

Acute upper gastrointestinal bleeding in over 16s: management

Clinical guideline

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www.nice.org.uk/guidance/cg141

Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should [assess and reduce the environmental impact of implementing NICE recommendations](#) wherever possible.

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This guideline is the basis of QS38.

Overview

This guideline covers how upper gastrointestinal bleeding can be effectively managed in adults and young people aged 16 years and older. It aims to identify which diagnostic and therapeutic steps are useful so hospitals can develop a structure in which clinical teams can deliver an optimum service for people who develop this condition.

Who is it for?

- Healthcare professionals
- People over 16 with acute upper gastrointestinal bleeding, and their families and carers

Introduction

Acute upper gastrointestinal bleeding is a common medical emergency that has a 10% hospital mortality rate. Despite changes in management, mortality has not significantly improved over the past 50 years.

Elderly patients and people with chronic medical diseases withstand acute upper gastrointestinal bleeding less well than younger, fitter patients, and have a higher risk of death. Almost all people who develop acute upper gastrointestinal bleeding are treated in hospital and the guideline therefore focuses on hospital care. The most common causes are peptic ulcer and oesophago-gastric varices.

Endoscopy is the primary diagnostic investigation in patients with acute upper gastrointestinal bleeding but it has not always been clear whether urgent endoscopy is cost effective as well as clinically valuable. Endoscopy aids diagnosis, yields information that helps predict outcome and most importantly allows treatments to be delivered that can stop bleeding and reduce the risk of re-bleeding.

Drugs may have a complementary role in reducing gastric acid secretion and portal vein pressure. Not every patient responds to endoscopic and drug treatments; emergency surgery and a range of radiological procedures may be needed to control bleeding.

This guideline aims to identify which diagnostic and therapeutic steps are useful in managing acute upper gastrointestinal bleeding. This should enable hospitals to develop a structure in which clinical teams can deliver an optimum service for people who develop this condition.

The guideline will assume that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

Recommendations

The following guidance is based on the best available evidence. The [full guideline](#) gives details of the methods and the evidence used to develop the guidance.

People have the right to be involved in discussions and make informed decisions about their care, as described in [NICE's information on making decisions about your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Risk assessment

- 1.1.1 Use the following formal risk assessment scores for all patients with acute upper gastrointestinal bleeding:
- the Blatchford score at first assessment, **and**
 - the full Rockall score after endoscopy.
- 1.1.2 Consider early discharge for patients with a pre-endoscopy Blatchford score of 0.

1.2 Resuscitation and initial management

- 1.2.1 Transfuse patients with massive bleeding with blood, platelets and clotting factors in line with local protocols for managing massive bleeding.
- 1.2.2 Base decisions on blood transfusion on the full clinical picture, recognising that over-transfusion may be as damaging as under-transfusion.

- 1.2.3 Do not offer platelet transfusion to patients who are not actively bleeding and are haemodynamically stable.
- 1.2.4 Offer platelet transfusion to patients who are actively bleeding and have a platelet count of less than 50×10^9 /litre.
- Offer fresh frozen plasma to patients who are actively bleeding and have a prothrombin time (or international normalised ratio) or activated partial thromboplastin time greater than 1.5 times normal. If a patient's fibrinogen level remains less than 1.5 g/litre despite fresh frozen plasma use, offer cryoprecipitate as well.
- 1.2.5 Offer prothrombin complex concentrate to patients who are taking warfarin and actively bleeding.
- 1.2.6 Treat patients who are taking warfarin and whose upper gastrointestinal bleeding has stopped in line with local warfarin protocols.
- 1.2.7 Do not use recombinant factor VIIa except when all other methods have failed.

For advice on reversing direct-acting oral anticoagulants (DOACs), see the [MHRA safety advice on DOACs for a list of reversal agents](#), and [NICE's technology appraisal guidance on andexanet alfa for reversing anticoagulation from apixaban or rivaroxaban](#).

1.3 Timing of endoscopy

- 1.3.1 Offer endoscopy to unstable patients with severe acute upper gastrointestinal bleeding immediately after resuscitation.
- 1.3.2 Offer endoscopy within 24 hours of admission to all other patients with upper gastrointestinal bleeding.
- 1.3.3 Units seeing more than 330 cases a year should offer daily endoscopy lists. Units seeing fewer than 330 cases a year should arrange their service according to local circumstances.

1.4 Management of non-variceal bleeding

Endoscopic treatment

- 1.4.1 Do not use adrenaline as monotherapy for the endoscopic treatment of non-variceal upper gastrointestinal bleeding.
- 1.4.2 For the endoscopic treatment of non-variceal upper gastrointestinal bleeding, use one of the following:
- a mechanical method (for example, clips) with or without adrenaline
 - thermal coagulation with adrenaline
 - fibrin or thrombin with adrenaline.

Proton pump inhibitors

- 1.4.3 Do not offer acid-suppression drugs (proton pump inhibitors or H₂-receptor antagonists) before endoscopy to patients with suspected non-variceal upper gastrointestinal bleeding.
- 1.4.4 Offer proton pump inhibitors to patients with non-variceal upper gastrointestinal bleeding and stigmata of recent haemorrhage shown at endoscopy.

Treatment after first or failed endoscopic treatment

- 1.4.5 Consider a repeat endoscopy, with treatment as appropriate, for all patients at high risk of re-bleeding, particularly if there is doubt about adequate haemostasis at the first endoscopy.
- 1.4.6 Offer a repeat endoscopy to patients who re-bleed with a view to further endoscopic treatment or emergency surgery.
- 1.4.7 Offer interventional radiology to unstable patients who re-bleed after endoscopic

treatment. Refer urgently for surgery if interventional radiology is not promptly available.

1.5 Management of variceal bleeding

- 1.5.1 Offer terlipressin to patients with suspected variceal bleeding at presentation. Stop treatment after definitive haemostasis has been achieved, or after 5 days, unless there is another indication for its use.

At the time of publication (June 2012), terlipressin was indicated for the treatment of bleeding from oesophageal varices, with a maximum duration of treatment of 72 hours (3 days). Prescribers should consult the relevant summary of product characteristics. Informed consent for off-label use of terlipressin should be obtained and documented.

- 1.5.2 Offer prophylactic antibiotic therapy at presentation to patients with suspected or confirmed variceal bleeding.

Oesophageal varices

- 1.5.3 Use band ligation in patients with upper gastrointestinal bleeding from oesophageal varices.
- 1.5.4 Consider transjugular intrahepatic portosystemic shunts (TIPS) if bleeding from oesophageal varices is not controlled by band ligation.

Gastric varices

- 1.5.5 Offer endoscopic injection of N-butyl-2-cyanoacrylate to patients with upper gastrointestinal bleeding from gastric varices.
- 1.5.6 Offer TIPS if bleeding from gastric varices is not controlled by endoscopic injection of N-butyl-2-cyanoacrylate.

1.6 Control of bleeding and prevention of re-bleeding in patients on NSAIDs, aspirin or clopidogrel

- 1.6.1 Continue low-dose aspirin for secondary prevention of vascular events in patients with upper gastrointestinal bleeding in whom haemostasis has been achieved.
- 1.6.2 Stop other non-steroidal anti-inflammatory drugs (including cyclooxygenase-2 [COX-2] inhibitors) during the acute phase in patients presenting with upper gastrointestinal bleeding.
- 1.6.3 Discuss the risks and benefits of continuing clopidogrel (or any other thienopyridine antiplatelet agents) in patients with upper gastrointestinal bleeding with the appropriate specialist (for example, a cardiologist or a stroke specialist) and with the patient.

1.7 Primary prophylaxis for acutely ill patients in critical care

- 1.7.1 Offer acid-suppression therapy (H₂-receptor antagonists or proton pump inhibitors) for primary prevention of upper gastrointestinal bleeding in acutely ill patients admitted to critical care. If possible, use the oral form of the drug.

As of September 2023, the use of proton pump inhibitors or H₂-receptor antagonists other than ranitidine and cimetidine for this indication would be off label. Ranitidine is currently unavailable. See the [MHRA drug alert on ranitidine](#) for more information.

- 1.7.2 Review the ongoing need for acid-suppression drugs for primary prevention of upper gastrointestinal bleeding in acutely ill patients when they recover or are discharged from critical care.

1.8 Information and support for patients and carers

1.8.1 Establish good communication between clinical staff and patients and their family and carers at the time of presentation, throughout their time in hospital and following discharge. This should include:

- giving verbal information that is recorded in medical records
- different members of clinical teams providing consistent information
- providing written information where appropriate
- ensuring patients and their families and carers receive consistent information.

Finding more information and committee details

To find out what NICE has said on related topics, including guidance in development, see the [NICE topic page on upper gastrointestinal bleeding](#).

For full details of the evidence and the guideline committee's discussions, see the [full guideline](#). You can also find information about [how the guideline was developed](#), including details of the committee.

NICE has produced [tools and resources to help you put this guideline into practice](#). For general help and advice on putting our guidelines into practice, see [resources to help you put NICE guidance into practice](#).

Update information

August 2016: Information about which proton pump inhibitors and H₂-receptor antagonists are licensed for use and which are classed as off-label has been added to recommendation 1.7.1.

April 2015: Recommendation 1.2.5 has been amended to add the use of cryoprecipitate as further treatment.

Minor changes since publication

September 2023: In the [section on resuscitation and initial management](#), we added links to the [MHRA safety advice on direct-acting oral anticoagulants \(DOACs\)](#) and [NICE's technology appraisal guidance on andexanet alfa for reversing anticoagulation from apixaban or rivaroxaban](#).

We also updated the off-label text on proton pump inhibitors and H₂-receptor antagonists for recommendation 1.7.1, including that ranitidine is currently unavailable.

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