**Oral Bleeding Emergency Management**

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**PRESENTATION**

- Patient presents with oral bleeding

**INITIAL EVALUATION**

- Perform resuscitation measures:
  - Provide oxygen support and intubate if needed
  - Direct tamponade for visualized bleed
  - Labs (including type and screen)
  - Establish IV access (2 large bore IV catheters)
  - Fluids
  - Blood transfusion
  - Reverse coagulopathy
  - Rapid history and exam

- Is the patient in respiratory distress and/or hemodynamic instability?
  - Yes
  - No

**DISPOSITION**

- Upper respiratory bleed
  - Direct visualization of bleed in the nose or mouth
  - Choking, coughing, epistaxis, hematemesis

- Lower respiratory bleed
  - SOB, coughing, wheezing
  - Hemoptysis

- Gastrointestinal (GI) bleed
  - Hematemesis
  - Melena

- Unknown source of bleed
  - Consider consultation from Pulmonary, GI, and Thoracic Surgery as clinically indicated

- Discuss goals of care

- Reverse coagulopathy

- Direct tamponade for visualized bleed

- Blood transfusion

- Labs (including type and screen)

- Continue resuscitation measures (ACLS)

- Consult Anesthesia and/or Head and Neck Surgery for possible surgical airway

- Consider transfer to ICU or higher level of care or palliative unit as clinically indicated and as consistent with the patient’s goals of care

**REFERENCE**

1. Bleeding from the oral cavity, nose, and/or stoma site (e.g. tracheostomy or laryngostoma)
2. Respiratory failure: need > 50% FiO2 to maintain oxygen saturation of 90%, increased work of breathing, respiratory rate > 30 breaths/minute
3. Acute hypoxic hypercapnic respiratory failure: PaCO_2_ > 45 mmHg with pH < 7.35
4. Hemodynamic instability: Heart rate > 110 beats/minute, systolic blood pressure < 90 mmHg, inability to protect airway, Glasgow coma scale (GCS) < 13
5. Point of care (POC) hemoglobin and hematocrit (if available), chemistries, PT, PTT, INR, fibrinogen, and d-dimer
6. If patient is actively bleeding and unstable, obtain untyped and uncrossmatched blood. If vitals are stable and patient is not actively bleeding, wait for hemoglobin and hematocrit results then transfuse for hemoglobin < 7 g/dL.
7. Consider tranexamic acid 1g (consider topical or inhalation as necessary); fresh frozen plasma (FFP); platelets; cryoprecipitate; specific reversal agents for fractionated and unfractionated heparin; and/or direct oral anticoagulants (DOACs).
8. Providers may use the Emergency Anticoagulation Reversal orderset in OneConnect or refer to the Anticoagulation Resources for additional references regarding anticoagulation reversal management.
9. Discuss goals of care with patient and primary oncologist, establish code status, and limit invasive interventions as clinically appropriate and as consistent with patient’s goals of care. Reverse DNR status as needed for procedures.
10. Head and Neck sentinel bleed may present as hematemesis; Hematemesis does not always equal GI bleed for Head and Neck patients.
ASSESSMENT

Respiratory source

- Assess for head and neck tumor
- CTA head and neck with contrast
- Consider risk factors for sentinel bleed (e.g. carotid or innominate):
  - Neck surgery
  - Radiation therapy
  - Tracheostomy
  - Laryngectomy
  - Targeted therapy (i.e. VEGF inhibitors)
  - Anticoagulation therapy
- Assess for lung lesions or chest mass
- CT chest with contrast
- Consider risk factors for hemoptosis:
  - Lung cancer
  - Mediastinal mass
  - Tracheal tumor
  - Anticoagulation therapy
  - Lung metastasis
  - Pulmonary embolism
  - Tuberculosis
  - Fungal pneumonia
  - Radiation therapy to the lung or mediastinal area
- Discuss goals of care

VEGF = vascular endothelial growth factor

TREATMENT

Upper airway

- Consult Head and Neck Surgery
  - Head and Neck Surgery may consider consulting Interventional Radiology (IR) for possible embolization
- Provide supplemental oxygen
- Intubate if needed
- Place on lateral decubitus with bleeding side down if known
- Tranexamic acid 1g IV for one dose
- Consult Pulmonary Medicine and speak with the pulmonary interventionist on-call
- Consult IR for embolization
- Consult Thoracic Surgery if patient is unstable, intubated, or recommended by Pulmonary Medicine

Lower airway

- Massive hemoptysis

Massive hemoptysis

DISPOSITION

Yes

Admit patient to ICU

No

Admit patient to ICU or acute care floor or palliative care unit as clinically indicated and as consistent with patient’s goals of care

- For moderate volume of blood, admit to an acute care floor
- For minimal volume of blood, disposition as clinically indicated

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ASSESSMENT

- Complete history and physical (with a rectal exam)
- Assess for esophageal or gastric tumor
- Consider risk factors for GI bleed:
  - PUD/ Gib
  - Portal hypertension (Cirrhosis)
  - Liver with tumor metastasis
  - NSAID and/or anticoagulation therapy
  - Splenic vein thrombosis
  - Known upper GI tumor
  - Portal vein thrombosis
  - Severe retching prior to hematemesis
- Discuss goals of care

TREATMENT

Suspected variceal hemorrhage?

- Yes
  - See Appendix A for suspected variceal bleed management
  - STAT emergent GI consult for management
  - Endoscopy within 12 hours
  - Trend hemoglobin and hematocrit every 6-8 hours

- No
  - Yes
    - See Appendix B for non-variceal bleed management
    - Consult GI for management
    - Consider endoscopy within 24 hours
    - Trend hemoglobin and hematocrit every 6-8 hours
  - No
    - Work up for other diagnosis

DISPOSITION

- Admit patient to ICU or palliative unit as clinically indicated and as consistent with the patient’s goals of care
- Disposition as clinically indicated

PUD/GIB = peptic ulcer disease/gastrointestinal bleed
NSAID = nonsteroidal anti-inflammatory drug

1 Discuss goals of care with patient and primary oncologist, establish code status, and limit invasive interventions as clinically appropriate and as consistent with the patient’s goals of care appropriate. Reverse DNR status as needed for procedures.

2 If patient is unstable and vomiting blood, place STAT urgent GI consult. If the patient is stable, place routine GI consult after the patient is admitted or at the discretion of the inpatient team.
APPENDIX A: Suspected Variceal Bleed Management

Resuscitation
- IV fluids
- Blood product transfusion
  - Transfuse PRBC for a hemoglobin goal of ≥7 g/dL. May consider a higher target if history of cardiac/comorbidities.
  - Transfuse platelet or plasma
  - Avoid over-transfusion due to concern for increasing portal hypertension
- Hold diuretics and beta blockers

Antithrombotic Management
- Consider consulting Benign Hematology
- Hold anticoagulants
- Consider holding anti-platelet agents - weigh thrombotic risk, clinical stability/urgency, and bleeding risk
- Consider continuing aspirin if on dual antiplatelet therapy (DAPT)
- For life-threatening bleeds, consider reversal agents, 4 factor prothrombin complex, vitamin K, FFP, cryoprecipitate, activator factors
- Exercise caution when stopping DAPT with stents, platelet transfusion in patients on anti-platelet agents, and giving vitamin K or reversal agents

Infusions
- Prophylactic antibiotics (e.g. ceftriaxone 1 g IV every 24 hours preferred or fluoroquinolone can be used)
- Octreotide 50 mcg IV for one dose then 50 mcg/hour IV infusion
- Consider Pantoprazole 80 mg IV for one dose then 8 mcg/hour IV infusion

Procedural Management
- Endoscopy within 12 hours
- Interventional Radiology
- Surgery

Post Procedure Management
- Octreotide infusion for at least 72 hours
- Prophylactic antibiotic for 7 days

Post Procedure Anticoagulation Management
- Reinitiate anti-platelet once hemostasis achieved and in discussion with prescribing provider
- Consider resuming anticoagulation after discussion with prescribing provider
APPENDIX B: Non-Variceal Bleed Management

**Resuscitation**
- IV fluids
- Blood product transfusion
  - Transfuse PRBC for a hemoglobin goal of $\geq 7$ g/dL. May consider a higher target if history of cardiac/comorbidities.
  - Transfuse platelet or plasma

**Antithrombotic Management**
- Consider consulting Benign Hematology
- Hold anticoagulants
- Consider holding anti-platelet agents - weigh thrombotic risk, clinical stability/urgency, and bleeding risk
- Consider continuing aspirin if on dual antiplatelet therapy (DAPT)
- For life-threatening bleeds, consider reversal agents, 4 factor prothrombin complex, vitamin K, FFP, cryoprecipitate, activator factors
- Exercise caution when stopping DAPT with stents, platelet transfusion in patients on anti-platelet agents, and giving vitamin K or reversal agents

**Infusions**
- Pantoprazole 80 mg IV for one dose then 8 mcg/hour IV infusion
- Consider Octreotide 50 mcg IV for one dose then 50 mcg/hour IV infusion if uncertain about possibility of variceal bleeding

**Procedural Management**
- Endoscopy within 24 hours
- Interventional Radiology
- Surgery

**Post Procedure Management**
- Continue high dose IV proton pump inhibitor (PPI) for 72 hours in PUD with high risk stigmata
- Transition to oral PPI in PUD with low risk stigmata
- Consider the need for PPI long term

**Post Procedure Anticoagulation Management**
- Reinitialize anti-platelet once hemostasis achieved
- Discuss anti-platelet agents with prescribing provider for high risk of rebleeding or other concerns
- Resume anticoagulation within first week or consider bridge with short acting agent
- Discuss anticoagulant timing with prescribing provider
SUGGESTED READINGS

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