European Guidelines on the Management of Upper Gastrointestinal Bleeding: Where Are Emergency Physicians?

Pierre-Clément Thiebaud, Youri Yordanov

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Pierre-Clément Thiebaud [1], Youri Yordanov [2]

1. Sorbonne Université, AP-HP, Hôpital Saint Antoine, Service d'Accueil des Urgences, Paris, France
2. Sorbonne Université, AP-HP, Hôpital Saint Antoine, Service d'Accueil des Urgences, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, UMR-S 1136, Paris, France

European guidelines on the management of upper gastrointestinal bleeding: where are emergency physicians?

In the last two years, the European Society of Gastrointestinal Endoscopy have updated it guidelines on the diagnosis and management of nonvariceal upper gastrointestinal bleeding (UGIB) and adapted the Baveno VI guideline on the management of variceal UGIB. [1,2] These guidelines encompass the endoscopic and post-endoscopic patient's management, but a large part of these reports also describe the pre-endoscopic management of these patients.. But before being referred to our colleagues from gastroenterology, endoscopy and/or intensive care, patients with an UGIB generally present to an emergency department (ED) or call emergency medical services (i.e. 15, 112, 911, 999).[3]

Patients presentating symptoms, triage, risk stratification and treatment initiation

UGIB is common medical emergency, with an estimated incidence ranging from 65 to 134 per 100,000 individuals.[3–5] At initial assessment, patients can present with a large variety of symptoms ranging from hematochezia, anemia or shock for most severe patients, to hematemesis and/or melena. These symptoms can be caused by numerous potentially serious lesions, including, but not limited to, peptic ulcers and/or varices.[3,4,6].

Therefore, patients' managements entry point is the initial complaint (bleeding) and rarely the bleeding aetiology (peptic ulcers or varices). From the emergency department perspective, the first step when facing a patient presenting for a bleeding that could be due to an UGIB is initial triage. Depending on the used triage scales, and regardless of their vitals, these patients are considered as urgent to very urgent[7].

Patients with a suspected UGIB require a rapid initial evaluation and must be revaluated on a regular basis. Clinicians can use the Glasgow-Blatchford Score (GBS) or the pre-endoscopy Rockall Score to stratify patients risk [1], but both these scores are probably more useful to stratify the immediate or delayed need for endoscopy rather than the magnitude of ED based care. In an ED setting, we are more concerned by the patient that could deteriorate in the next hours and we will therefore initially focus on formalized or unformalized clinical assessment, looking repeatedly for severity signs. Warning scores as the National Early Warning Score (NEWS), the Modified Early Warning Score (MEWS) or even the Quick Sepsis-related Organ Failure Assessment (Q-SOFA) are used on a regular basis[5]. In patients presenting with low early warning scores, adding patient comorbidities appears to increase the ability of these score to predict unfavourable outcome, as it has been suggested in some of the recently developed triage scales [7,8]

If the patient is hemodynamically unstable, and requires continuous active resuscitation even after prompt intravascular volume replacement one could consider initiating inotropic support as well as major haemorrhage protocols. The principles of permissive hypotension or

hypotensive resuscitation could be employed in the patient with a UGIB induced haemorrhagic shock, as it is the case in patients with a trauma induced haemorrhagic shock. [9]

A common set of recommendations and larger panel of experts

Management entry point, triage, severity assessment or treatment of unstable patients are just mere examples of areas in which the guidelines could benefit from a multi-disciplinary approach.

Patients' managements will start with the patients' complaint and not with a diagnosis, but recommendations are often dichotomized between variceal and nonvariceal bleeding.[1,2,10,11] This classification is historical and widespread, however UGIB origin, even if it can be suspected, is at least ambiguous during initial management of these patients. As an example, in 20% of patients with a history of cirrhosis, UGIB was due to a bleeding peptic ulcer in a series of patients that have presented to French EDs in 2013.[3] Therefore, to avoid moving from a recommendation to the other depending on the initial suspected aetiology or diagnosis, it would be preferable to have a common set of recommendations (or a common section in each guideline) for the initial management of patients presenting with a suspected UGIB.

In the nonvariceal UGIB guidelines, 18 out of 49 (37%) recommendations focus on the pre-endoscopic management of patients[1]. The quality of the available evidence was low for 10 of them, moderate for 4 and high for only the remaining 4. That means that the vast majority of recommendations on the initial management of patients with UGIB is based on gastroenterologists' experts' opinions. These experts should have included emergency physicians, as well as critical care specialists, as they are very much involved in the early management of UGIB patients. In most European health care systems, these patients are the responsibility of emergency physicians. Gastroenterologists, hepatologists and endoscopists are rarely the primary health care provider in these situations.

Our colleagues from the British Society of Gastroenterology have recently led a multi-society consensus process and published a care bundle for the early clinical management of UGIB. [5] And a few years ago the French Society of Intensive Care, with the participation of the French Language Group of Paediatric Intensive Care and Emergencies, the French Society of Emergency Medicine, the French Society of Gastroenterology, and the French Society of Digestive Endoscopy have published common recommendations for the management of severe gastrointestinal bleeding in adults and children.[12]

It is now time for the European scientific societies to collaborate in order to avoid such pitfalls in the design, conduct and drafting of future recommendations on upper gastrointestinal bleeding. Emergency medicine specialists must take an active part in these recommendations, as patients will continue to come to our EDs for suspected UGIB. We will be the ones assessing and treating them first, as this is emergency medicine, and emergency medicine is what we do.

Conflicts of interest

Authors declare no conflicts of interest.

References

1 Gralnek IM, Stanley AJ, Morris AJ, Camus M, Lau J, Lanas A, *et al.* Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline - Update 2021. *Endoscopy* 2021;**53**:300–32.

2 Karstensen JG, Ebigbo A, Bhat P, Dinis-Ribeiro M, Gralnek I, Guy C, *et al.* Endoscopic treatment of variceal upper gastrointestinal bleeding: European Society of Gastrointestinal Endoscopy (ESGE) Cascade Guideline. *Endosc Int Open* 2020;**8**:E990–7.

3 Thiebaud P-C, Yordanov Y, Galimard J-E, Raynal P-A, Beaune S, Jacquin L, *et al.* Management of upper gastrointestinal bleeding in emergency departments, from bleeding symptoms to diagnosis: a prospective, multicenter, observational study. *Scand J Trauma Resusc Emerg Med* 2017;**25**:78.

4 Wuerth BA, Rockey DC. Changing Epidemiology of Upper Gastrointestinal Hemorrhage in the Last Decade: A Nationwide Analysis. *Dig Dis Sci* 2018;**63**:1286–93.

5 Siau K, Hearnshaw S, Stanley AJ, Estcourt L, Rasheed A, Walden A, *et al.* British Society of Gastroenterology (BSG)-led multisociety consensus care bundle for the early clinical management of acute upper gastrointestinal bleeding. *Frontline Gastroenterology* 2020;**11**:311–23.

6 Czernichow P, Hochain P, Nousbaum JB, Raymond JM, Rudelli A, Dupas JL, *et al.* Epidemiology and course of acute upper gastro-intestinal haemorrhage in four French geographical areas. *Eur J Gastroenterol Hepatol* 2000;**12**:175–81.

7 Taboulet P, Maillard-Acker C, Ranchon G, Goddet S, Dufau R, Vincent-Cassy C, *et al.* Triage des patients à l'accueil d'une structure d'urgences. Présentation de l'échelle de tri élaborée par la Société française de médecine d'urgence : la FRench Emergency Nurses Classification in Hospital (FRENCH). *Ann Fr Med Urgence* 2019;**9**:51–9.

8 Langsted SND, Dynesen JJ, Liesanth JY, Jessen MK, Mackenhauer J, Ahrensberg J, *et al.* How comorbidities impact Early Warning Score as a predictor of 7-day mortality. *European Journal of Emergency Medicine* 2020;**27**:142–6.

9 Kudo D, Yoshida Y, Kushimoto S. Permissive hypotension/hypotensive resuscitation and restricted/controlled resuscitation in patients with severe trauma. *Journal of Intensive Care* 2017;**5**:11.

10 Barkun AN, Almadi M, Kuipers EJ, Laine L, Sung J, Tse F, *et al.* Management of Nonvariceal Upper Gastrointestinal Bleeding: Guideline Recommendations From the International Consensus Group. *Ann Intern Med* 2019;**171**:805–22.

11 Laine L, Barkun AN, Saltzman JR, Martel M, Leontiadis GI. ACG Clinical Guideline: Upper Gastrointestinal and Ulcer Bleeding. *Official journal of the American College of Gastroenterology | ACG* 2021;**116**:899–917.

12 Osman D, Djibré M, Da Silva D, Goulenok C. Management by the intensivist of gastrointestinal bleeding in adults and children. *Ann Intensive Care* 2012;**2**:46.

T 1) Gralnek IM, Stanley AJ, Morris AJ, et al. Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline - Update 2021. *Endoscopy*. 2021;53(3):300-332. doi:10.1055/a-1369-5274

2) Karstensen JG, Ebigbo A, Bhat P, et al. Endoscopic treatment of variceal upper gastrointestinal bleeding: European Society of Gastrointestinal Endoscopy (ESGE) Cascade Guideline. *Endosc Int Open*. 2020;8(7):E990-E997. doi:10.1055/a-1187-1154

3) de Franchis R; Baveno VI Faculty. Expanding consensus in portal hypertension: Report of the Baveno VI Consensus Workshop: Stratifying risk and individualizing care for portal hypertension. *J Hepatol*. 2015;63(3):743-752. doi:10.1016/j.jhep.2015.05.022

4) Barkun AN, Almadi M, Kuipers EJ, et al. Management of Nonvariceal Upper Gastrointestinal Bleeding: Guideline Recommendations From the International Consensus Group. *Ann Intern Med*. 2019;171(11):805-822. doi:10.7326/M19-1795

5) Laine L, Barkun AN, Saltzman JR, Martel M, Leontiadis GI. ACG Clinical Guideline: Upper Gastrointestinal and Ulcer Bleeding. *Am J Gastroenterol*. 2021;116(5):899-917. doi:10.14309/ajg.0000000000001245

6) Thiebaud PC, Yordanov Y, Galimard JE, et al. Management of upper gastrointestinal bleeding in emergency departments, from bleeding symptoms to diagnosis: a prospective, multicenter, observational study. *Scand J Trauma Resusc Emerg Med*. 2017;25(1):78. Published 2017 Aug 14. doi:10.1186/s13049-017-0425-6

7) Siau K, Hearnshaw S, Stanley AJ, et al. British Society of Gastroenterology (BSG)-led multisociety consensus care bundle for the early clinical management of acute upper gastrointestinal bleeding. *Frontline Gastroenterol*. 2020;11(4):311-323. Published 2020 Mar 27. doi:10.1136/flgastro-2019-101395
8) Osman D, Djibré M, Da Silva D, Goulenok C; group of experts. Management by the intensivist of gastrointestinal bleeding in adults and children. *Ann Intensive Care*. 2012;2(1):46. Published 2012 Nov 9. doi:10.1186/2110-5820-2-46