

MEDICAL CENTER

Category: Clinical Practice

Protocol: Adult Stress Ulcer Prophylaxis

Approval Date: 12/17/2019 (CMT)

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Applicable to

VUH Children's DOT VMG Off-site locations VMG VPH Other

Team Members Performing

All faculty & staff Faculty & staff providing direct patient care or contact MD House Staff APRN/PA RN LPN
 Other:

Content Experts

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I. Purpose:

Provide standardization in the prevention of stress ulcers in burn patients. Provide standardization in the care of GI bleeding.

II. Population:

Adult patients admitted to Vanderbilt Regional Burn Center

III. Background

The incidence of gastrointestinal bleeding in critically ill patients is estimated at 1.5-8.5% (1-5). Stress ulceration in the GI tract begins early after a large burn injury has been sustained. Endoscopy performed within 72 hours after a major burn revealed acute mucosal abnormalities in greater than 75% of patients in one study (6).

Risk factors that increase the probability of gastrointestinal hemorrhage include critical illness requiring mechanical ventilation > 48 hours, coagulopathy, organ failure, shock and a prior history of gastrointestinal hemorrhage. GI mucosal atrophy, decreased neutralization of hydrogen ions and impaired mucosal healing are consequences of splanchnic hypoperfusion from burn shock (9).

Potential complications from stress ulcer prophylaxis include pneumonia, Clostridium difficile infection, osteoporotic hip fracture and decreased bioavailability of medications such as clopidogrel (7). Additionally, there is a significant cost burden to the healthcare system due to routine use in patients without indications.

Enteral nutrition improves mucosal blood flow to the GI tract and is protective against GI bleeds. Enteral nutrition has been used in multiple studies as the only source of stress ulcer prophylaxis in patients at a risk for gastrointestinal hemorrhage (7, 8). However, the studies are limited by the lack of randomization and are mostly retrospective in nature.

IV. Indications for Prophylaxis

High Risk: *All patients to receive prophylaxis*

- TBSA > 20%: *prior to complete surgical coverage and excision of burns*
- Mechanical Ventilation > 48 Hours
- Coagulopathy: *platelets < 50,000; INR > 1.5, PTT > 60*
- History of previous GI hemorrhage
- Current outpatient PUD treatment
- Acute CNS injury (SAH/CVA – hemorrhagic or ischemic)
- Sepsis with organ dysfunction
- Vasopressor/inotropic support
- High dose, prolonged steroid therapy

Moderate Risk: Consider Prophylaxis

- Chronic NSAD or aspirin use
- High dose prolonged steroid use
- Burns < 20% TBSA prior to complete surgical coverage and excision of burns

V. Intervention/Treatment:

- A. All burn patients in the high-risk category will receive prophylaxis. Prophylaxis should be strongly considered for patients in the moderate risk category.
- B. First line agent:
 - a. Famotidine 20g PO/PT/IV q12h
- C. Patients on home PPI regimen or with suspected/confirmed upper gastrointestinal bleeding
 - a. Omeprazole PO/PT 50mg 24h
 - b. Pantoprazole IV 40mg q24h
- D. Duration of therapy:

Stress ulcer prophylaxis will continue until patient has < 20% TBSA open (or at the discretion of the ICU attending)

VI. Considerations:

Patient with CrCl < 50mL/min should have dose Famotidine dose adjusted to 20mg PO/PT/IV q24h.

VII. References:

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