MANAGEMENT OF NONVARICEAL GASTROINTESTINAL BLEEDING:- MANAGEMENT PRINCIPLE

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Introduction :- Gastrointestinal nonvariceal bleeding is a common condition worldwide. Upper gastrointestinal tract bleeding has an estimated annual incidence of 40-150 cases per 100000 population[1-2]. 20% of the all gastrointestinal tract bleeding cases are lower gastrointestinal bleeding(LGIB) [3-5]. Gastrointestinal tract haemorhage(GIH) leads to frequent hospital admission and it has significant morbidity and mortality specially in elderly. Common causes of upper gastrointestinal haemorhages(UGH) are non variceal and it include peptic ulcers 28% - 59% , of them 17% - 37% deudenal ulcer and 11% - 24% Gastric ulcer. Mucosal erosive diseases of the oesophagus / stomach / deudenum is 1%- 47% Mallory-Weiss syndrome 4%-7%. Upper gastrointestinal tract malignancy 2% - 4%. Other diagnosis 2% - 7% and no exact causes identified in 7% - 25% [1-2]. The most common causes in lower gastrointestinal bleeding(LGIB) are diverticular disease, haemorhuides fissure, intlammatrmy bowel disease, carcinoma, large polyphs, radiation euterities, solitary rectal ulcer and angiodysplasia [6].

Presentation

- The most common presentations of intestinal haemorohages are haematemesis melena, hematochezia and positive foecal occult blood test with or without iron deficency and the symptoms of blood loss ; eg light headedness, shortness of breath, easy fatigueability [6].

Risk factor

Risk factors for acute nonvariceal gastrointestinal bleeding are H pylori infection, use of NSAIDs, use of low-dose aspirin, and other antiplatelet medications or oral anticoagulants [7].

Mortality from Acute Upper Gastrointestinal Bleeding

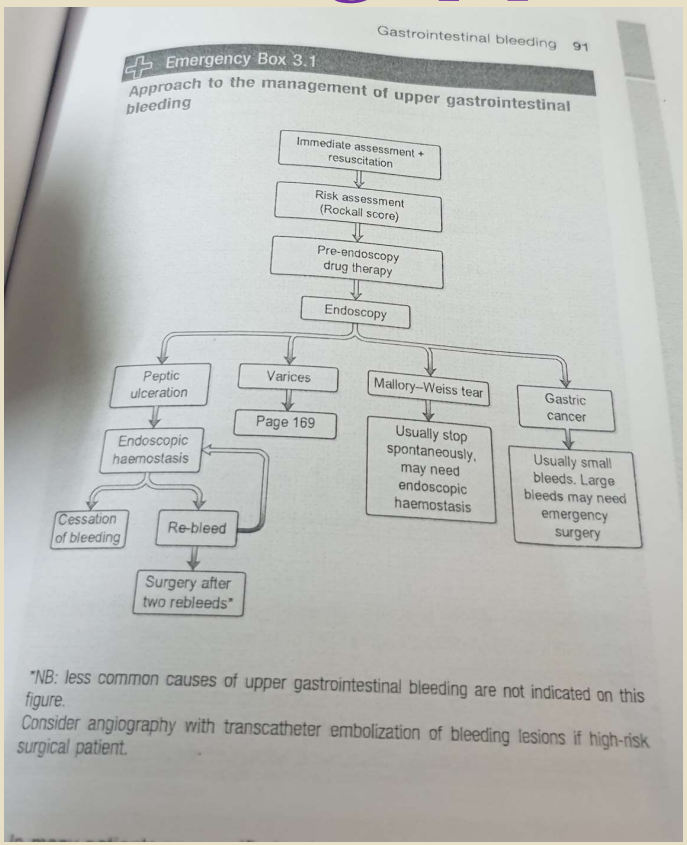
Despite advances in endoscopic hemostasis and adjuvant pharmacologic treatment, the overall mortality from UGIB remains 5% to 14%, although most studies from the united states, Europe, and Asia place that figure closer to 5% [7].

- Risk factor for mortality after nonvariceal UGIB
- Increasing age
- Hemodynamic instability on admission
- Presence of severe and life-threatening comorbid medical conditions [7].

Diagnosis of acute non variceal gastrointestinal bleeding

- After proper history, examination, endoscopy and colonoscopy is the mainstay of diagnosis and management is most cases.

Approach to the management of Upper Gastrointestinal bleeding :[8].



Emergency Box 3.1

Approach to the management of upper gastrointestinal bleeding

*NB: less common causes of upper gastrointestinal bleeding are not indicated on this figure.

Consider angiography with transcatheter embolization of bleeding lesions if high-risk surgical patient.

Initial Assesments
Evaluation and risk stratification

- A focused history, physical examination, and laboratory evaluation should be obtained at the time of patient presentation to assess the severity of bleeding and its possible location and etiology. Initial patient assessment and hemodynamic resuscitation should be performed simultaneously 10.
- ESGE recommends immediate assessment of hemodynemic status in patients who present with acute Upper gastrointestinal hemorrhage, with promt intravascular volume replacement initially using crystalloid fluds if hemodynamic instability exists [9]
- GIB associated with hemodynamic instability may be indicative of an UGIB source, and an upper endoscopy should be performed. A nasogastric aspirate/lavage may be used to assess a possible upper GI source if suspicion of UGIB is moderate.

- GIB associated with hemodynamic instability may be indicative of an UGIB source, and an upper endoscopy should be performed. A nasogastric aspirate/lavage may be used to assess a possible upper GI source if suspicion of UGIB is moderate.
- Risk assessment and stratifi cation should be performed to help distinguish patients at high and low risks of adverse outcomes and assist in patient triage including the timing of Endoscopy, colonoscopy and the level of care [10].
- The glasgow blathford score(GBS) is used pre-endoscopy to identify patients at low risk of requiring intervention. If gbs=0, admission can be avoided – ie Hb>=130g/L (or >=120g/L if 0+); systolic Bp>=110mmHg; pulse <100/min; urea<6.5mmol/L; no melaena or syncope+no past/present liver disease or heart failure [11].
- Initial rockall score is based on pre-endoscopy criteria; these are added to post-endoscopy criteria for final score which predicts risk of rebleeding and death(Age,shock: systolic BP & pulse rate and other comorbidity-Heart failure,ischaemic heart disease, renal failure, liver failure,metastases) [11].

Hemodynamic resuscitation

- Patients with hemodynamic instability and/or suspected ongoing bleeding should receive intravenous fl uid resuscitation with the goal of normalization of blood pressure and heart rate prior to endoscopic evaluation/intervention.
- Packed red blood cells should be transfused to maintain the hemoglobin above 7 g/dl. A threshold of 9 g/dl should be considered in patients with massive bleeding, signifi cant comorbid illness (especially cardiovascular ischemia), or a possible delay in receiving therapeutic interventions [10].

Pre-endoscopy/colonoscopy pharmacologic management

- Offending drugs (NSAID and anticoagulants) and other noxus agent should be stopped, intravenous proton pump inhibitor (PPI) should be started immediately; tramexemic acid, somatostatins and its analogue octeriotide has no beneficial effect in nonvearical bleeding. But intravenous eroythromycin use helps in improved endoscopic visualization in upper gastrointestinal haemorhage (UGIH) Anti helico bactor therapy is recommended in peptic ulcer disease. Broad spectrum antibiotic is also recommended in lower GIB [10].

Management of anticoagulant medications

- Endoscopic hemostasis may be considered in patients with an INR of 1.5–2.5 before or concomitant with the administration of reversal agents. Reversal agents should be considered before endoscopy in patients with an INR >2.5 .
- Platelet transfusion should be considered to maintain a platelet count of 50×10/l in patients with severe bleeding and those requiring endoscopic hemostasis.
- Platelet and plasma transfusions should be considered in patients who receive massive red blood cell transfusions .
- In patients on anticoagulant agents, a multidisciplinary approach (e.g., hematology, cardiology, neurology, and gastroenterology) should be used when deciding whether to discontinue medications or use reversal agents to balance the risk of ongoing bleeding with the risk of thromboembolic events [10].

Endoscopic hemostasis therapy

- Endoscopic therapy should be provided to patients with high-risk endoscopic stigmata of bleeding: active bleeding (spurting and oozing); non-bleeding visible vessel; or adherent clot (cliping, banding or thermal application).
- Diverticular bleeding: through-the-scope endoscopic clips are recommended as clips may be safer in the colon than contact thermal therapy and are generally easier to perform than band ligation, particularly for right-sided colon lesions.

- Angioectasia bleeding: noncontact thermal therapy using argon plasma coagulation is recommended .
- Post-polypectomy bleeding: mechanical (clip) or contact thermal endotherapy, with or without the combined use of dilute epinephrine injection, is recommended .
- Epinephrine injection therapy (1:10,000 or 1:20,000 dilution with saline) can be used to gain initial control of an active bleeding lesion and improve visualization but should be used in combination with a second hemostasis modality including mechanical or contact thermal therapy to achieve defi nitive hemostasis [10].

Non-colonoscopy interventions

- A surgical consultation should be requested in patients with high-risk clinical features and ongoing bleeding. In general, surgery for acute LGIB should be considered after other therapeutic options have failed and should take into consideration the extent and success of prior bleeding control measures, severity and source of bleeding, and the level of comorbid disease. It is important to very carefully localize the source of bleeding whenever possible before surgical resection to avoid continued or recurrent bleeding from an unresected culprit lesion.[10]
- Radiographic interventions should be considered in patients with high-risk clinical features and ongoing bleeding who have a negative upper endoscopy and do not respond adequately to hemodynamic resuscitation efforts and are therefore unlikely to tolerate bowel preparation and urgent colonoscopy.
- If a diagnostic test is desired for localization of the bleeding site before angiography, CT angiography should be considered [10] .

Prevention of recurrent lower gastrointestinal bleeding

- Non-aspirin NSAID use should be avoided in patients with a history of acute LGIB, particularly if secondary to diverticulosis or angioectasia and any ciuse of upper intestine bleeding.
- In patients with established high-risk cardiovascular disease and a history of LGIB, aspirin used for secondary prevention should not be discontinued.
- Aspirin for primary prevention of cardiovascular events should be avoided in most patients with LGIB.

- In patients on dual antiplatelet therapy or monotherapy with non-aspirin antiplatelet agents (thienopyridine), non-aspirin antiplatelet therapy should be resumed as soon as possible and at least within 7 days based on multidisciplinary assessment of cardiovascular and GI risk and the adequacy of endoscopic therapy (as above, aspirin use should not be discontinued). However, dual antiplatelet therapy should not be discontinued in patients with an acute coronary syndrome within the past 90 days or coronary stenting within the past 30 days[10].

Conclusion

- UGIB is predominantly nonvariceal in origin and remains on of the most common despite major advances in the approach to the management of nonvariceal UGIB over the past 2 decades, including prevention of peptic ulcer bleeding, optimal use of endoscopic therapy, and adjuvant high-dose proton pump inhibitors(PPis), it still carries considerable morbidity, mortality, and health economic burden [10].

Refereces

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Thank you