Title: A year of gastrointestinal bleeding: an epidemiologic study

Authors: Marya, Neil B.1; Jawaid, Salmaan A.1; Gondal, Bilal1; Maranda, Louise2; Marshall, Christopher A.1; Foley, Anne1; Charpentier, Joseph1; Singh, Anupam1; Cave, David R.1

Affiliations: 1. Department of Internal Medicine, University of Massachusetts-Worcester, Worcester, MA, United States.
2. Department of Quantitative Health Sciences, University of Massachusetts-Worcester, Worcester, MA, United States.

Contact Information: Neil B. Marya, neil.marya@umassmemorial.org, phone: 978-855-3279.

Background: For decades the diagnosis and management of gastrointestinal bleeding (GIB) has been based largely on endoscopy. Studying a large cohort of patients presenting to the ED we may find cost-effective alternatives in the management of GIB. We analyzed the epidemiology and initial disposition of all patients who presented to our ED from the perspective of hematemesis versus non-hematemesis, to identify patterns among each cohort’s presentations to aid in this.

Methods: Retrospective analysis of medical records for 338 patients presenting to the UMass ED. Two cohorts were identified: those with hematemesis (G1) or non-hematemesis (G2).

Results: 105 patients presented to the ED with hematemesis (G1), 233 patients presented with non-hematemesis GIB (G2). G1 was younger than G2 (54.4 years vs. 65.6 years, p<0.001). There were more males in G1 vs. G2 (61% vs. 53%, p=0.154). Comorbidities in G1 were liver disease (21%), alcohol abuse (20%), and diabetes (11%). Comorbidities in G2 were coronary artery disease (22%), atrial fibrillation (13.7%), and diverticulosis (8%). More patients in G2 than G1 used Coumadin (23% vs. 7%, p<0.001), anti-platelet agents (12% and 3%, p<0.004), and NSAIDs (40% and 32%, p=0.203). Admission hematocrit was greater in G1 compared to G2 (34.1 vs. 30.0, p<0.001). INR was greater in G2 compared to G1 (1.7 vs. 1.3, p=0.03). BUN was greater in G2 compared to G1 (30.2 vs. 23.6, p=0.021). More patients in G2 were admitted compared to G1 (89.6% vs. 78.1%, p=0.019). More were admitted to the ICU in G1 compared to G2 (46% vs. 38%, p=0.237).

Discussion: This study uses a novel approach that elicits different patterns than the traditional delineation of upper versus lower GIB. These results may lead to new decision-making in patients presenting with GIB, allowing for new diagnostic and management paradigms, resulting in cost-effective care.