CSL Behring

Symposium CSL Behring

Moderator: Dr. Maria José Colomina

Thursday, May 11, 2023 5.30pm – 6.30pm | Sevilla Room 2

1. GASTROINTESTINAL (GI) BLEEDING: EVALUATION, STABILIZATION, AND RISK FACTORS

Dr. José Aguiar

In 2020, the manuscript *Interventional Algorithm in Gastrointestinal Bleeding-An Expert Consensus Multimodal Approach Based on a Multidisciplinary Team* was published. The document offers a collection of algorithms to manage gastrointestinal bleeding, based on a literature review and the experience of 14 Portuguese experts making up a multidisciplinary working group[1].

The work was published in the *Clinical and Applied Thrombosis/Hemostasis* journal, and the author advocate the adaptation of the recommendations to each individual situation and clinical scenario, to the experience and expertise of the physicians, and to the resources available in the setting.

The document provides a hands-on approach on the following items:

1 ASSESSMENT

Why is the patient bleeding and what can we do to stabilize them and control risk factors?

- **Signs of bleeding**
  - sometimes may be subtle
- **Clinical history**
  - Previous episodes of gastrointestinal bleeding
  - Gastrointestinal disease
  - Gastrointestinal surgery
  - Endoscopy
  - Radiotherapy
  - Other
- **Management of different comorbidities**
  - Cirrhosis, portal hypertension
  - Chronic kidney disease
  - Cardiovascular disease

2 MANAGEMENT OF ANTICOAGULATION/ANTIAGGREGATION

Criteria for discontinuation and/or use of antidotes or FXa inhibitors.

3 RESUSCITATION IN SEVERE BLEEDING

Recommendations are provided on the following aspects:

- **Goals to consider in hemodynamic stabilization**
  - Hemodynamic
  - Therapeutic
  - Laboratory
  - Transfusion
- **Bad prognosis factors**
  - Involve alert signs

4 DIAGNOSTIC/THERAPEUTIC APPROACH DEPENDING ON THE SUSPECTED LOCATION OF THE BLEEDING

- **Upper gastrointestinal tract**
  - Variceal
    - Empirical treatment
    - Endoscopy
  - Non-variceal
    - Endoscopy
    - Empirical treatment
- **Middle gastrointestinal tract**
  - Angiography by tomography
  - Capsule endoscopy
- **Lower gastrointestinal tract**
  - Angiography by tomography
  - Endoscopy of the lower gastrointestinal tract

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2. MANAGEMENT OF COAGULOPATHY IN GI BLEEDING

Dr. Manuela Gomes

Before starting to manage the coagulopathy, the following factors must be considered:

- Concomitant medication
- Comorbidities, with a special focus on liver disease:
  - Whether there is variceal bleeding (cirrhotic patient with portal hypertension) ➡ limiting the administration of fluids so as not to make portal hypertension worse.

Massive bleeding is defined as the volume of blood lost, the pace of bleeding, and the number of transfused blood units. Depending on the severity of the bleeding, the concomitant administration of certain drugs may be necessary, or the administration of several doses[1].

The authors of the consensus document suggest:

1 **TRANSFUSION OF RED BLOOD CELLS** if Hb is < 7 g/dL (< 8 g/dL if there is cardiac disease) with the following target values:

7-9 g/dL

8-10 g/dL in case of cardiac disease

2 **TRANEXAMIC ACID** if there is evidence of fibrinolysis (confirmation by ROTEM)

- In gastrointestinal bleeding, tranexamic acid decreases mortality, but not rebleeding.

3 **FIBRINOGEN** is a deficiency is suspected (confirmation by ROTEM)

- Levels < 1.5-2 g/L and/or loss of ≥ 1-1.5 L and bleeding persists.

4 **PLATELET CONCENTRATE** if there is thrombocytopenia:

- Bleeding in the upper gastrointestinal tract and liver disease with active bleeding, and count < 50 x 109/L or viscoelastic test.

5 **DESMOPRESSIN** if there is active bleeding in patients with uremia and altered kidney function, or in patients with antiplatelet therapy.

6 **PROTHROMBIN COMPLEX / VITAMIN K / FROZEN FRESH PLASMA** if a deficiency in other coagulation factors is suspected (thrombin formation deficiency).

7 **FROZEN FRESH PLASMA** if there is variceal bleeding and suspected FV deficiency.

8 **FROZEN FRESH PLASMA / FXIII** in other types of bleeding and suspected FXIII deficiency (clot instability not related to hyperfibrinolysis).

9 **rFVII** in patients in which the above has been corrected but are still experiencing life-threatening bleeding.

Although unusual, treatment changes may have to be introduced in certain clinical situations, and coagulation must be assessed after each specific therapeutic episode.

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3. PBM IN GI BLEEDING

Dr. Manuel Quintana

The concept of patient *blood management* (PBM) is much wider than optimizing the use of blood products: not only the use of blood products has to be improved (product-centered approach), but also any health-related results (patient-centered approach):

Optimizing bleeding management

Optimizing the management of hemostasis and coagulopathy

Minimizing the contribution of blood products

In case of gastrointestinal bleeding[2]

- An estimated 15-20% of red blood cell transfusions are performed inadequately.
- The characteristics of patients are highly heterogeneous: comorbidities, medication, risk factors, etc.
- These are 'pseudo-surgical' patients, and as such, go through pre-, peri-, and post-operative moments.
- Anemia can be due to a combination of a chronic factor and an acute one (easier to identify).
- The transfusion of large volumes can lead to an increase in portal hypertension and make the bleeding worse.

The document *Indications and hemoglobin thresholds for red blood cell transfusion and iron replacement in adults with gastrointestinal bleeding: An algorithm proposed by gastroenterologists and patient blood management experts*[2] is based on **three clear ideas**:

Need of a protocol to manage anemia and iron deficiency in GI bleeding

Red blood cell transfusion restrictive model (1-unit policy)

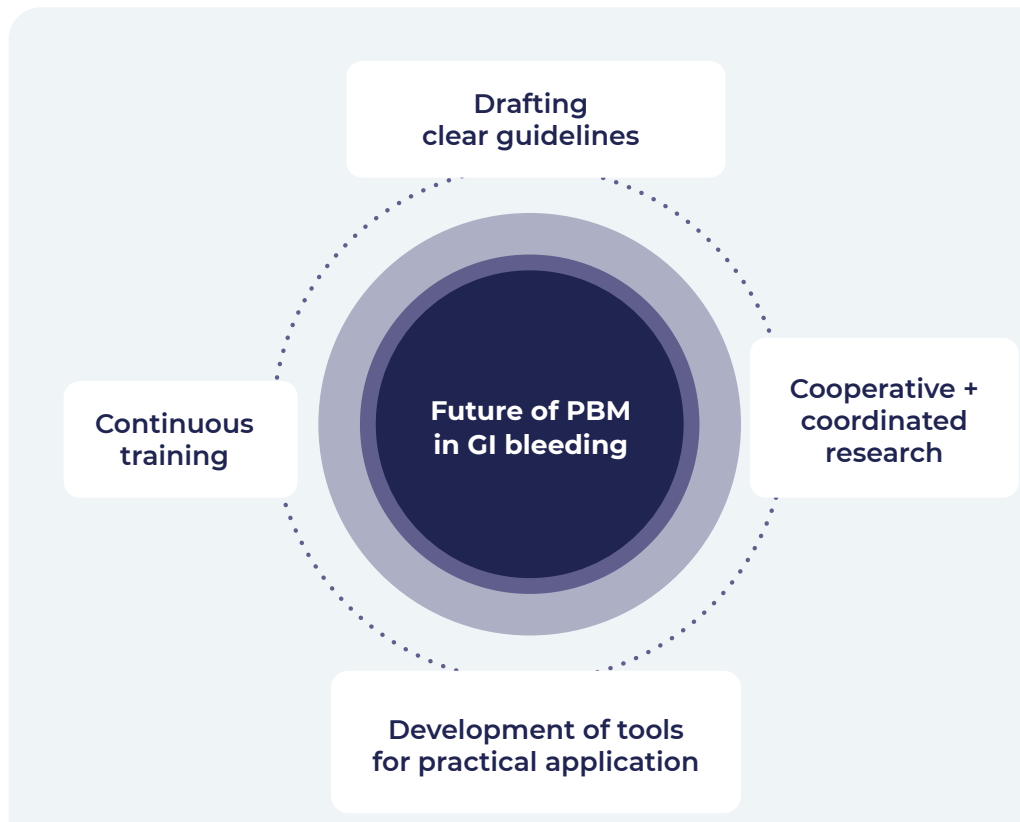
Safe effective use of intravenous iron

Relevant points included in the publication:

- Algorithm om the consideration of risk factors and organic dysfunction. It considers the possibility of a transfusion together with the administration of iron
- Indication of viscoelastic tests in the management of the coagulopathy, exclusively in patients with hemorrhagic shock.
- Use of tranexamic acid, fibrinogen, and prothrombin complex in specific cases in which this is indicated, not as a routine.

Relevant resources for the implementation of a PBM in gastrointestinal bleeding

- Human and material resources: On-duty endoscopist, liver hemodynamic laboratory, massive transfusion protocol, interventional radiology, etc.
- Reference documentation, ideally based on clinical cases.
- Relationship with control and regulatory institutions
- Institutional support



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1. Rodrigues A, Carrilho A, Almeida N, et al (2020) Interventional Algorithm in Gastrointestinal Bleeding-An Expert Consensus Multimodal Approach Based on a Multidisciplinary Team. Clin Appl Thromb Hemost. https://doi.org/10.1177/1076029620931943

2. Montoro M, Cucala M, Lanas Á, et al (2022) Indications and hemoglobin thresholds for red blood cell transfusion and iron replacement in adults with gastrointestinal bleeding: An algorithm proposed by gastroenterologists and patient blood management experts. Front Med. https://doi.org/10.3389/FMED.2022.903739