# Comparison of Outcomes Between Upper and Lower GI Bleed Patients: A Post-Hoc Analysis of Retrospective Study

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## INTRODUCTION

Traditionally, lower gastrointestinal bleed (LGIB) patients tend to have a benign clinical course compared to those with upper gastrointestinal bleed (UGIB) patients leading to the over-utilization of resources in patients with UGIB. However, recent studies have reported similar clinical outcomes such as readmission and mortality rates, thereby challenging this view. Our study aimed to compare clinical outcomes between the two groups.

## METHODS

This is a post-hoc analysis of a retrospective study on patients admitted with gastrointestinal bleed as their primary diagnosis to higher level of care from March, 2015 - March, 2021. Electronic medical records of patients above 18 years of age were reviewed. The patients were stratified into 2 groups: UGIB and LGIB. The outcomes analyzed included incidence of end organ damage (acute kidney injury and myocardial infarction), treatment modalities (conservative and/or endoscopic intervention), no. of patients requiring intensive care unit (ICU), hospital length of stay (LOS), 30-day mortality, and 90-day readmission rate. Pearson Chi-square and Mann Whitney U were applied to compare groups. p-value greater than 0.05 was considered significant.

## TABLE 1

| | Upper GI Bleed n (%) = 164 (79.2%) | Lower GI Bleed n, (%) = 34 (16.4%) | p-value |
|---|---|---|---|
| Age, mean ± SD (median, IQR) | 65.6 (55,77) | 64.15 (51, 76.3) | ns |
| Gender | | | ns |
| Male | 98 (47.3%) | 25 (12.1%) | |
| Female | 66 (31.9%) | 9 (4.3%) | |
| Race | | | ns |
| Caucasian | 104 (50.2%) | 22 (10.6%) | |
| Black | 23 (11.1%) | 6 (2.9%) | |
| Hispanic | 13 (6.3%) | 2 (1.0%) | |
| Other including unavailable data | 24 (11.6%) | 4 (1.9%) | |
| History of HTN | 92 (44.4%) | 21 (10.1%) | ns |
| History of DM | 39 (18.8%) | 8 (3.9%) | ns |
| History of CAD | 47 (22.7%) | 14 (6.8%) | ns |
| History of NSTEMI/STEMI | 13 (6.3%) | 2 (1.0%) | ns |
| History of CKD | 42 (20.3%) | 8 (3.9%) | ns |
| History of Liver disease | 35 (16.9%) | 7 (3.4%) | ns |
| History of DVT/PE | 16 (7.7%) | 2 (1.0%) | ns |
| History of Smoking | 74 (35.7%) | 17 (8.2%) | ns |
| History of Alcohol use | 76 (36.7%) | 15 (7.2%) | ns |
| History of Illicit Drug use | 7 (3.4%) | 2 (1.0%) | ns |
| Personal history of GI tract cancer | 14 (6.8%) | 6 (2.9%) | ns |
| Family history of GI tract cancer | 4 (1.9%) | 8 (3.9%) | ns |
| Use of NSAIDs | 27 (16.8%) | 3 (9.1%) | ns |
| Use of anticoagulants | 49 (23.9%) | 12 (5.9%) | ns |
| Use of antiplatelets | 25 (27.6%) | 14 (42.4%) | ns |
| Troponin leak | 14 (6.8%) | 3 (1.4%) | ns |
| AKI | 48 (23.2%) | 14 (6.8%) | ns |
| Antibiotics | 32 (15.5%) | 4 (1.9%) | ns |
| pRBC transfusion median (IQR) | 3 (2,4) | 3 (2,4.75) | ns |
| Endoscopic intervention | 81 (39.1%) | 13 (6.3)%) | ns |
| No. of patients requiring ICU | 63 (30.4%) | 8 (3.9%) | ns |
| Intubation during hospitalization | 15 (7.2%) | 0 (0.0%) | ns |
| Time to scope, mean ± SD (median, IQR) | 1.35 ± 1.78 (1.0, 0.75-2.00) | 1.72 ± 1.46 (1.0, 1-2) | ns |
| Alive at 30 days | 142 (68.6%) | 29 (14%) | ns |
| 90-day readmission due to GI Bleed | 39 (18.8%) | 7 (3.4%) | ns |

**Table 1: Comparison of baseline characteristics, medical history, end organ damage (troponin leak and AKI), 30-day mortality, and 90-day readmission rates, between the upper GI bleed and lower GI bleed. NS – None significant.**

## RESULTS

Out of 207 eligible patients, 164 (79.2%) had UGIB, 34 (16.4%) LGIB, and remaining 9 (4.4%) had both. The latter were excluded from the analysis. Table 1 illustrates baseline characteristics and outcomes. We did not observe any significant difference in the conservative treatment (transfusion requirement and antibiotics usage), endoscopic interventions, and time to scope between the two groups ($p > 0.05$). Furthermore, there was no significant difference in no. of patients requiring ICU, hospital LOS, 30-day mortality, and 90-day readmission rates (due to UGIB and LGIB).

## DISCUSSION

Similar clinical outcomes were observed between the UGIB and LGIB patients in our study which is in line with the emerging data. Moreover, no difference was noted in the approach of treatment i.e., conservative and/or endoscopic. Our study also highlights that early endoscopic intervention and higher level of care may not be as necessary in all patients with UGIB.