

## UGI Endoscopy Findings In Patients Admitted With Non Variceal UGI Bleed and Assessing The Outcome

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### Abstract

**Objectives:** To describe the etiology, association factors, co morbid conditions and the most common endoscopic findings associated with Non-variceal Upper Gastro Intestinal Bleeding (UGIB).

**Methods And Materials:** The study was conducted at Coimbatore medical college hospital during the period of January 2016 to May 2016. It is a Retrospective study. The study population included 100 patients who are presented with hematemesis or melena and admitted in medical ward during that period.

**Statistical Analysis:** The collected data was analysed with SPSS 16.0 version. To describe about the data descriptive statistics frequency analysis, percentage analysis, mean, S.D were used. To find the significance difference between for the Independent samples and for multiple comparison one way ANOVA with Tukey's Post Hoc test was used. In both the above statistical tools the probability value P value 0.05 is considered as significant level.

**Results:** Upper gastro intestinal bleed is more common in males than females and affect males predominantly in the age group of 20 to 60 years. NSAID intake and alcohol intake are a well known risk factors for UGIB. Ischemic heart disease is most common comorbid condition in UGIB and it increases the duration of hospital stay. It denotes aspirin is directly associated with UGIB. Gastric inflammation (Erosive mucosal disease) is the most common endoscopic finding in our hospital.

**Conclusion:** Outcome was compared with Rockall Score, it showed positive correlation. Rockall Scoring System is the most useful and effective system in triaging the patients.

**Keywords:** UGI endoscopy , Non-variceal UGI Bleeding

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### I. Introduction

Upper gastrointestinal (UGI) bleeding is a common medical condition than lower gastro intestinal bleeding those results in high morbidity, mortality and medical care costs. The incidence is more common with males than females, and increasing with age<sup>5</sup>. Patients with upper GI bleeding, clinical symptoms varies from hematemesis, malena, syncope or asymptomatic iron-deficiency anemia. Sometimes hematochezia may be due to bleeding from an upper GI source<sup>4</sup> Those who present with massive bleeding or hypotension require treatment in an intensive care unit. They need early and urgent endoscopic evaluation to identify the risk. The patient with low risk of re bleeding without hypotension and no significant co-morbid conditions can be discharged earlier. To assess the risk group, it needs endoscopic evaluation and scoring system. Many scoring systems are available to assess the risk. Rockall scoring system is the most useful and externally validated scoring system in many countries. In this study identifying the risk group by post endoscopic rockall scoring system, we triage the patient into high or low risk. We hope that this study could provide the baseline data from which future guidelines use rockall scoring system to assess the risk groups.

### II. Methodology

Collection of data regarding personal history including smoking habits, alcohol intake, past history of similar complaints, medical history like HT, DM, Drug intake, peptic ulcer history was done. Endoscopy was done for all our study patients. Risk for re bleeding and death was analyzed with post endoscopy Rockall scoring system. Rockall score was taken for risk analysis and triaging the patient into high risk or low risk. Measures of adverse outcome and healthcare resource utilization was done by assessing the duration of hospital stay, re bleeding, requirement of blood transfusion and I.V fluids and mortality rate.

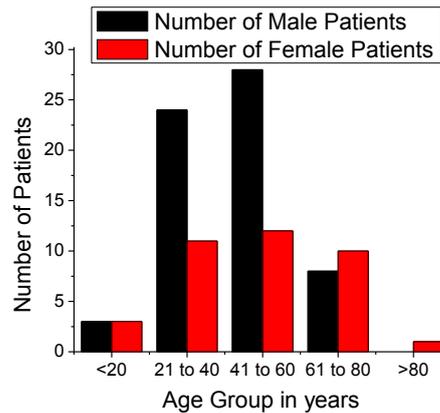
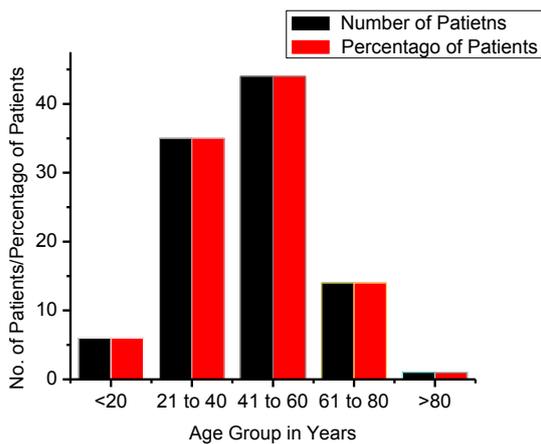
**Statistics:** The collected data was analysed with SPSS 16.0 version. To describe about the data descriptive statistics frequency analysis, percentage analysis, mean, S.D were used. To find the significance difference between for the Independent samples and for multiple comparison one way ANOVA with Tukey's Post Hoc test

was used. In both the above statistical tools the probability value P value 0.05 is considered as significant level. Comparison between two categories were made, using student t-test for continuous variables. To analyze categorical data, chi square test is performed. Analyzed data was preserved in the form of tables and graphs.

**III. Results**

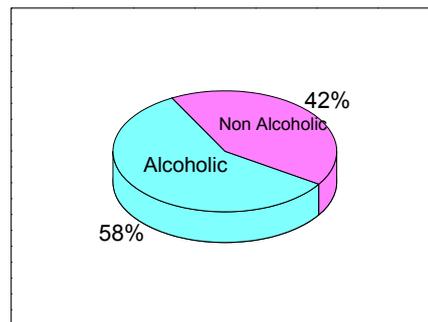
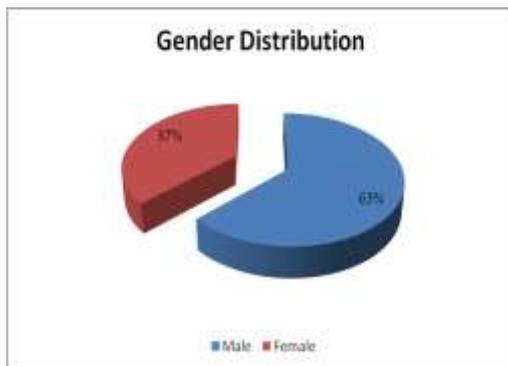
During the study period , a total of 100 patients were included in the study, of age ranging from 16 years to 85 years. The mean age of patients with UGIB included in our study was 50.5 years (range =16 to 85 years). The most common age group affected in our study population was 41 to 60 years (44 patients or 44% ), followed by age group of 21 to 40 years (35 patients or 35%). There was only 15 patients above the age of 60 years constituting 15% of the total number of patients.

**Chart 1**-Age wise distribution of study population **Table 2**-Age group wise distribution of male and female patients

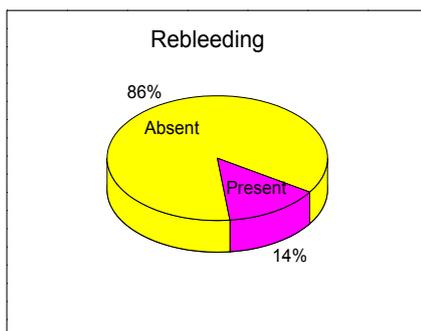


**Gender frequency**

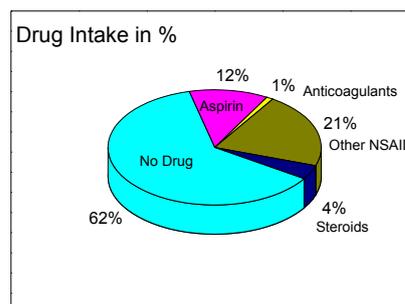
**Percentage of Alcoholics in UGIB**



**Percentage Rebleeding in UGIB**

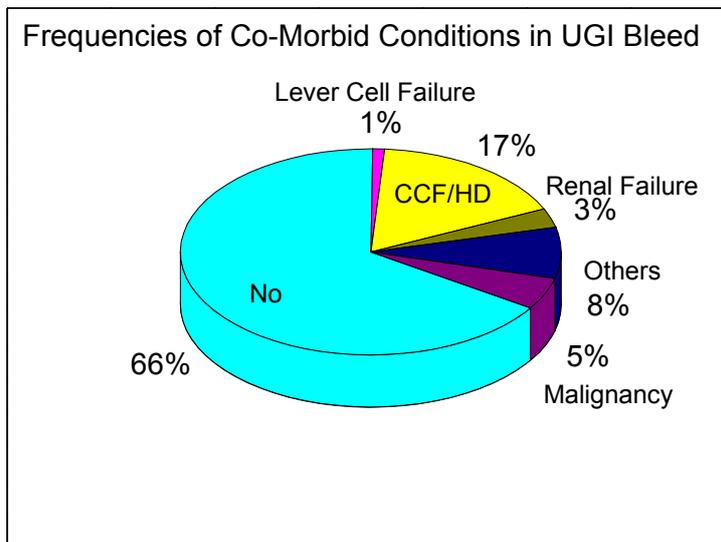


**Percentage of Drug intakers**



**Frequencies of co- morbid conditions in UGIB**

Among the study population 17% of the patients were associated with ischemic heart disease or congestive cardiac failure. Liver cell failure accounts for 1 %, 3 % patients are associated with renal failure, 5 % patients are associated with malignancy. Eight percent of the patients were associated with other disorders like COPD, Systemic sclerosis and etc., There is no associated disorders in 66% of the patients.

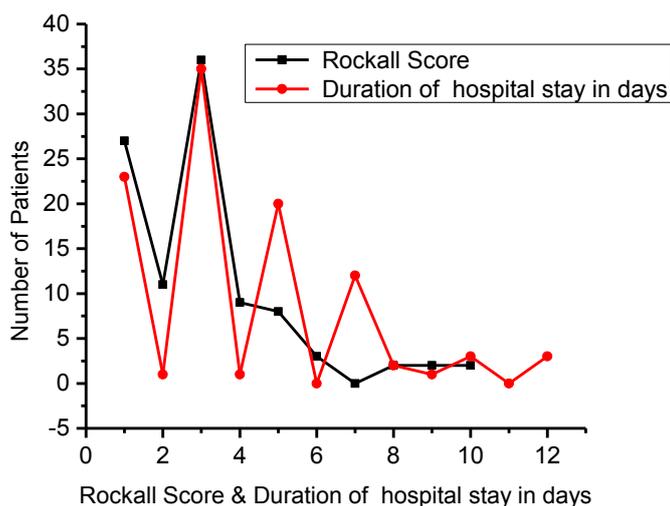


**Endoscopy findings**

In our study ,among 100 subjects ,the most common endoscopic finding is Gastric inflammation. It is followed by Esophageal mucosal tear(Mallory weiss tear) ,Gastric ulcer ,duodenal ulcer and duodenal inflammation,Malignancy ,congenital anomalies like Hiatus hernia,diverticulosis in the descending order. Duodenal ulcer was less common finding than gastric ulcer.Malignancy was found in 5% of the subjects.Combined lesions are more common than the single lesion. Gastic ulcer and duodenal ulcer both combined lesion found in 1% of the subjects.

**Table 6 – Endoscopy Findings**

Sl.no	Endoscopy findings	% of Patients
1	Esophageal Mucosal inflammation	10.0
2	Gastric inflammation	16.0
3	Duodenal Inflammation	1.0
4	Gastric ulcer	15.0
5	Duodenal ulcer	1.0
6	Growth	5.0
7	Gastric inflammation and Duodenal Inflammation	6.0
8	Gastric Inflammation ,Anamolies – Hiatus Hernia, Divertic	3.0
9	Esophageal Mucosal tear, Gastric inflammation, Anamolies	5.0
10	Gastric inflammation, Gastric ulcer	7.0
11	Gastric ulcer, Duodenal ulcer	1.0
12	Esophageal Mucosal tear, Gastric inflammation, Anamolies	2.0
13	Esophageal Mucosal tear, Gastric inflammation	10.0
14	Esophageal Mucosal tear, Duodenal inflammation	2.0
15	Esophageal Mucosal tear, Gastric inflammation	4.0
16	Esophageal Mucosal tear, Gastric inflammation, Duodenal inflammation	4.0
17	Esophageal Mucosal tear, Duodenal inflammation, Gastric ulcer	1.0
18	Duodenal inflammation and Gastric ulcer	2.0
19	Esophageal Mucosal tear, Duodenal ulcer, Gastric ulcer	2.0
20	Esophageal Mucosal tear(Mallory weiss syndrome)	2.0
21	Esophageal Mucosal tear, Gastric ulcer	2.0
22	Esophageal Mucosal tear, Gastric inflammation, Duodenal ulcer	3.0
23	Esophageal Mucosal tear, Gastric inflammation and Gastric ulcer	4.0



Duration of hospital stay correlates with Rockall score ,it has proved statistically.The Rockall score ranged from 1–10 with a mean ( $\pm$ SD) of 3.8 ( $\pm$ 1.6). Increased Rockall score was significantly associated with increased need of blood transfusion ( $P=0.016$ ), length of hospital stay ( $P=0.011$ ) and mortality ( $P=0.000$ ).Rockall score is useful indicator to predict the mortality.Post endoscopic rockall score is accurate and externally validated in many countries.In our study ,shows increase in the score is associated with high mortality.

#### IV. Discussion

There is very little Indian literature on endoscopic findings in UGI bleed and outcome assessment using Rockall Score. This study was done in Karnataka as Upper Gastro Intestinal Bleed and Rockall Score, authors have concluded that Rockall Score is a useful scoring system in triaging the patients and predicting the outcome. In our study, patients are in the age group from 16 years to 85 years. The mean age of patients in our study was 50.5 years, little lower compared to western studies 46,10,48,50. This could be a reflection of the presence of higher older population in the west. Male patients constituted the large proportion in the age group of 20 to 60 years. Female patients were more above the age of 60 years. Overall the male patients are more in number than female patients as in western studies 45, 10 , 48, 49. Risk of NSAIDs The use of NSAID is a well known risk factor associated with UGI Bleed<sup>51, 52</sup>. This is confirmed in our study which shows 21% of the patients are NSAID intakers with UGIB. It was higher compared to other drugs. NSAID is an easily available drug taken by the patient and commonly causes erosive medical disease and peptic ulcer. This was proved in our study. Regulations to discourage the dispensing of NSAID without prescription of a qualified medical practitioner is of paramount importance in reducing the above complications. Alcohol consumption has increased nowadays and it is a well known risk factor for UGI Bleeding<sup>52</sup>. In our study 58% of the patients were alcoholic. Number of alcoholic patients were higher than non alcoholics in our study. We could not find any significant association between abuse of alcohol and specific endoscopic lesions or with a higher mortality rate.Smoking is a well known associated factor with peptic ulcer.In our study, it accounts for 54% and is more associated with gastric ulcer. Common associated medical condition are hypertension and diabetes mellitus. Nowadays these are increasing due to the high prevalence of HT and DM in the general population. In our study, the comorbid conditions most commonly associated were cardiac failure, malignancy and renal failure. Re bleeding rates reported in michigan study is around 20-30% of patients and is associated with a high risk of death <sup>57</sup>. In our study, re bleeding was noted in 14%, a figure which is significantly low compared to that found in previous studies<sup>48, 57</sup>. Early identification and aggressive treatment reduces the rebleeding. Blood pressure was low in 46% of our patients. Hemoglobin level less than 8 gms accounts for 13% of patients and it indicates the requirement of blood transfusion. Platelet count was low (less than 1.5 lakhs), in 11% of the patients could be due to drug induced or concurrent infection.

Our study showed **that** gastric inflammation(Erosive mucosal disease) is the most common endoscopic finding, contradictory to other studies in which peptic ulcer was more common after varices<sup>7, 47, 49</sup>. Peptic ulcer is more common than variceal bleeding in western countries. <sup>10,33,48</sup>. Gastric ulcer is commoner than duodenal ulcer. Peptic ulcer is more commonly due to H.Pylori infection. We could not find out the prevalence of H.Pylori,in which urea breadth test and tissue biopsy is not routinely done in all patients. In agreement with other studies,the majority of the patients in this study were treated medically<sup>47, 48, 55</sup>. About 69% of the

patients were given blood transfusion. All patients are treated with I.V. fluids and I.V. PPI. Proton pump inhibitors reduce the chances of rebleeding. The overall duration of hospital stay in our study was the same, as study done by hyasinta in tanzania reported in previous studies 59. High score in the Rockall scoring system was associated with increase in the duration of hospital stay. The overall mortality rate in our study was 10% which is equal to the studies reported in most western countries<sup>23, 58</sup>. The high mortality rate in our study could be due to associated underlying medical conditions, comorbidities and in patients with hypotension, age > 60 years, higher Rockall Score. Our study showed that increase in the Rockall Score was associated with increased requirement of blood transfusion, increased chance of rebleeding, increase in the duration of hospital stay and high mortality.

## V. Conclusion

Gastric inflammation (Erosive mucosal disease) is the most common endoscopic finding in our hospital. Rockall scoring system is the most useful and effective system in triaging the patients.

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