

# Etiology of Upper GI Bleeding on Endoscopy

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## Abstract

**Background:** Several circumstances and conditions lead to UGIB. The commonest among them peptic ulcer to an approximation of 50% in cases. The second major cause may be esophageal varices and third is Mallory-Weiss tears. There are also other causes, which may include erosions, tumors and other malformations like arteriovenous. **Methods:** This was an observational retrospective study of all patients referred to endoscopy. The study exclusion criteria include all patients who had repeat endoscopies within one month of the previous endoscopy whereas all the patients with UGIB were included in this study. **Results:** We retrieved data of total 150 patients who had experienced upper gastrointestinal endoscopy during the selected time period covered in the study, March 2015 to February 2016. The mean age of the patients was  $43.3 \pm 13.80$ . 80 (53.3%) of the patients were male and 70 (46.7%) were females. Exploring more into UGIB causes the majority of patients were with esophageal varices 68 (45.3%) with male to female share was 2:1. The second most cause was esophagitis ( $n = 22$ , (14.67%)), the distribution of the cause was similar in male to female. **Conclusion:** We may conclude from our findings that the most common cause of UGIB is esophageal varices in our population.

## Keywords

Upper Gastrointestinal Endoscopy, Esophageal Varices, Upper Gastrointestinal Bleeding, Peptic Ulcer

## 1. Introduction

The emergency medical condition like upper gastrointestinal bleeding (UGIB) is

communal diseases that compel hospitalization and may fallout in high patient morbidity [1]. To one of the published studies, it is shown that the incidence is 100 per 10,000 annually for UGIB. The published mortality rates range 6% to 10% among patients with UGIB. The bleeding from upper gastrointestinal (UGI) is about 4 times more to the bleeding from lower gastrointestinal [2]. Several circumstances and conditions lead to UGIB. The commonest among them peptic ulcer to an approximation of 50% in cases. The second major cause may be esophageal varices and third is mallory-weis tears. There are also other causes which may includes erosins, tumors and other malformations like arteriovenous [3]. For hemodynamic stability, it is essential to evaluate the patients with UGIB. In acute UGIB, an early aggressive restoration of hemodynamically instable patient can lead to reduction over mortality [4]. It is always smart to identify the source of bleeding and then quick administration via therapy may lead to faster recovery [5]. In this regard the most preferred, accurate, less complicated and potential therapy for UGIB is the upper gastrointestinal endoscopy [3] [4] [5] [6]. The primary objective of the study was to determine the etiology endoscopic finding among UGIB patients.

## 2. Material and Methods

This was an observational retrospective study of all patients referred to endoscopy unit of Services Hospital with upper gastrointestinal bleeding history. The study period was of one four month starting from March 2017. Whereas the information retrieved of all patients registered in gastrointestinal department from March 2015 to February 2016. The study exclusion criteria include all patients who had repeat endoscopies within one month of the previous endoscopy whereas all the patients with UGIB were included in this study. All the information regarding demographic profile, clinical features, pathology, imaging, history of UGIB and endoscopic findings were retrieved via hospital electronic registry system. All the standard Operating Procedures (SOP) was practiced during the clinical, pathological tests when they were initially done for patients. We confirm the procedures before extracting the patient's data. An ethical consideration was taken in to account by taking approval Hospital ethical Committee.

### Statistical Analysis

All the collected data was formalized electronically & analyzed later by using Microsoft Excel version 10 and SPSS version 19. Descriptive statistics were applied to calculate mean and standard deviation. Frequency distribution and percentages were calculated for qualitative variables whereas the Difference in mean assessed by using sample t-test. Over all a *P* values less than 0.05 was considered statistically significant.

## 3. Results

We retrieved data of total 150 patients who had experienced UGI endoscopy

during the selected time period covered in the study, March 2015 to February 2016. The mean age of the patients was  $43.3 \pm 13.80$ . 80 (53.3%) of the patients were male and 70 (46.7%) were females. The age and gender distribution was given in **Table 1**.

Exploring more into UGIB causes the majority of patients were with esophageal varices 68 (45.3%) with male to female share was 2:1. The second most cause was esophagitis ( $n = 22$ , (14.67%)), the distribution of the cause was similar in male to female. Other causes involved can be summaries in **Table 2**.

#### 4. Discussion

The study was conducted to determine the endoscopic findings in patients presenting with UGIB and its frequency among these patients. We observed in our study that the mean age of patient who had UGIB was 43.3. This is incorporated with other Studies available especially Africa [7] [8]. But this age is lower as compared to the developed countries like US. This might be due to the older population like in Europe. Our study findings report the proportion of male to

**Table 1.** Age and gender wise distribution of UGIB patients.

Age	n	%
10 - 20	30	20%
21 - 30	40	27%
31 - 40	72	48%
Above 40	8	5%
<b>Gender</b>		
Male	80	53%
Female	70	47%

**Table 2.** Summary of endoscopic findings of patients with UGIB.

Endoscopic findings	n	%
Esophageal varices	68	45%
Esophagitis	22	15%
Gastritis	15	10%
Duodenal ulcer	8	5%
Gastroduodenitis	6	4%
Gastric ulcer	4	3%
Hiatus hernia	3	2%
Cancer stomach	2	1%
Duodenitis	1	1%
Gastric polyp	1	1%
Normal	20	13%

female patients with UGIB is almost similar as in comparison to other published studies [9] [10] [11]. This might be due to the endemic nature of hepatitis in our population, Because the prevalence of hepatitis B and C prevalence in Pakistan general population is 2.4% and 3% respectively. Another finding of our study was the major cause of UGIB in endoscopy. The male to female ratio is greater in our population. Similar finding were reported by other published studies [7] [8] [12] [13] [19]. But these results are contrary to the western populations where the most common cause for UGIB is peptic ulcer [5] [6] [8] [9]. This may be due to the chronic liver disease, which is more prevalent in the population, and also due to the endemic nature of HBV infections. Our results also report that other causes like gastritis, esophagitis, duodentitis and gastroduodenitis combinely named as Erosive Mucosal disease (EMD) were also commonest among UGIB patients. It is evident that the UGIB in patient may have multiple etiologies *i.e.* in this study gastritis and duodentitis, but we may recommend to write the diagnosis as gastroduodenitis. Studies from West and Africa confirms our findings [10] [11] [12] [13] [14]. Another finding of our study, the peptic ulcer disease was the third commonest in our population, though its prevalence is very high in Europe [3] [10] [12] [15] [16]. To our population, duodenal ulcer is more common than gastric ulcer. Our study reported traces of esophageal carcinoma, gastric cancer, hiatus hernia. In Afghanistan esophageal carcinoma reported common cause of UGIB, it may be due to the high esophageal cancer incidence in the Iran-China belt [17]. We observed in our study that plenty of patients have no source of bleeding, this finding is incorporated with the studies in India and Africa [7] [8] [18]. This finding is contradictory to some of western world publications [10]. One of the probable reason the patients tends to have endoscopy as earliest following UGIB. We also observed in our study that the time interval between the bleeding outbreak and endoscopy impacts its diagnosis.

## 5. Conclusion

We may conclude from our findings that the most common cause of UGIB is esophageal varices in our population.

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