

# Clinical Profile of Patients Presenting with Upper Gastrointestinal Bleed in a Tertiary Care Hospital from South India

Dr. Varadaraj P Gokak MD, DNB<sup>1</sup>, Dr. Santosh D Hajare MD DM DNB<sup>2</sup>,  
Dr. Amar Patil MD<sup>3</sup>, Dr. Sharad Tukade MD<sup>4</sup>, Dr. Santosh Bellari BHMS<sup>5</sup>

<sup>1</sup>Department of Medical Gastroenterology, Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India

<sup>2</sup>Department of Medical Gastroenterology, Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India

<sup>3</sup>Department of General, Medicine Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India

<sup>4</sup>Postgraduate, Department of General Medicine, Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India

<sup>5</sup>Medical Officer, Department of Medical Gastroenterology, Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India

**Corresponding author:** Dr Santosh D Hajare MD DM DNB (Medical Gastroenterology) Department of General, Medicine Jawaharlal Nehru Medical College, Belagavi 590010, Karnataka, India, Email: drsantoshhajare[at]gmail.com, amar.patil349[at]gmail.com, Tel No: 9448111913

**Abstract:** ***Background and aim:** Bleeding is one of the common medical emergencies in acute upper gastrointestinal bleeding. Geographically, there is a wide variation in the etiology. The current study was an attempt to find out the etiology of patients exhibiting upper gastrointestinal bleeding and to choose the optimal endoscopic therapy. **Methodology:** Retrospective study was carried with a total of 100 patients presenting with upper gastro-intestinal bleeding. Patients unfit for upper gastrointestinal endoscopy were excluded. Data analysis was done using R i386.3.5.1 and Microsoft Excel. **Results:** Majority of the patients were males (87%) and were between 36 and 60 years. On clinical examination, pallor followed by hepatosplenomegaly was observed in most. Based on upper gastrointestinal endoscopy, the most common etiology was esophageal varices followed by gastric and duodenal ulceration. Alcohol-induced liver cirrhosis was most common diagnosis along with portal hypertension. **Conclusion:** Upper gastrointestinal bleeding is broadly prevalent among males, esophageal varices being the most common cause.*

**Keywords:** Gastrointestinal Tract, Haemorrhages, Varices, Hematemesis, melena, Esophageal varices

## 1. Introduction

Upper gastrointestinal bleeding (UGIB) refers to blood loss within the intraluminal gastrointestinal tract from any location between the upper esophagus to the duodenum at the level of the ligament of Treitz [1]. It is a common medical emergency associated with significant morbidity and mortality. Bleeding from the upper gastrointestinal tract is approximately five times more common than lower gastrointestinal tract [2]. Bleeding from the GI tract may present in five ways—hematemesis (vomitus of red blood), melena (black, tarry, foul smelling stool), hematochezia (passage of bright red or maroon blood from rectum), occult GI bleeding (identified in the absence of overt bleeding by special examination of the stool) and presentation of symptoms of blood loss or anemia such as light-headedness, syncope, angina, or dyspnea [2-5].

In the recent years the number of studies exclusively examining epidemiologic patterns of UGIB has been quite limited. However, most epidemiologic studies have shown a decrease in the incidence of all causes of UGIB. Although the incidence of peptic ulcers has remained unchanged. [9]

Therefore, information about etiology is helpful for physicians in order to choose the best treatment techniques and set the ground to control and manage the disease and its

consequences [10, 11] Hence the present study was designed to study the etiological and clinical profile of patients presenting with UGIB.

## 2. Materials and Methods

Retrospective study was conducted in the Department of Medicine and Gastro-enterology of a tertiary care hospital in South India, from January 2018 to October 2019. An overall of 100 patients with UGIB were involved in the study. The sample size was defined by pondering 80% of the average three-year hospital statistics on patients presented with UGIB. The study was approved by the Institution Ethics committee.

Patients were interviewed and demographic data, history of present illness, other comorbid conditions, personal history and diet pattern were recorded. Inclusion criteria included patients with UGIB and  $\geq 18$  years. Patients unfit for UGI endoscopy were excluded. Those who met the choice standards were informed about the type of study and included after obtaining a written informed consent.

Patients were subjected to UGI video endoscopy (Olympus forward viewing flexible video endoscope) and endoscopy was performed in all patients within 24 h of admittance after hemodynamic stabilization. Endoscopy was executed by

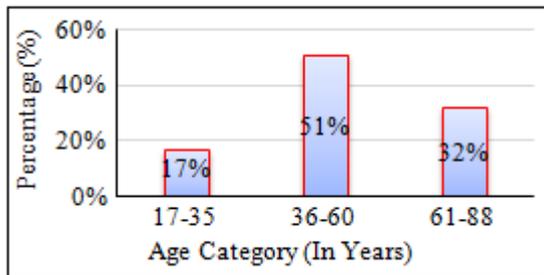
arranging the patients in a left lateral position by standard technique.

**Statistical Analysis**

Data analysis was performed using R i386.3.5.1 and Microsoft Excel. Continuous data represented in the form of mean ± SD and the categorical variables are represented by the frequency table.

**3. Results**

Majority of the patients were in the age group 36-60 years followed by 61-88years.Total 87% of the patients were male.



**Figure 1:** Distribution of subjects by Age category

In Table 1, the most common presentation was hematemesis (73%) followed by melena (57%).

**Table 1:** Number of patients with different clinical complaints

| Presenting Complaints | Total    |
|-----------------------|----------|
| Hematemesis           | 73 (73%) |
| Melena                | 57 (57%) |
| Pain in abdomen       | 43 (43%) |
| Nausea                | 24 (24%) |
| Vomiting              | 17 (17%) |
| Loss of appetite      | 16 (16%) |
| Loss of weight        | 11 (11%) |
| Dyspepsia             | 11 (11%) |
| Jaundice              | 7 (7%)   |
| Heart burns           | 7 (7%)   |
| Haematochezia         | 5 (5%)   |

Of the total, only 34 patients reported history of liver disease followed by 23 patients with diabetic mellitus and 22 patients with hypertension (Table 2). Irrespective of gender, liver disease, DM, and Hypertension were the 3-common past-history in UGIB patients. Overall, 47 patients were alcoholic whereas 16 were smokers and 12 had a habit of chewing tobacco.

**Table 2:** Distribution of subjects by Past History

| Past-History                | Male        | Female     | Total    |
|-----------------------------|-------------|------------|----------|
| Liver disease               | 28 (32.18%) | 6 (46.15%) | 34 (34%) |
| Diabetes mellitus           | 20 (22.99%) | 3 (23.08%) | 23 (23%) |
| Hypertension                | 20 (22.99%) | 2 (15.38%) | 22 (22%) |
| Intake of NSAIS/ aspirin    | 16 (18.39%) | 3 (23.08%) | 19 (19%) |
| Sclerotherapy               | 8 (9.2%)    | 2 (15.38%) | 10 (10%) |
| Acid peptic disease         | 5 (5.75%)   | 0 (0%)     | 5 (5%)   |
| Bleeding diathesis          | 2 (2.3%)    | 1 (7.69%)  | 3 (3%)   |
| Surgery                     | 1 (1.15%)   | 0 (0%)     | 1 (1%)   |
| Family H/o of liver disease | 1 (1.15%)   | 0 (0%)     | 1 (1%)   |

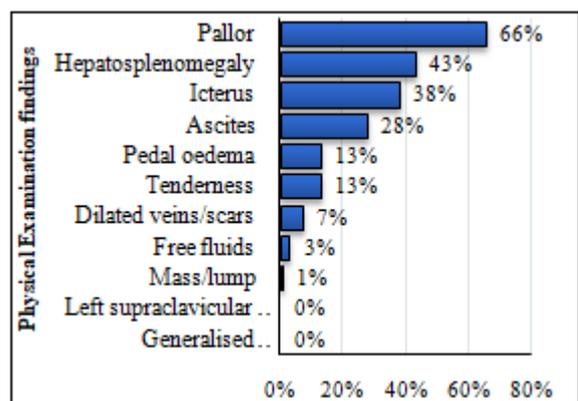
**General physical examination findings in the study:** It was observed that pallor (63%) and hepatosplenomegaly (43%) were the two most common physical examination findings (Figure 2).

**Table 3:** Endoscopic Findings

| UGI scopy                       | Male        | Female     | Total    |
|---------------------------------|-------------|------------|----------|
| Esophagealvarices               | 51 (58.62%) | 8 (61.54%) | 59 (59%) |
| Gastric ulceration              | 7 (8.05%)   | 2 (15.38%) | 9 (9%)   |
| Duodenal ulceration             | 11 (12.64%) | 0 (0%)     | 11 (11%) |
| Erosive gastritis               | 7 (8.05%)   | 3 (23.08%) | 10 (10%) |
| Fundicvarices                   | 4 (4.6%)    | 1 (7.69%)  | 5 (5%)   |
| Mallory Weiss tear              | 4 (4.6%)    | 0 (0%)     | 4 (4%)   |
| Duodenal erosions               | 6 (6.9%)    | 0 (0%)     | 6 (6%)   |
| Esophageal ulcers               | 4 (4.6%)    | 0 (0%)     | 4 (4%)   |
| Dieulafoy lesion                | 1 (1.15%)   | 0 (0%)     | 1 (1%)   |
| Esophagitis, Oesophageal ulcers | 1 (1.15%)   | 0 (0%)     | 1 (1%)   |

**Table 4:** Distribution of subjects by Diagnosis

| Diagnosis  | Male        | Female     | Total    |
|--|-------------|------------|----------|
| Cirrhosis of liver   | 31 (35.63%) | 0          | 31 (31%) |
| Cryptogenic cirrhosis of liver with portal hypertension.                       | 8 (9.2%)    | 1 (7.69%)  | 9 (9%)   |
| Drug induced gastropathy   | 10 (11.49%) | 3 (23.08%) | 13 (13%) |
| Gastric ulcerations  | 6 (6.9%)    | 0          | 6 (6%)   |
| Erosive gastritis  | 5 (5.75%)   | 1 (7.69%)  | 6 (6%)   |
| Cirrhosis of liver secondary to hepatitis B infection with portal hypertension | 2 (2.3%)    | 1 (7.69%)  | 3 (3%)   |
| NCPH   | 7 (8.05%)   | 5 (38.46%) | 12 (12%) |
| Non-alcoholic liver disease with hypertension                                  | 9 (10.34%)  | 0          | 9 (9%)   |
| Mallory weiss tear   | 2 (2.3%)    | 0          | 2 (2%)   |
| Dieulafoy's lesions  | 1 (1.15%)   | 0          | 1 (1%)   |
| Duodenal ulcerations   | 5 (5.75%)   | 2 (15.38%) | 7 (7%)   |
| Gastric ulcerations, Duodenal ulcerations                                      | 1 (1.15%)   | 0          | 1 (1%)   |



**Figure 2:** Distribution of subjects by Physical Examination findings

Esophagealvarices are the most common etiology. A total 11 patients had multiple endoscopy findings (Table 3).

Total 31% of the patients were diagnosed with cirrhosis of liver (Table 4). Drug-induced gastropathy (13%) was the

second most common diagnosis whereas 12% of total patients were diagnosed with NCPH.

#### 4. Discussion

Acute UGIB is one of the widespread medical emergencies that have a hospital mortality of approximately 7% to 10%. In spite of the advances in therapeutic management, mortality rate is unaffected, which may be due to increased longevity, comorbid conditions in the elderly, liver disease, frequent use of non-steroidal anti-inflammatory drugs (NSAID), and anticoagulants [6]. The present study was aimed to study the etiological profile of patients presenting with UGIB.

In this study, male predominance was recorded (87%). A similar study from Rajshahi et al., in 2008 also reported male preponderance with 88% males; male to female ratio was 7.3:1 [7]. Another study by Kashyap R from Shimla in 2005 also reported 78.4% of the subjects being males [8]. In contrast, a study [9] from Tata Main Hospital, Jamshedpur, of the 500 patients, there were 257 males in contrast to 243 female patients. However, the findings of the present study were consistent with the studies from Rajshahi et al, Kashyap R [8] et al and Limboo LB reporting male prevalence. The male preponderance observed in this study could be explained by the presence of various risk factors such as smoking and alcohol consumption.

In this study, 73% of the patients presented with hematemesis. A study from Rajshahi also reported that, most of the patients with UGI hemorrhage presented with both hematemesis and melena (42%) [7]. Rathod JB et al [10] in 2011 reported hematemesis as most common presenting symptom. Variations in presentation among the cases of UGI haemorrhage in the present study compared to other studies may be explained by the fact that hematemesis and melena are dependent upon the rate, amount and site of bleeding.

Total 34% of the patients reported history of liver disease while 19% reported intake of NSAIDs and aspirins. The other comorbid conditions included hypertension (22%), diabetes mellitus (23%). Personal history revealed alcohol consumption in 47%, smoking in 16% and tobacco chewing in 12% of the patients. It has been estimated that more than 30 million people all over the world consume NSAIDs daily [8]. History of NSAIDs was among 37.5% patients, along with intake of aspirin, and other drugs intake within 48 hours, the probable precipitating factors. NSAIDs, aspirin, can cause bleeding ulcer and increase the chances of bleeding from pre-existing ulcers [11]. In 78.4% patients, ulcer-like symptoms were present before onset of UGI bleeding. Laszlo et al. found frequent absence of preceding symptoms in upper GI bleeding patients regardless of NSAIDs application [12].

In the present study based on UGI endoscopy, the most common etiology was esophageal varices noted in more than half of the study population (54%). Few studies showed esophageal varices as a leading cause of bleeding. In contrast, another study done in Pakistan by Bhutta et al.

reported esophageal varices only in 21% [13]. The discrepant result was explained due to various factors like hospital reporting of all the major and minor cases and doing endoscopy in time. In India, Anand et al [14] investigated 408 patients of UGI bleed and found that 45.5% had esophageal varices and another study done by Rao et al [15] showed esophageal varices as the most common cause (51%). In a study by Elghuel A [16] at Tripoli Medical Centre the most common cause of UGIB was peptic ulcer, which represents 37% of all cases, followed by bleeding due to varices in 26.7%, reflux oesophagitis (9.8%), erosions (11.4%) as the most common causes. Rathod JB et al [17] in 2011 showed acute erosive gastritis (34%) as most common cause followed by esophageal varices (24%), Peptic ulcer (22%), Refluxoesophagitis (18%). In a study by Kaviani MJ et al [18] in 2010, gastric ulcer was the most common etiology followed by duodenal ulcer and oesophageal varices. Sugawa C et al [19] reported acute gastric mucosal lesion (26%) as the most common cause followed by gastric ulcer (26%), duodenal ulcer (23%) and oesophageal tear (7%). Lakhwani MN et al [20] in 2010 reported duodenal ulcer (32%) as the most common causes of UGI followed by gastric ulcer (29.7%), erosion (10.9%) and esophageal varices (10.9%).

In the present study, the most common diagnosis was alcohol-induced cirrhosis of liver with portal hypertension noted among 34% of the patients. Portal hypertension is responsible for several sources of upper and lower gastrointestinal bleeding, including esophageal varices, gastric varices, ectopic varices in the small and large intestine, congestive gastropathy, and a higher incidence of peptic ulcer.

#### 5. Conclusion

The present study evaluated the epidemiological data, etiological factor and endoscopic findings for the patients presenting with UGIB. Esophageal varices was the most common endoscopic observation. Hematemesis was the commonest presentation followed by Malena. Common diagnosis was alcohol-diagnosed liver cirrhosis. Drug induced gastropathy was the second most common diagnosis whereas patients were also diagnosed with NCPH.

Acknowledgement: Nil

#### 6. Conflicts of Interest

There are no conflicts of interest

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