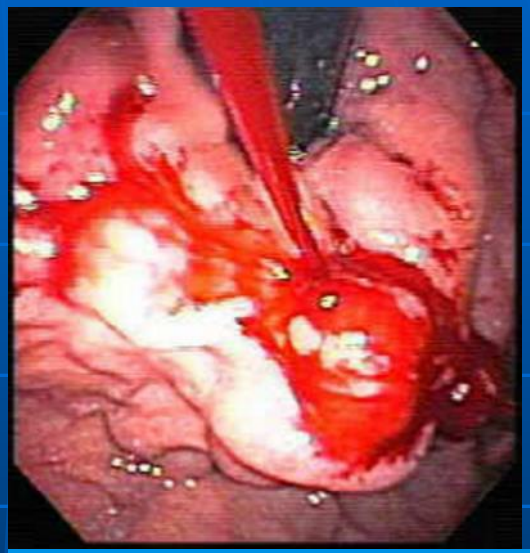


- Bleeding from gastric ulcer



Case 4, bleeding from gastric varices

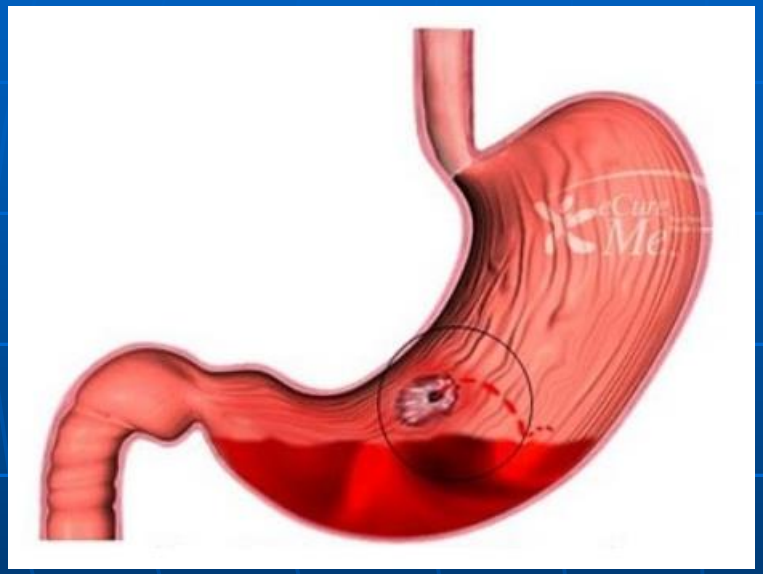
- 肝硬化病人發生 嘔吐鮮血, Panendoscopy發現無食道靜脈曲張,但有gastric varies 而且 active bleeding.



This 66 year old female, presented with Massive upper gastrointestinal bleeding. Endoscopy revealed spurting from a large varix in the gastric fundus.

Active bleeding is evidenced by the spurting of blood from a varix and the adjacent pooling of bright red blood. In this retrofl exed view, the endoscopic shaft is seen adjacent to the fundal varices exiting from the gastroesophageal junction. Bleeding from gastric varices is a life-threatening event that

看見出血點---正在流-→ 要止血

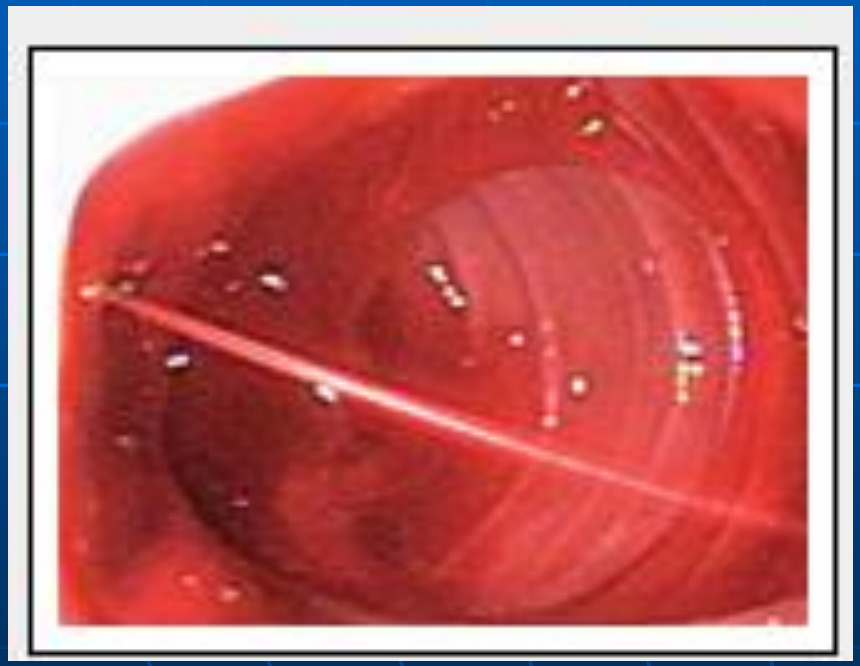


Bleeding from gastric varices is a life-threatening complication of portal hypertension.

Case 5, bleeding from duodenal ulcer

- A 72 year Old man noted tarry stool passage for 2 days then followed by an episode of coffee ground vomiting .
- Pan-endoscopy disclosed bleeding in the duodenal bulb and much coffee ground substance in the stomach

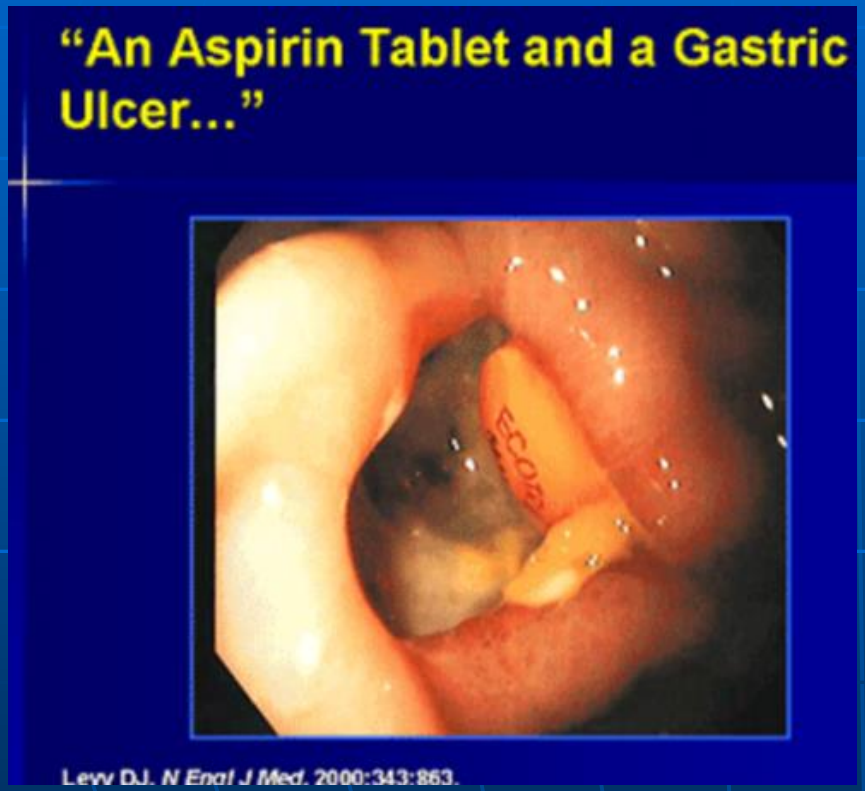
Bleeding from duodenal ulcer projectile bleeding/血跡斑斑 証明是出血

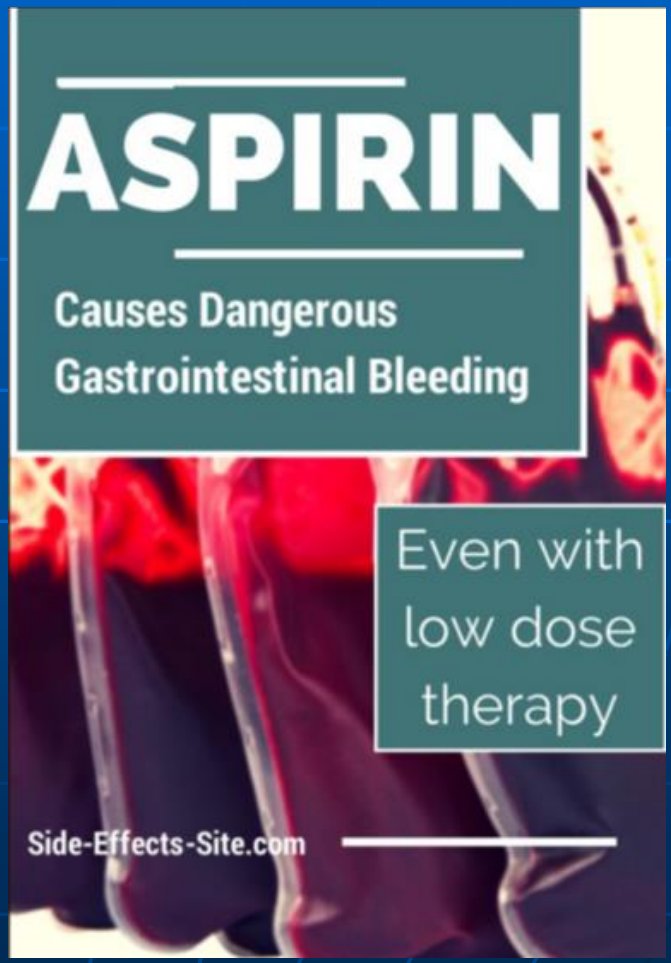


冷天對熱帶人是個威脅,心理壓力增加也是發作之因素

- **Stress---stress related diseases and relapse of diseases.**
- 寒冷→**Stress.**
- **Circulatory problem.**
- 藥物之使用 **(Aspirin, NSAID)**

Case 6 , Gi bleeding in patients taking aspirin

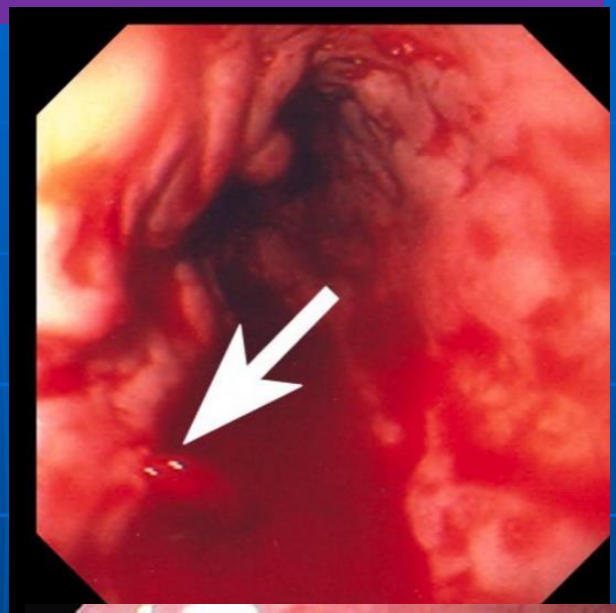




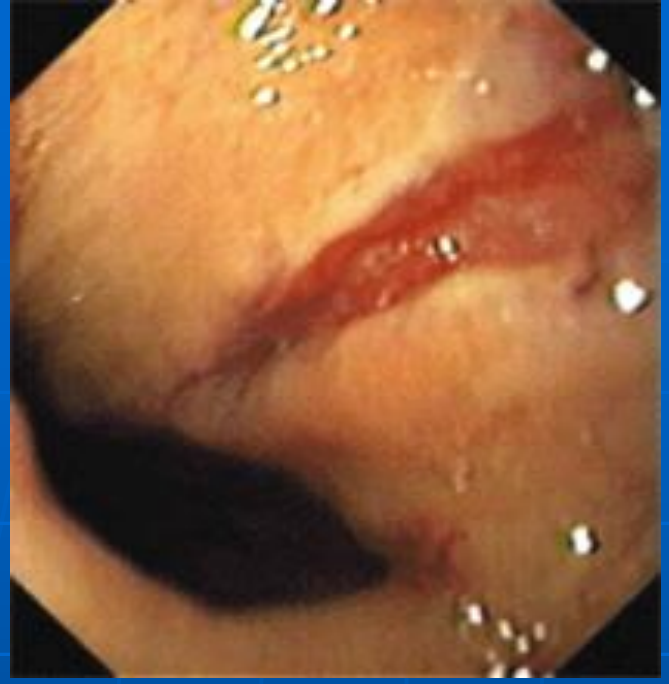
Ecotrin : aspirin

Case 7, Massive fresh bleeding in Mallory-Weiss Syndrome

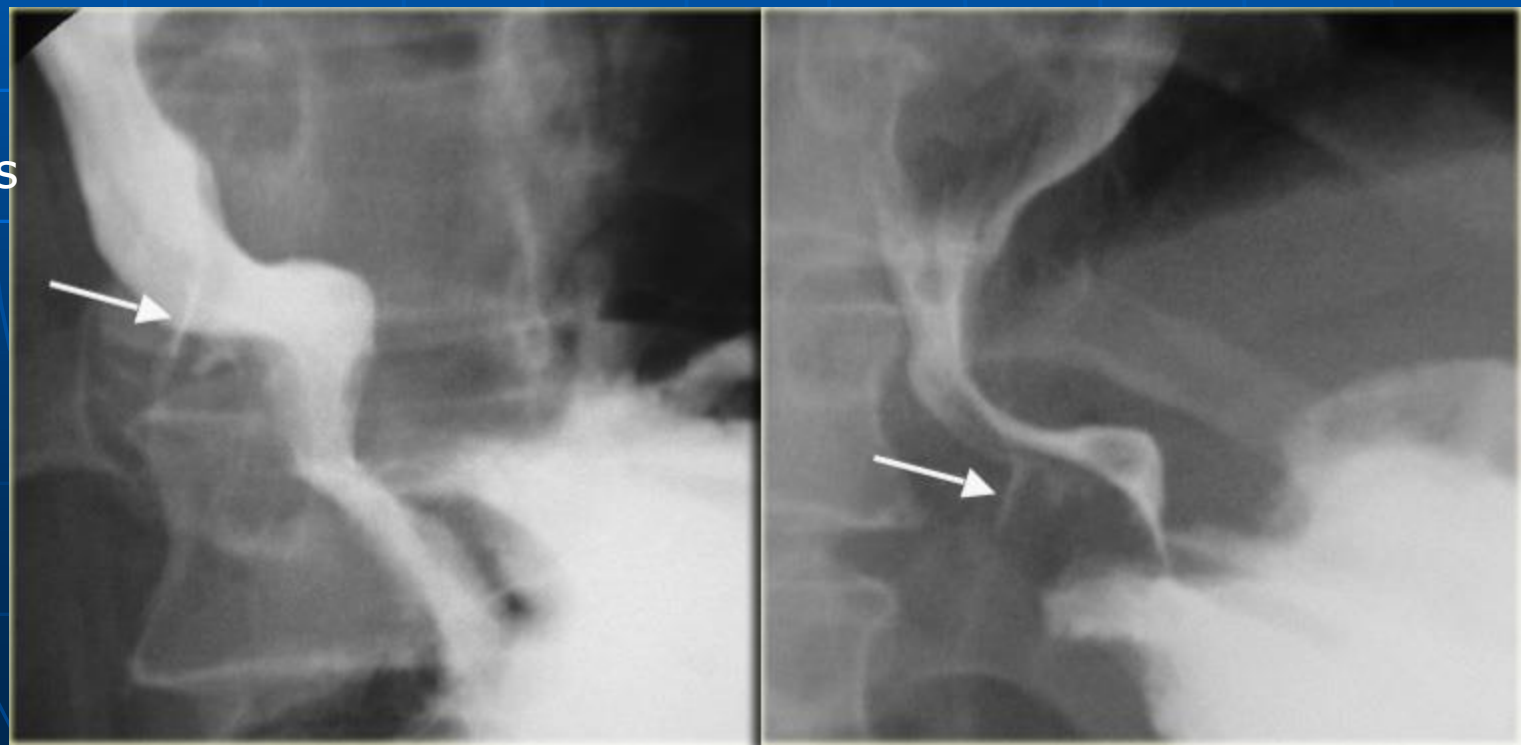
- A 38 year old woman , one day after delivery of a male baby, noted epigastric discomfort, cramping pain and nausea after taking cups of chicken soup with alcohol. She vomited suddenly The vomitus was food intake at first then she noted reddish material coming out. It was blood. She cried. Emergency endoscopy confirmed massive bleeding in the esophagus. Bleeding ceased after epinephrine irrigation. (1979)



Massive bleeding in esophagus :MW syndrome or varices



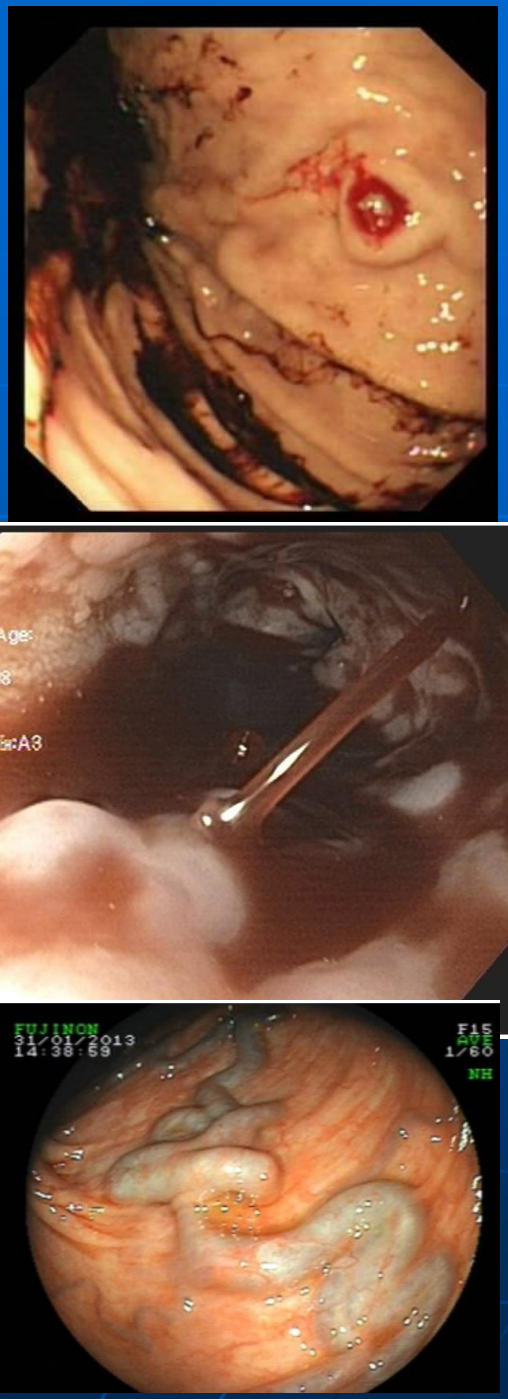
Mallory-Weiss Tear
Endoscopy
Radiography



Case 8, Bleeding from Dieulafoy's lesion

- A 67 year Old man came to ES after an episode of blood vomiting of a large bowel. (about 500 ml) No history of hunger pain in the past.
- Emergent endoscopy confirmed bleeding in the stomach. *Heat probe was applied and then Hemoclips was added at the site of coagulation.*

- **Dieulafoy's lesion** (*exulceratio simplex Dieulafoy*) is a medical condition characterized by a large tortuous arteriole in the stomach wall that erodes and bleeds. It can cause gastric hemorrhage but is relatively uncommon.
- 杜氏病變



UGI Dieulafoy lesions

- **Predictors of Rebleeding in Upper Gastrointestinal Dieulafoy Lesions.**
- Park SH et al (Korea) *Clin Endosc. 2015 Sep;48(5):385*-91
- January 2004 and June 2013,
- 81 male and 36 female patients. **Primary hemostasis** was achieved in 115 out of 117 patients (98.3%) with various endoscopic therapies. Re-bleeding occurred in 10 patients (**8.5%**). The mortality rate was significantly higher in patients with re-bleeding than in those without re-bleeding (30.0% vs. 4.7%, p=0.020).
- Re-bleeding has an important prognostic significance in patients with UGIDLs. Kidney disease and infection are major predictors of re-bleeding and mortality in patients with UGIDLs

Dieulafoy's lesion: current trends in diagnosis and management;

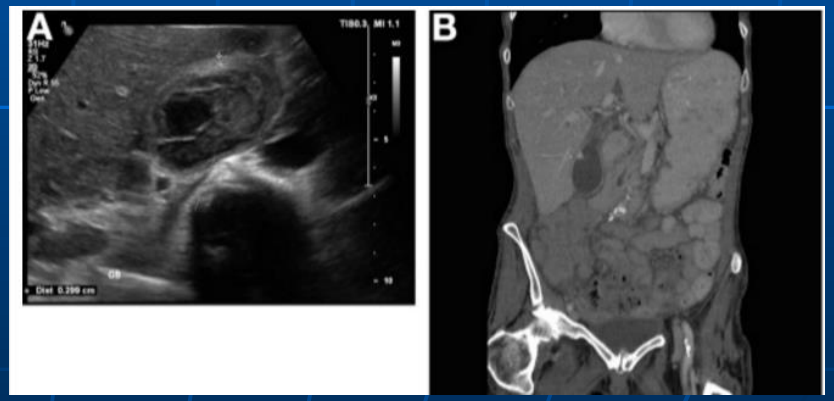
- Baxter M et al: *Annals of the Royal College of Surgeons of England 92 (7), 548-54 (Oct 2010)*
- Dieulafoy's lesion is a relatively rare, but potentially **life-threatening condition**. It accounts for 1-2% of acute gastrointestinal (GI) bleeding, but arguably is under-recognised rather than rare.
- There is no consensus on the treatment of Dieulafoy's lesions. Therapeutic endoscopy can control the bleeding in 90% of patients while angiography is being accepted as a valuable alternative to endoscopy for inaccessible lesions. Currently, surgical intervention is kept for failure of therapeutic endoscopic or angiographic interventions and it should be guided by pre-operative localization.
- **Advances in endoscopy have increased the detection of Dieulafoy's lesions and decreased the mortality from 80% to 8.6%**

Case 9, Massive bleeding from duodenum mistaken as lower Gi bleeding due to initial manifestation of fresh bloody stool

- A 20 year old young man came to ER and mentioned he passed large amount of fresh blood 30 min. before He was dizzy and pale.
  Lower Gi bleeding was suspected. Colonoscopy revealed only a large amount of blood in the colon and no specific lesion was found in the colon. Fresh blood coming out from the terminal ileum was observed. Upper Gi endoscopy confirmed bleeding in the duodenal ulcer.

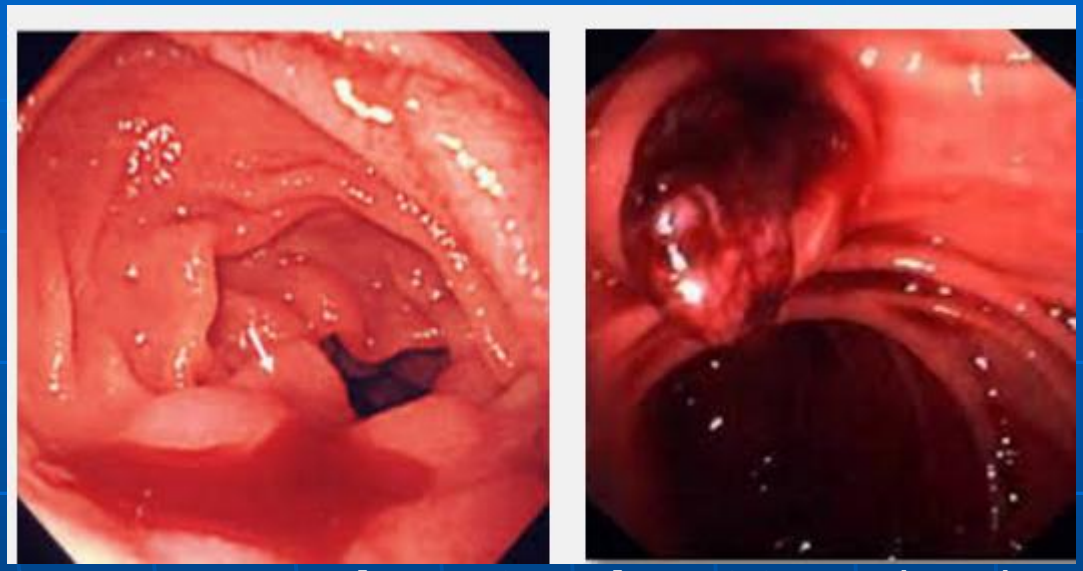
Case 10, Hemobilia

- **An 84-year-old woman presented with abdominal**
- **pain and melena**. She had a recent history of an open, low anterior resection and loop ileostomy formation for a diverticular stricture. Physical examination revealed **jaundice** and right upper quadrant tenderness but no signs of chronic liver disease. Laboratory tests showed a hemoglobin of **55 g/L** (normal range, 120-150), elevated liver enzymes (**gamma-glutamyl transferase 1886 IU/L** [normal range, 6-42]; alkaline phosphatase 1046 IU/L [normal range, 30-110]) and hyperbilirubinemia (148 μmol/L [normal range, <22]). **Upper endoscopy revealed fresh blood in the third part of the duodenum but no source for bleeding was found**.
- Abdominal ultrasonography is
- shown in Figure *A* and computed
- tomography (CT) of the abdomen
- is shown in Figure *B*,
- Where is the likely site of bleeding
- given the triad of ***jaundice,***
- ***obscure upper gastrointestinal***
- ***bleeding, and abdominal pain***?



Clot in GB

Quincke's triad



Quincke's triad

1. Jaundice
2. Biliary Colic
3. GI Bleeding

It is Triad of HEMOBILIA.

Gastroenterology October 2015 The clinical triad of jaundice associated with upper abdominal pain and obscure upper gastrointestinal bleeding is known as Quincke's triad.[1]
Together, these 3 clinical features indicate the likely source of bleeding to be within the biliary tract (hemobilia). **The commonest cause of hemobilia is iatrogenic (ie, post liver biopsy, hepatobiliary surgery, and endoscopic retrograde cholangiopancreatography)**.[1] In this case, clot is seen within the gallbladder on ultrasonography, implicating this organ as the likely source. *(Volume 149, Issue 4, Pages 874–875)*

Upper GI bleeding:
儘快思考原因→ 確定→止血

- Complete history taking
- Consider various causes of ugi bleeding
- Ask administration of anticoagulant or anti-platelets,
- Check past history of diseases and examinations.
- Check records of previous bleeding
- **Arrange endoscopy(Upper** gi) as soon as possible after well preparation.
- Check local epidemiological characteristics and seasonal variations.

Factors related
UGI bleeding in CKD

- 3. **Upper gastrointestinal bleeding in patients with CKD.** Liang CC et al (CMUH) Clin J Am Soc Nephrol. 2014 Aug 7;9(8):1354-9.
- from 2003 to 2009 were enrolled and prospectively followed until December of 2012.
- 2968 patients
- The incidence of upper gastrointestinal bleeding per 100 patient-years was **3.7**
- Higher eGFR was associated with a lower risk of upper gastrointestinal bleeding
- 結論:In patients with CKD who are not receiving dialysis, lower renal function is associated with higher risk for upper gastrointestinal bleeding. The risk is higher in patients with previous upper gastrointestinal bleeding history and low serum albumin.

UGI bleeding and aspirin

- **4. Epidemiology of Upper Gastrointestinal Damage Associated with Low-Dose Aspirin.**
- Hsu PI, Tsai TJ[1].(高榮) : Curr Pharm Des. 2015;21(35):5049-55.
- 1. Low-dose aspirin, commonly defined as 75-325 mg daily,
- 2. It reduced the risk of CV events and death in patients with coronary and cerebrovascular diseases and has the advantages of both low cost and long duration of antiplatelet action. However, low-dose aspirin therapy is associated with upper gastrointestinal (GI) side effects, which range from dyspepsia (point prevalence: 31%), gastroduodenal erosions (point prevalence: 60%), endoscopic peptic ulcer (**3-month incidence: 7%),** to symptomatic or complicated ulcers (annual incidence of **upper GI bleeding: 0.6%;** relative risk of upper GI bleeding: 2.6).

How to reduce GI complications

- 5. **The use of enteric-coated or buffered preparations do not reduce the risk of upper GI complications.** Assessment of GI risk for patients is a crucial step in preventing complications of antiplatelet agents.
- 6. Patients with a high GI risk should prevent peptic ulcer or ulcer complications by co-therapy with an **antisecretory agent,** especially **proton pump inhibitors.** H pylori eradication is recommended for patients requiring long-term low-dose aspirin therapy who have a prior history of peptic ulcer or GI bleeding.

7. SSRI and UGI bleeding

- **Short-term use of serotonin reuptake inhibitors and risk of upper gastrointestinal bleeding.** Wang YP et al : Am J Psychiatry. 2014 Jan;171(1):54-61
- Taiwan National Health Insurance Database (1998-2009).
- A total of 5,377 patients with upper gastrointestinal bleeding
- The adjusted odds ratio for the risk of upper gastrointestinal bleeding after **SSRI exposure** was **1.67** (95% CI=1.23-2.26) for the 7-day window, 1.84 (95% CI=1.42-2.40) for the 14-day window, and 1.67 (95% CI=1.34-2.08) for the 28-day window
- **Short-term SSRI use (7-28 days**) is significantly associated with upper gastrointestinal bleeding. Gender differences may exist in the relationship between SSRI use and upper gastrointestinal bleeding. Physicians should carefully monitor signs of upper gastrointestinal bleeding even after short-term exposure to SSRIs,

8. Alendronate and GI bleeding

Osteoporosis International
May 2014, Volume 25, Issue 5, pp 1617–1623 | Cite as

Alendronate, a bisphosphonate, increased upper and lower gastrointestinal bleeding: risk factor analysis from a nationwide population-based study

- **Alendronate, a bisphosphonate, increased upper and lower gastrointestinal bleeding: risk factor analysis from a nationwide population-based study.**
- Peng YL et al (陽明大): Osteoporos Int. 2014 May; 25(5):1617-23
- Patients receiving alendronate, a type of bisphosphonate, for **osteoporosis** have a higher risk of developing upper gastrointestinal bleeding (UGIB).
- Using the National Health Insurance (NHI) Research Database of Taiwan, 3,000 alendronate users and 12,000 age-, sex-, and enrollment time-matched controls were extracted for analysis from a cohort data set of 1,000,000 randomly sampled subjects.
- **Patients receiving alendronates seemed to carry a higher risk for UGIB and LGIB**

9. UGI bleeding in CAD

- **Risk factors for upper gastrointestinal bleeding in coronary artery disease patients receiving both aspirin and clopidogrel.** Kuang-Wei Huang,et al (陽明大): 中華醫誌January 2013Volume 76, Issue 1, Pages 9–14
- 67 (**12.5 %**) out of 534 patients developed UGIB (32 patients at early stage, 35 patients at late stage).
- **Use of proton pump inhibitor therapy** has a protective role in these patients [hazard ratio (HR): 0.10,
- **ACS (HR: 2.67,) has a high risk of developing UGIB at an early stage. Old age (>75 years of age) (HR: 2.13,) and prior history of peptic ulcer disease (HR: 3.27,)** each have an associated high risk for developing UGIB at a late stage

10. UGI bleeding in AKI

- **Long-Term Risk of Upper Gastrointestinal Hemorrhage after Advanced AKI.** Vin-Cent Wu et al (NTUH):CJASN, Dec. 2014.
- Taiwan National Health Insurance Research Database, (1998 and 2006) A total of 4565 AKI-recovery patients and the same number of matched patients without AKI were analyzed.
- Incidence rates of UGIB were **50** (by stringent criterion) and **69** (by lenient criterion) per 1000 patient-years in the AKI-recovery group and 31 (by stringent criterion) and 48 (by lenient criterion) per 1000 patient-years in the non-AKI group
- **The risk for long-term mortality increased after UGIB** (**HR, 1.24)** and dialysis-requiring AKI (HR, 1.66)

11. peptic ulcer bleeding in cirrhosis

- **Long-term risk of recurrent peptic ulcer bleeding in patients with liver cirrhosis: A 10-year nationwide cohort study. YC Hsu et al (義守):Hepatology :** Volume 56, Issue 2 August 2012 ,Pages 698–705.
- Taiwan National Health Insurance Research Database.
- 9,711 patients who had cirrhosis with clinical complications of portal hypertension from all patients (n = 271,030) hospitalized for peptic ulcer bleeding between January 1997 and December 2006, along with 38,844 controls .
- 1. Overall, patients with cirrhosis had a significantly higher death-adjusted re-bleeding rate compared with controls (1 year**, 14.4%** versus 11.3%; **5 years, 26.1%** versus 22.5%; 10 years, 28.4% versus 27.1%; $P < 0.001$).
- 2. **Cirrhosis was significantly associated** with peptic ulcer re-bleeding (adjusted hazard ratio, 3.19)

ISRN Hepatology
Volume 2013, Article ID 541836, 20 pages
http://dx.doi.org/10.1155/2013/541836

International Scholarly Research Notices

Review Article

Gastrointestinal Bleeding in Cirrhotic Patients with Portal Hypertension

Erwin Biecker

Department of Gastroenterology and Hepatology, HELIOS Klinikum Siegburg, Ringstraße 49, 53129 Siegburg, Germany

Received 30 May 2013; Accepted 29 June 2013

Academic Editors: A. Castiella, S.-S. Yang, and M.-H. Zheng

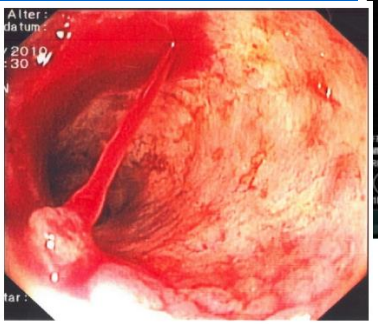
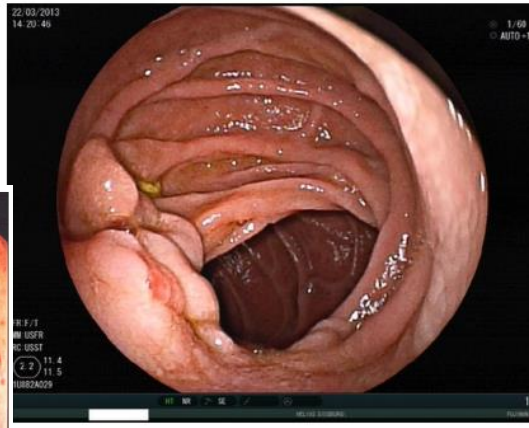
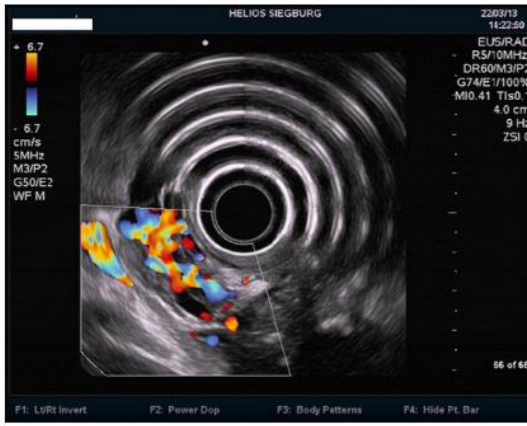


Figure 10: Acute bleeding from a rectal varix in a patient with liver cirrhosis.



(a)



@@@ About 40–50% of variceal hemorrhages cease spontaneously without therapeutic intervention. Control of acute bleeding is achieved in more than 80% of patients using actual therapy modalities.

Bleeding from varices is a common and often life-threatening complication of portal hypertension. The best modalities for prophylaxis and treatment of acute bleeding from esophageal varices were investigated in numerous clinical studies, and evidence based clinical guidelines are available. Only few studies investigated the prophylaxis and treatment of bleeding from gastric varices, and almost no controlled studies investigating prophylaxis and treatment of bleeding from portal hypertensive gastropathy and from ectopic varices have been conducted.

12. UGI and hemodialysis

- **The risk of upper gastrointestinal bleeding in patients treated with hemodialysis: a population-based cohort study.** Chien-Chun Kuo et al (高長)BMC Nephrology2013**14**:15
- Taiwan National health Insurance Research Database, 796 patients who were beginning HD between 1999 and 2003
- 1. The incidence rate of UGIB (**42.01 per 1000 person-year**) was significantly higher in the HD cohort than in the control cohort (27.39 per 1000 person-years).
- 2. adjusted hazard ratios for UGIB during the 6-year follow-up periods **for HD patients was 1.27**

13. Aorto-esophageal fistula

- **Primary aortoesophageal fistula: a rare but fatal cause of upper gastrointestinal bleeding.** Hsu WF[1],(亞東) et al : J Dig Dis. 2013 Dec;14(12):676-8
- **A Rare Cause of Massive Upper Gastrointestinal Tract Bleeding in an Older Adult: Aortoesophageal Fistula.**
- Yozgat A[1], Akmangit I[2], Altinbas A[1]. J Am Geriatr Soc. 2015 Sep;63(9):1966
- **[Aortoesophageal fistulae as a cause of fatal hemorrhage].** Hutan M[1], Bandzak J, Balaz P, Hostyn L. Bratisl Lek Listy. 1999 Jun;100(6):330-3. **Aortoesophageal fistula is a rare cause of upper gastrointestinal bleeding, ranging from 0 to 2.3% in literature.** The authors studied a group of 266 patients with upper gastrointestinal bleeding during the period of three years (1996-1998). According to two patient cases and the data from literature diagnostic methods, causes of aortoesophageal fistulas are analysed and the necessity of urgent closure of the fistulas is stressed.

14. Bleeding peptic ulcer and HP infection

- **Diagnosis, treatment, and outcome in patients with bleeding peptic ulcers and Helicobacter pylori infections.**
- Huang TC[1], Lee CL[2].(CGH) Biomed Res Int. 2014;2014:658108.
- 1. Helicobacter pylori (Hp) infection and nonsteroidal anti-inflammatory drug (NSAID) administration are two independent risk factors for UGI bleeding.
- 2. rapid urease test (RUT), with or without histology, is usually the first test performed during endoscopy. If the initial diagnostic test is negative, a delayed (13)C-urea breath test (UBT) or serology should be performed. Once an infection is diagnosed, antibiotic treatment is advocated. Sufficient evidence supports the concept that **Hp infection eradication can heal the ulcer and reduce the likelihood of re-bleeding.**

15. GIB in clopidogrel users

- **Risk Factors of Gastrointestinal Bleeding in Clopidogrel Users ,A Nationwide Population-Based Study** C.-C. Lin; et al Aliment Pharmacol Ther. 2013;38(9):1119-1128.
- National Health Insurance Research Database of Taiwan, 3238 clopidogrel users and 12 952 age-, sex-, and enrolment time-matched controls
- 1. use of clopidogrel increased the risk of UGIB [hazard ratio
- (HR): **3.66;** 95% confidence interval (CI): 2.96–4.51]
- and LGIB [HR: 3.52, 95% CI: 2.74–4.52].
- 2. Age, CKD, PUB history, use of aspirin and NSAIDs were
- independent risk factors for UGIB in the clopidogrel users

Clopidogrel and aspirin

- **Upper gastrointestinal lesions in patients receiving clopidogrel anti-platelet therapy.**
- Tsai TJ et al(高榮) :J Formos Med Assoc. 2012 Dec;111(12):705-10.
- 215 consecutive patients receiving **clopidogrel (n=106) or low-dose aspirin (n=109) therapy**
- The frequencies of hemorrhagic spots, erosions and peptic ulcers in the symptomatic clopidogrel users were 25%, 39% and 39%, respectively.
- Compared with the aspirin group, the clopidogrel group was older and had higher frequencies of past ulcer history and past gastrointestinal bleeding history in their clinical characteristics.
- Regarding to the endoscopic findings, **the clopidogrel users had higher frequencies of hemorrhagic spots (25% vs. 10%) and peptic ulcer (39% vs. 24%) than aspirin users** (p=0.004 and 0.027, respectively)

16. Antral vascular ectasia

- **Comparison of argon plasma coagulation in management of upper gastrointestinal angiodysplasia and gastric antral vascular ectasia hemorrhage.** Chiu YC et al(高長)：BMC Gastroenterol. 2012 Jun 9;12:67.
- The 46 patients with UGI vascular ectasia hemorrhage included 27 patients with angiodysplasia and 19 with **GAVE**(gastric antral vascular ectasia)
- Endoscopic hemostasis with APC is a safe treatment modality for both angiodysplasia and vascular ectasia bleeding. **The efficacy of APC treatment is greater for angiodysplasia than for vascular ectasia bleeding**. **GAVE** patients have a higher recurrent bleeding rate (78.9%)and may require multiple treatment sessions for sustained hemostasis. Older age (> 60) and previous radiation therapy are associated with recurrent bleeding.

Obscure UGI bleeding

Gastroenterol Hepatol (N Y). 2009 Dec; 5(12): 839–850. PMCID: PMC2886381
PMID: 20567529

Diagnostic Evaluation and Management of Obscure Gastrointestinal Bleeding

A Changing Paradigm

Shabana F. Pasha, MD,[1] Amy K. Hara, MD, and Jonathan A. Leighton, MD

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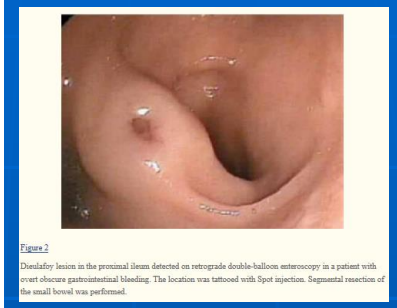


Figure 2

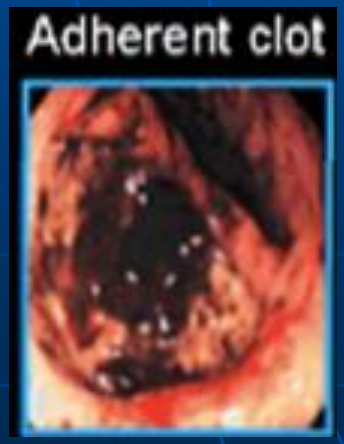
Dieulafoy lesion in the proximal ileum detected on retrograde double-balloon enteroscopy in a patient with overt obscure gastrointestinal bleeding. The location was tattooed with Spot injection. Segmental resection of the small bowel was performed.

Carcinoid tumor of the ileum

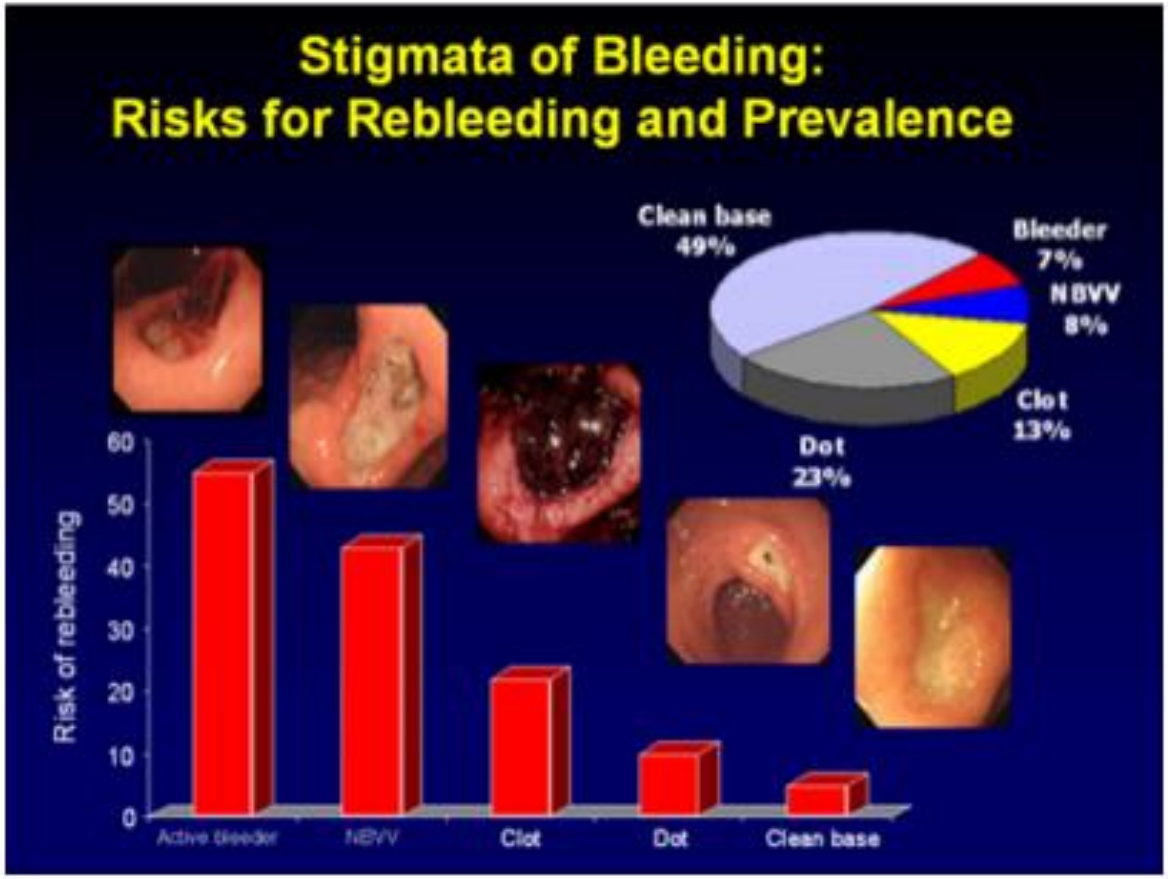
The main challenges related to evaluation of OGIB include the high miss rate for lesions on initial evaluation with standard endoscopy and the limited capacity of older diagnostic modalities to effectively examine the small bowel. The introduction of capsule endoscopy, balloon-assisted enteroscopy, spiral enteroscopy, and computed tomography (CT) enterography have served to overcome the limitations of older diagnostic tests. **Capsule endoscopy is currently recommended** as the third test of choice in the evaluation of patients with OGIB, after a negative bidirectional endoscopy. Balloon-assisted enteroscopy is useful for both the diagnosis and endoscopic management of OGIB. CT enterography is superior to small-bowel radiograph for luminal and extraluminal small-bowel examination. These advances in small-bowel diagnostics and the capacity to successfully perform endoscopic therapeutics have largely replaced surgical procedures and resulted in a trend toward noninvasive evaluation and endoscopic management of OGIB.

55 %

Laine and Peterson, N Engl J Med 1994; 331: 717



22 %



Endoscopic risk of re-bleeding

Stigmata of recent hemorrhage

SRH	Prevalence	Rebleeding	Surgery	Mortality
Clean base	42%	5%	0.5%	2%
Flat spot	20%	10%	6%	3%
Adherent clot	17%	22%	10%	7%
Visible vessel	17%	43%	34%	11%
Active bleeding	18%	70%	35%	11%

Endoscopic risk

- **High endoscopic risk : Need endoscopic therapy and medication**
  - Arterial bleeding, spurting, oozing
  - Non-bleeding visible vessel
  - Adherent clot
- **Low endoscopic risk : Need medical therapy**
  - Clean-base ulcer
  - Flat spot

Surgical indication-33

- 33. 有以下有以下情形時應照會外科手術治療
- (1) 出血嚴重、**在24少時內持續不停**內視鏡治療與丅AE均無法達成止血之目的.
- (2) 出血嚴重, **經輸血1500 ml以上**,仍無法
- 改善休克即 血壓仍低於90 mm Hg.
- Pulse > 104/min.尿量小於 30
- ml/hr.
- (3) 併發胃腸穿孔.

Discharge and discharge plan, 34出院有依據

- 34.有以下 情形可出院
- (1) 輕症病人,符 合5a, 出血不嚴重、且已停止 24 小時以上,Hb 在 12 gm/dl 以上,血壓及脈搏正常,BUN在25 mg/dl 以下者 ,可即出院
- (2) 住院病人,出血已停止 48 hours 以上,**連續3天之血紅素均未降低**、且在10 gm/dl 以上,血壓及**脈搏正常,**BUN在25 mg/dl 以下者 ,即可 出院

Discharge and discharge plan, 35-39 .出院規劃-1

- 35.已跟病人說明致病原因, 並指導避免再發之方法
- **36.安排在一週內回診,**請預約門診 並在 **3-5** 天內檢查 **CBC, BUN, Cr. Stool OB, LFT(GOT, GPT, GGT, serum bilirubin, total and conjugate,)**以備評估再出血之狀況.並作適當之處理.

Discharge and discharge plan, 35-39 .出院規劃-2

- 37.在出院後繼續服用**PPI**至少三個月、之後依內視鏡之變化及臨床需要決定是否繼續.
- 38.定期門診,至少每 **1-2** 個月一次、至少持續一年.
- **39 .**如需服用 **aspirin, NSAID,** 或其他之抗血小板藥剂(包括**Plavix**)請與 相關醫師討論用藥之注意事項.

- **Only full adherence to proton pump inhibitors protects against drug-induced upper gastrointestinal bleeding.**
- Ruiz B[1] et al (*Spain, Italy): Eur J Clin Pharmacol. 2018 Jul 24
- **Full adherence (> 0.80DDD) to proton pump inhibitors (PPIs) was the only gastroprotective therapy that significantly reduced the risk of UGIB, considering NSAID risk (OR: 0.53; 95% CI: 0.30-0.95) and dose (OR: 0.48; 95% CI: 0.27-0.87) with ORs adjusted for single-antiplatelet therapy (model 1) and NSAID risk (OR: 0.55; 95% CI: 0.31-0.98) and dose (OR: 0.49; 95% CI: 0.28-0.89) with ORs adjusted for dual-antiplatelet therapy (model 2).**

DDD/PDD

- **Defined daily doses (DDD)** are used to analyse drug utilization. For frequently prescribed drug groups, we studied to what extent the DDD correspond to the average prescribed daily doses (PDD).
- **Results:** During the study period, **about 38 500 patients** received continuous prescriptions of each ACE inhibitors or selective beta-antagonists, and about 9 000 of sulfonylurea compounds. PDD differed from DDD in varying degrees. For ACE inhibitors, PDD ranged between 1.5 DDD (for captopril) and 3.5 (for ramipril). The PDD for beta-antagonists were on average 0.9 DDD, similar for bisoprolol (0.8 DDD) and metoprolol (0.9 DDD). As for oral antidiabetics, doctors prescribed 1.0 DDD glibenclamid per day and patient and 2.0 DDD glimepirid. Depending on differences between DDD and PDD, real daily costs for drug therapy differed from the theoretical costs per DDD, for example in the case of ramipril they were 0.24 € compared to 0.07 €
- The PDD were much higher than the DDD for several frequently prescribed drugs.
- T. Grimmsmann[1] , W. Himmel[2] : Relation between Defined Daily Doses (DDD) and Prescribed Daily Doses: A 3-Month Analysis of Outpatient Data from a Statutory Health Insurance Company. Gesundheitswesen 2010; 72(7): 412-418

TAE 治療UGI出血(refractory to endoscopic treatment)

- Transcatheter arterial embolization for acute nonvariceal **upper gastrointestinal bleeding**: Indications, techniques and outcomes. Loffroy R, et al *(France): Diagn Interv Imaging. 2015 Jul-Aug;96(7-8):731-44.
- Transcatheter arterial embolization has become the first-line therapy for the management of acute nonvariceal upper gastrointestinal bleeding that is refractory to endoscopic hemostasis. Advances in catheter-based techniques and newer embolic agents, as well as recognition of the effectiveness of minimally invasive treatment options, have expanded the role of interventional radiology in the treatment of bleeding for a variety of indications. **Transcatheter arterial embolization is a fast, safe, and effective minimally invasive alternative to** surgery,

Case: TAE in bleeding DU

Arteriogram images of bleeding from a bulbar duodenal ulcer in a 76-year-old man: a, b: arteriogram showing contrast medium **extravasated** from a slender branch of **the gastroduodenal artery** into the duodenum (arrows);
c : after microcatheterization, selective glue embolization (radiopaque because of associated lipiodol (arrow)) preserving the gastroduodenal artery ensured control of the bleeding, with no early or late recurrences

GI bleeding in patients taking oral anticoagulants

J Gastroenterol Hepatol. 2018 Jan;33(1):164-171. doi: 10.1111/jgh.13830.

New predictive model for acute gastrointestinal bleeding in patients taking oral anticoagulants: A cohort study.

Shimomura A[1], Nagata N[1], Shimbo T[2], Sakurai T[1], Moriyasu S[1], Okubo H[1], Watanabe K[1], Yokoi C[1], Akiyama J[1], Uemura N[3].

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508 patients taking oral anticoagulants (66 direct oral anticoagulants users and 442 warfarin users). Absence of GI bleeding at an initial examination and any subsequent GI bleeding were confirmed endoscopically.

During a median follow-up of 31.4 months, 42 GI bleeds (8.3%) occurred: 42.8% in the upper GI tract, 50.0% in the lower GI tract, and 7.1% in the middle GI tract. **The cumulative 5 and 10-year probability of GI bleeding was 12.6% and 18.5%,** respectively. Multivariate analysis revealed that absence of **proton pump inhibitor therapy, chronic kidney disease, chronic obstructive pulmonary disease, history of peptic ulcer disease, and liver cirrhosis predicted GI bleeding.** The c-statistic for the new predictive model using these five factors was 0.65

Paediatr Int Child Health. 2019 Feb;39(1):18-22. doi: 10.1080/20469047.2018.1500226. Epub 2018 Jul 30.

Diagnostic and therapeutic approach to upper gastrointestinal bleeding.

Poddar U[1].

Author information

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- **Although UGI bleeding is a common complication (10%) in paediatric intensive care units (PICU), clinically significant UGI bleeding (haemodynamic instability, fall in haemoglobin by 2 g/dL and/or a requirement for blood transfusion) is less common (1.6%).** In low- and middle-income countries, clinically significant UGI bleeding is commonly owing to variceal bleeding whereas non-variceal aetiologies (e.g. peptic ulcer disease) are common in high-income countries. **The fundamental clinical principles of managing UGI bleeding are immediate assessment of severity, detecting possible causes and stabilising the haemodynamic status.** In suspected cases of variceal bleeding, intravenous octreotide and, in non-variceal bleeding, administration of a proton pump inhibitor (PPI) should be commenced immediately. **UGI endoscopy plays a vital role in diagnosis and management. Over-transfusion should be avoided (target haemoglobin 7-9 g/dL).** Stress ulcer prophylaxis is recommended in a select group of patients in PICUs (e.g. respiratory failure, coagulopathy and paediatric risk of mortality score ≥10).
- **CONCLUSIONS:**
- In clinically significant UGI bleeding, the primary goal is to restore the haemodynamic status, followed by early endoscopy. Intravenous octreotide in suspected variceal and **PPI** in non-variceal bleeding should be administered early. Stress ulcer prophylaxis should be restricted to high-risk children only.

Review > Expert Rev Gastroenterol Hepatol. 2025 Dec;19(12):1309-1317.
doi: 10.1080/17474124.2025.2596080. Epub 2025 Nov 28.

Multidetector computed tomography angiography in non-variceal upper gastrointestinal bleeding: when, why and how?

Alberto Martino et al (Italy)

- **專家意見：** 儘管胃鏡檢查無疑是大多數非靜脈曲張性上消化道出血（NVUGIB）病例診斷和治療的基石，但多層螺旋CT血管造影（MDCTA）已成為一種很有前景的輔助診斷工具，尤其適用於臨床病情嚴重的病例以及由罕見非消化性病因引起的病例

在以下情況下，可考慮在 EGD 後進行 MDCTA：a) 診斷失敗；b) 內視鏡止血效果不佳或失敗；c) 病因診斷不明確；d) 存在不適合內視鏡治療的大血管的證據。

在下列情況下，可考慮在進行 EGD 之前進行 MDCTA：

a) 血流動力學穩定不理想或難以維持；
b) 患者因病情危重不適合進行 EGD；
c) 近期進行過手術/介入治療；
d) 院內無急診胃腸內視鏡檢查服務；
e) 病史和臨床表現提示主動脈瘺 (aortoenteric fistula)。

Review > Clin Endosc. 2025 Dec 17. doi: 10.5946/ce.2025.202. Online ahead of print.

Non-variceal upper gastrointestinal bleeding: advances and future directions in management

Waku Hatta [1], Yohei Ogata [1], Takashi Chiba [2], Naotaro Tanno [1], Makoto Kawabe [1], Kimiko Kayada [1], Yutaka Hatayama [1], Masahiro Saito [1], Akira Imatani [1], Tomoyuki Koike [1], Atsushi Masamune [1]

Affiliations – collapse

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1 Division of Gastroenterology, Tohoku University Graduate School of Medicine, Sendai, Japan.

- 針對非靜脈曲張性上消化道出血（NVUGIB）的治療，已製定了許多臨床指南，但各指南的建議仍有顯著差異。本篇回顧總結了NVUGIB治療的最新證據，並將其分為四個關鍵階段：內視鏡前管理、內視鏡治療、內視鏡後護理以及難治性出血的識別和處理。
- 在內鏡前階段，已開發出多種風險評分系統來預測死亡率。目前建議多數患者採用限制性輸血策略，血紅素閾值設定為7至8 g/dL。內視鏡前靜脈注射紅黴素也有助於改善內視鏡下的視野。當內視鏡止血失敗時，經導管動脈栓塞術（TAE）通常優於手術，作為二線治療方案。止血後，必須進行高劑量抑酸治療，並評估再出血風險。
- 對於發生再出血的患者，建議首選內視鏡治療。然而，確定經動脈栓塞術（TAE）的最佳時機仍是一項挑戰。由於臨床表現的異質性，非靜脈曲張性上消化道出血（NVUGIB）的治療應個別化。

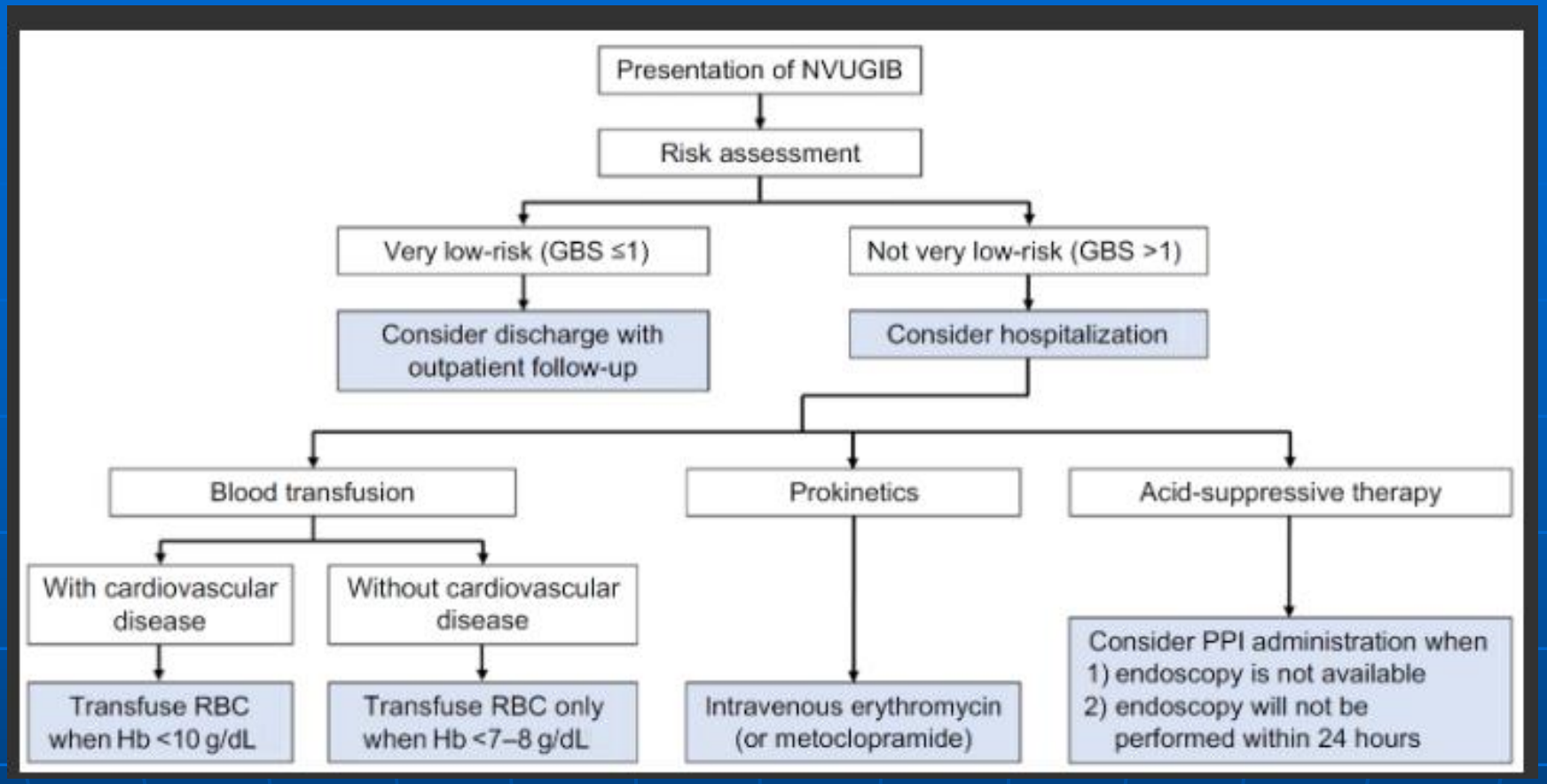
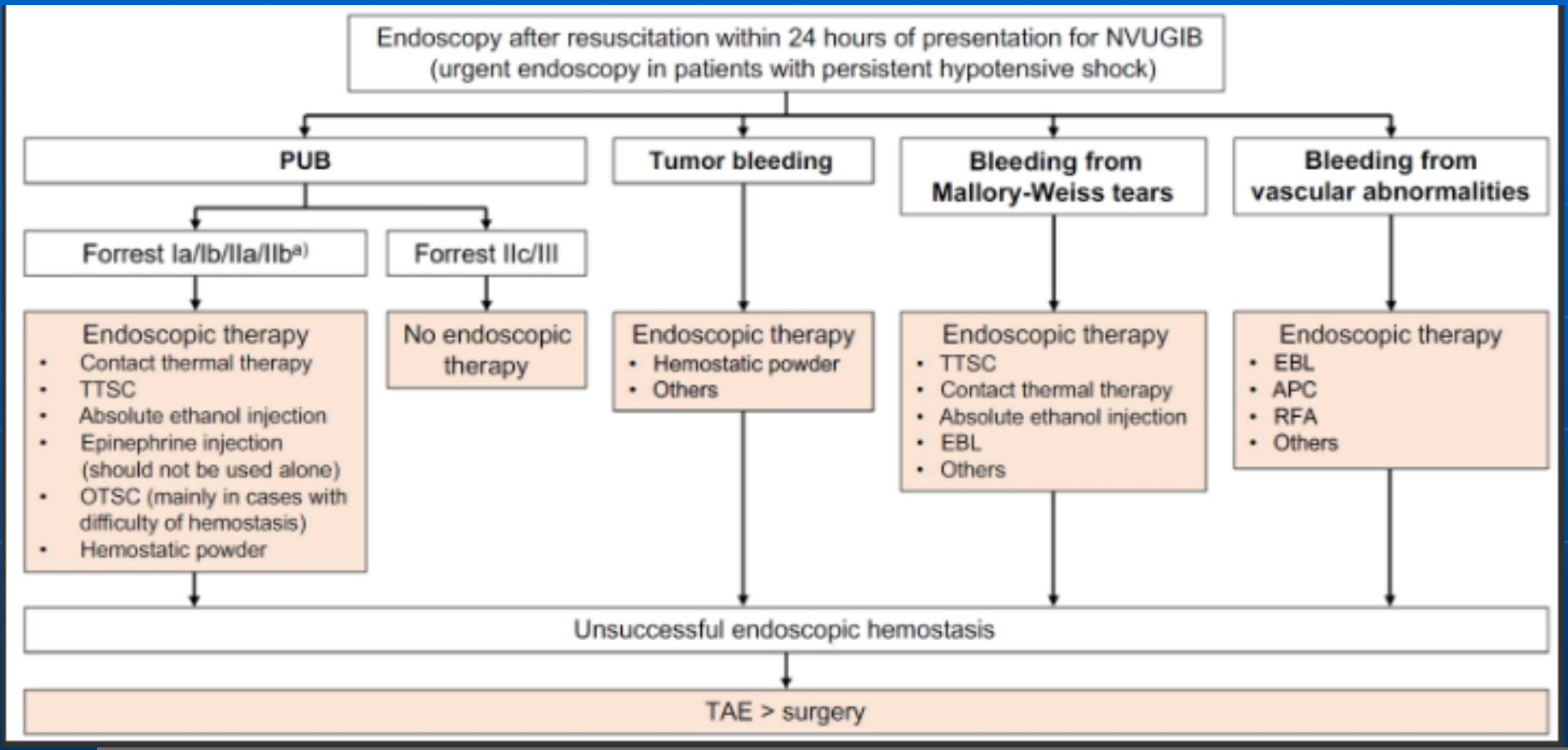


Fig. 1. Pre-endoscopic management of non-variceal upper gastrointestinal bleeding (NVUGIB). GBS, Glasgow-Blatchford score; RBC, red blood cell; Hb, hemoglobin; PPI, proton pump inhibitor.



非靜脈曲張性上消化道出血（NVUGIB）的內視鏡治療。 PUB，消化性潰瘍出血；TTSC，內視鏡夾閉術；OTSC，內視鏡外夾閉術；EBL，內視鏡套紮術；APC，氬等離子凝固術；RFA，射頻消融術；TAE，經導管動脈栓塞術。 a) Forrest IIa型病灶的內視鏡治療仍有爭議；然而，通常建議清除潰瘍基底部的沾黏血栓。

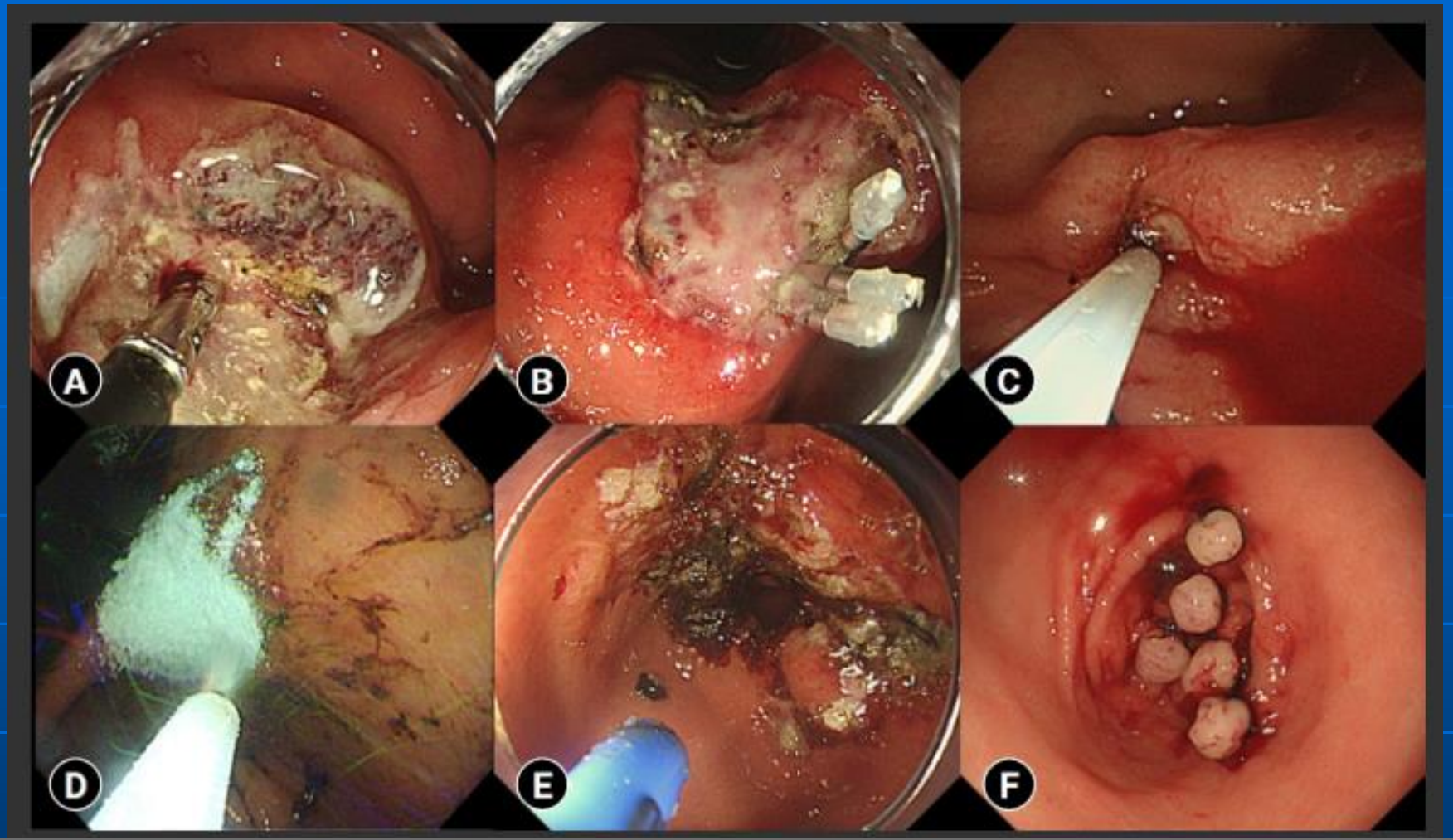


圖3.非靜脈曲張性上消化道出血（NVUGIB）的內視鏡治療方法。 (A) 接觸式熱療治療消化性潰瘍出血（PUB）。 (B) 內視鏡夾閉術治療消化性潰瘍出血（PUB）。 (C) 無水乙醇注射治療消化性潰瘍出血（PUB）。 (D) 止血粉（UI-EWD）治療消化性潰瘍出血（PUB）。 (E) 氬等離子體凝固術治療胃竇血管擴張（GAVE）出血。 (F) 內視鏡套紮術(Endoscopic band ligation)治療胃竇血管擴張（GAVE）出血。

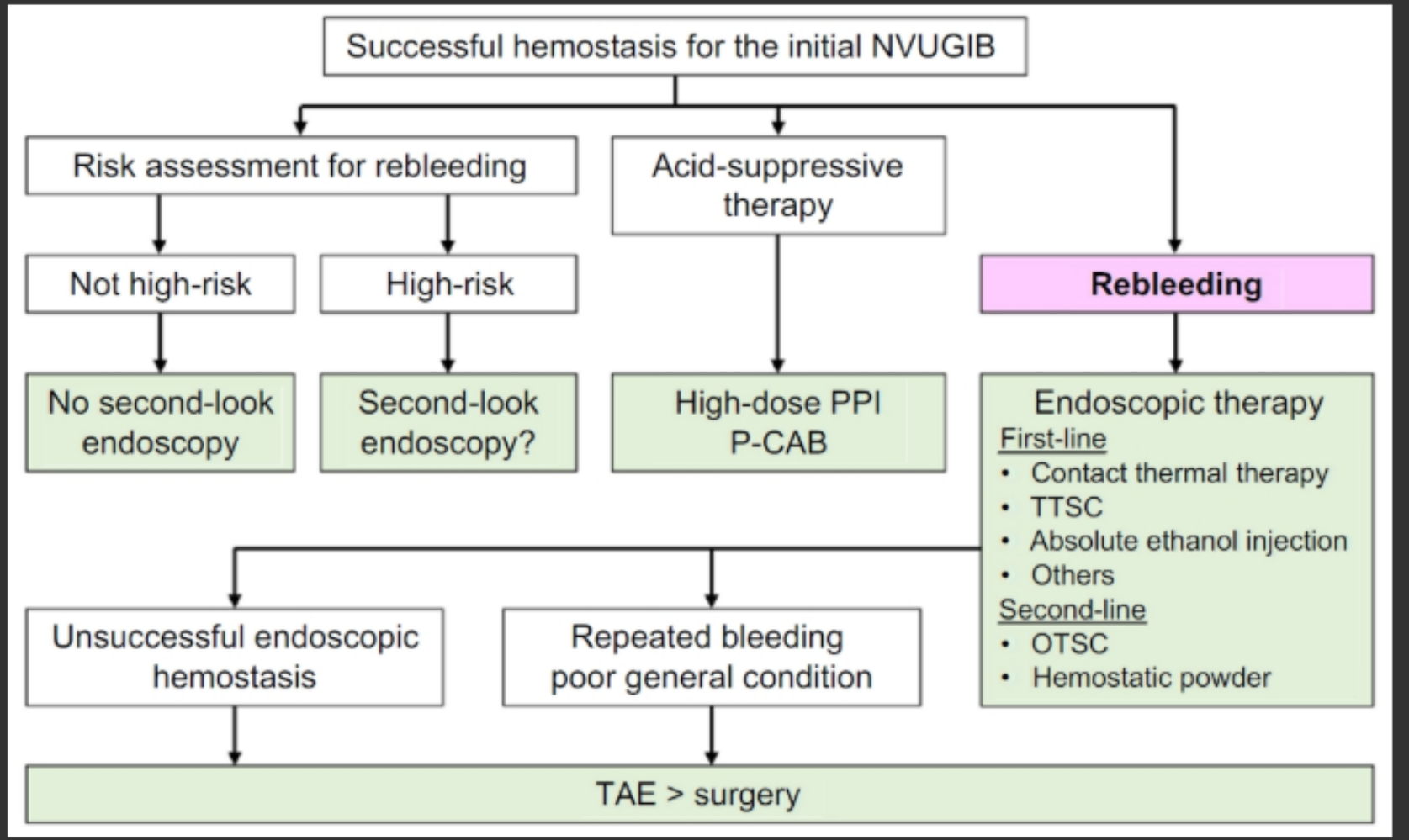


圖 4.內視鏡成功止血後的後續處理及難治性出血的處理策略。 NVUGIB，非靜脈曲張性上消化道出血；PPI，質子幫浦抑制劑；P-CAB，鉀競爭性酸阻斷劑；TTSC，內視鏡夾閉術；OTSC，內視鏡外夾閉術；TAE，經導管動脈栓塞術。

P-CAB, potassium-competitive acid blocker; TTSC, through-the-scope-clip; OTSC, over-the-scope clip; TAE, transcatheter arterial embolization.

結論(2025.12.26)

1. 上消化道出血是常見之問題,原因複雜、病史要用心詢問,
2. UGI endoscopy 對上消化道出血山判斷很有價值、也有止血之效果、只要臨床穩定,應及早施行上消化道內視鏡術.
3. UGI endoscopy 應在 來診之後12小時至24小時內施行. 輕症病人,已停止出血6小時以上,血色素變動不大, 也可不作內視鏡檢查.(*為減少合併症、建議在12小時後才作*)
4. *血色素低於9 gm/dl* 應輸血並使血壓及脈搏恢復正常.
5. **24小時內不能止血時、應考慮手術**.
6. 情況穩定,並已**止血超過48小 時方可考慮出院**.
7. 出院之後應使用 PPI 至少3個月以達到預防出血之目的.
8. 依據 guidelines 處理,可以降低死亡率及減少合併症