

MEDICAL CENTER

Protocol: Adult Burn Stress Ulcer Prophylaxis

Category	Clinical Practice
Protocol Number	BC-A-11
Approval Date	November 1, 2015
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Applicable to	
<input checked="" type="checkbox"/> VUH	<input type="checkbox"/> Children's <input type="checkbox"/> DOT <input type="checkbox"/> VMG Off-site locations <input type="checkbox"/> VMG <input type="checkbox"/> VPH <input type="checkbox"/> Other
Team Members Performing	
<input type="checkbox"/> All faculty & staff	<input checked="" type="checkbox"/> Faculty & staff providing direct patient care or contact
<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> MD <input checked="" type="checkbox"/> House Staff <input checked="" type="checkbox"/> APRN/PA <input checked="" type="checkbox"/> RN <input type="checkbox"/> LPN
Content Experts	
Lead Author:	Stuart McGrane, MBChB Associate Professor of Anesthesiology Division of Critical Care Department of Anesthesiology Medical Director, Burn Intensive Care Unit

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I. Population:

Adult Burn patients

II. Purpose:

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

III. Background

Background: The incidence of gastrointestinal bleeding in critically ill patients is estimated at 1.5 to 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).

Situations that place patients at increased risk of gastrointestinal hemorrhage include critical illness requiring mechanical ventilation > 48 hours, coagulopathy, organ failure, shock, and a prior history of gastrointestinal hemorrhage. The pathogenesis of stress ulceration is thought to be decreased mucosal blood flow with subsequent tissue ischemia (7).

Complications arising from stress ulcer prophylaxis include pneumonia, *Clostridium difficile* infection, osteoporotic hip fracture and decreased bioavailability of medications such as clopidogrel. Additionally, due to poorly defined indications for stress ulcer prophylaxis on patients not in the intensive care unit, there is a significant cost burden to the healthcare system due to routine use.

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 risk for gastrointestinal hemorrhage (7,8,8). 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

- Mechanical Ventilation >48 hours
- TBSA > 20%; prior to complete surgical coverage and excision of burns
- Coagulopathy (Platelets <50,000m³, INR >1.5, PTT >60)
- History of previous GI hemorrhage
- Current outpatient PUD treatment or prophylaxis
- Acute CNS injury (SAH/CVA – hemorrhagic or ischemic)
- Sepsis with organ dysfunction
- Vasopressor/inotropic Rx

MODERATE RISK: CONSIDER PROPHYLAXIS

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

Enteral access (tolerating TF)		Without enteral access (OR not tolerating TF)	
(-) Gross Blood	(+) Gross Blood	(-) Gross Blood	(+) Gross Blood
Famotidine 20mg PT q12h (q24h for CrCl<50ml/min)	Omeprazole suspension 20mg PT q24h	Famotidine 20mg IV q12h (q24h for CrCl<50ml/min)	Esomeprazole 40mg IV 24h

*Consider discontinuation of therapy when patient **BOTH**

- Has no high risk factors (see above) **AND**
- Tolerating goal oral/enteral nutrition

**Use Prilosec PO/PT, or Nexium IV if the patient was taking a PPI at home.

V. References:

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5. Cook DJ, Fuller HD, Guyatt GH, et al. Risk factors for gastrointestinal bleeding in critically ill patients. Canadian Critical Care Trials Group. N Engl J Med 1994;330:377-81.
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7. Hurt RT, Frazier TH, McClave SA, et al. Stress prophylaxis in intensive care unit patients and the role of enteral nutrition. *JPEN J Parenter Enteral Nutr* 2012;36:721-31.
8. Pilkington KB, Wagstaff MJ, Greenwood JE. Prevention of gastrointestinal bleeding due to stress ulceration: a review of current literature. *Anaesth Intensive Care* 2012;40:253-9.