คำอธิบายเพิ่มเติมตามแผนภูมิ

1. แผนภูมินี้ใช้สำหรับผู้ป่วยที่มาด้วยภาวะเลือดออกในทางเดินอาหารส่วนต้นเฉียบพลัน ที่เกิดภายใน 48 ชั่วโมงเท่านั้น โดยผู้ป่วยอาจมาด้วยอาการอาเจียนเป็นเลือด หรือถ่าย melena

2. Initial assessment and recuscitation

Supportive treatment

- Maintain airway
- History and physical examination for assessment of severity and causes
- NG irrigation
- Fluid resuscitation
- Blood for CBC, cross-match blood group for blood transfusion

3. Risk stratification

3A Low clinical risk factors

3B High clinical risk factors include

- Host factors
  - Age ≥ 60 years
  - Co-morbid conditions e.g. renal failure, cirrhosis, cardiovascular disease, COPD
  - Hemodynamic instability e.g. orthostatic hypotension, pulse rate > 100/min., systolic BP < 100 mm.Hg
- Bleeding character
  - Continuous red blood from NG after irrigation
  - Red blood per rectum
- Patient course
  - Need blood transfusion
  - Rebleeding
  - Hemodynamic instability

Note : In special circumstances, patients' referral may be considered if

- The patient has rare blood group (group AB, Rh negative)
- Blood transfusion is not available

4. Supportive treatment and monitoring

- Supportive treatment as 2
- Oral PPI double dose until endoscopy

5. Elective endoscopy

- Every patient should have endoscopy done if available
- If endoscopy is not available, consider patient's referral

6. Suspected non-variceal bleeding

- Continuous IV infusion or bolus PPI or oral PPI double dose
- If endoscopy is available within 8 hours, PPI may not be needed

Note: - Continuous IV infusion PPI: Omeprazole, Pantoprazole or Esomeprazole 80 mg. IV bolus then infusion drip 8 mg./hour

- Bolus PPI : : Omeprazole, Pantoprazole or Esomeprazole 40 mg. IV twice daily

7. Suspected variceal bleeding

- Clinical signs include
  - Previous documented of esophageal varices or gastric varices
  - Signs of portal hypertension e.g. splenomegaly, ascites, hepatic encephalopathy, dilated superficial vein

- Clinical cirrhosis with thrombocytopenia and/or splenomegaly

- Medication: Somatostatin 250 microgram bolus, followed with somatostatin 250 microgram/hour IV or Octriotide 50 microgram bolus, followed with Octriotide 50 microgram/hour IV
- If endocopy can be performed urgently, somatostatin or its analogue may not be needed

8. Patient should be referred if
   - High risk of bleeding including recurrent bleeding and no endoscopic treatment or no surgical treatment available
   - Rare blood group
   - No blood transfusion available
9. High endoscopic risks
   - Arterial bleeding; spurting, oozing
   - Adherent clot
10. Low endoscopic risks
   - Hematin spot
   - Clean- based ulcer
   - Gastritis
11. Therapeutic endoscopy feasible
   - Defined as ability to do any of therapeutic modalities (even 1 modality)
12. Endoscopic hemostasis
   - Spurting : injection with adrenaline and followed with thermal coagulation or hemoclips
   - Clot adherent : injection with adrenaline then removal of clot, followed with thermal coagulation or hemoclips
13. Consult surgeon as soon as possible or refer if no surgeon available
14. Pharmacologic therapy
   - Drugs : oral or IV infusion PPI is either used depending on patients severity and physician's judgement
15. Antisecretory therapy
   - Drugs : oral or IV infusion PPI is either used depending on patients severity and physician's judgement
   - In NSAID user including low dose ASA
     - PPI is recommended in ongoing NSAIDs use
     - H_2RA is as effective as PPI if NSAIDs are stopped
16. Pharmacologic therapy in variceal bleeding
   - Somatostatin 250 microgram bolus, followed with somatostatin 250 microgram/hour IV or Octriotide 50 microgram bolus, followed with Octriotide 50 microgram/hour IV
   - If the patient already received somatostatin or its analogue before endoscopy, bolus dose is not needed
17. Endoscopic variceal ligation (EVL) or endoscopic injection sclerotherapy (EIS) depends on the experiences of the endoscopist
18. Continue pharmacologic therapy for 5 days
19. Sengstaken Blakemore (SB) tube insertion
20. Hemostatic success means bleeding stopped
   - May consider discharge somatostatin or its analogue if the EVL or EIS is completely performed

21. If hemostasis fail
    - Somatostatin or its analogue should be continued
    - Consider options according to healthcare resources, experiences of the endoscopist and the patient's conditions
        - Consult for surgery or transcutaneous intrahepatic portosystemic shunt (TIPS) with or without temporary temponade with Sengstaken Blakemore tube
        - Temporary temponade with Sengstaken Blakemore tube and re-endoscopy after 24-48 hours

22. If bleeding is still ongoing more than 24-48 hours surgery or TIPS is needed
23. The surgeon should be capable for shunt surgery otherwise refer to the center that has more equipped facilities