



Factors Affecting Likelihood of Peptic Ulcer Disease as the Etiology of Suspected Upper Gastrointestinal Bleeding



Pavan Paka MD¹, Maan El Halabi MD¹, Anna Tavdy MD¹, Nour Al Khalili MD¹, Suhail Haddadin MD¹, Shabari Shenoy MD¹, Emilia Bagiella PhD², Michael S. Smith MD, MBA¹

¹Department of Medicine, Mount Sinai Morningside & Mount Sinai West Hospitals

²Department of Population Health Science & Policy, Icahn School Of Medicine At Mount Sinai

Background

- Proton Pump Inhibitors (PPIs) are prescribed to prevent and treat peptic ulcer disease (PUD)
- A limited amount of data exists regarding how outpatient PPI use affects the likelihood of finding PUD on endoscopy in patients with concern for an upper gastrointestinal bleed (UGIB)

Aim

- To assess components of the medical history that affect the likelihood of finding a peptic ulcer during endoscopy

Methods

- Retrospective chart review identified all adults undergoing upper endoscopy within 5 days of admission for suspected UGIB at 2 affiliated urban teaching hospitals from 1/2018 to 3/2022
- Demographic, procedural and clinical data were obtained via electronic medical records, including whether a patient was actively taking PPI (defined as once or twice daily use for 30 days or more)
- High risk ulceration was defined as Forrest classification 1a/1b/2a/2b, where endoscopic intervention is recommended
- Descriptive statistics included ANOVA and Chi-square tests
- Multivariate analysis was conducted using polytomous logistic regression

Multi-Variate Analysis Evaluating Potential Risk Factors for PUD in UGIB

Risk Factor	Any PUD Present	High Risk Ulcer (Forrest 1a/1b/2a/2b)	Low Risk Ulcer (Forrest 2c/3)	No Ulcer
Active PPI Use (%)	51 (36%)	13 (9%)	38 (27%)	91 (64%)
No Active PPI Use (%)	346 (47%)	84 (11%)	262 (36%)	386 (53%)
Active PPI Use OR (95% CI)	0.63 (0.43-0.93)	0.64 (0.33-1.23)	0.65 (0.43-0.99)	N/A
Age OR (95% CI)	1.02 (1.01-1.03)	1.04 (1.02-1.05)	1.01 (1.01-1.02)	N/A
Male Gender OR (95% CI)	1.29 (0.97-1.72)	1.73 (1.05-2.82)	1.21 (0.88-1.64)	N/A
Hepatic Disease History OR (95% CI)	0.56 (0.37-0.85)	0.86 (0.46-1.60)	0.46 (0.28-0.73)	N/A

PPI—Proton Pump Inhibitor; OR—Odds Ratio; CI—Confidence Interval; PUD—Peptic Ulcer Disease

Results

- 874 patients met inclusion criteria (mean age 64 years, 60% male)
- Common symptoms: melena (68%), abdominal pain (32%), hematemesis (28%)
- PUD found in 397 patients (45%); 97 (11%) had high risk ulcers
- Outpatient PPI users were 37% less likely to have any ulcer (p<0.0001)
- Risk of finding PUD increased by 2.0% for every year of age (p<0.0001)
- High risk ulcers were more common in males (OR 1.73, 95% CI 1.05-2.82)
- History of hepatic disease decreased the likelihood of finding PUD (OR 0.56, 95% CI 0.37-0.85)

Discussion

- Patients on outpatient PPI were less likely to have PUD when evaluated for suspected UGIB; other etiologies must be considered in order to prevent delays in care due to missed diagnoses
- The “protective” effect of hepatic disease likely stems from liver-related sources of UGIB present in this population; even when PUD is suspected in these patients, the data suggest timely empiric treatment with antibiotics and vasoactive agents is warranted