

Endoscopic Determination of Various Causes of Upper Gastrointestinal Bleeding

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ABSTRACT

Aim: To determine the various causes of upper gastrointestinal bleeding through endoscopic method.

Study design: Descriptive observational study

Place and duration of study: Department of Medicine, SKZB, CMH Muzaffarabad from 1st January 2021 to 30th June 2022.

Methodology: Ninety patients of upper gastrointestinal bleeding which were clinically and endoscopically confirmed of their state and between <25 to >66 years of age were included. Endoscopy procedure was conducted using lignocaine gargling as analgesia. Grading system was utilized for scoring endoscopy results as Grade I to IV.

Results: There were 52 (57.8%) males and 38(42.2%) females. The mean age of the patients was 48.5±3.3 years. It was also seen that majority of the males as well as females had esophageal varices and peptic ulcer as the main cause of UGB followed by esophagitis and gastritis.

Conclusion: Esophageal varices and peptic ulcer followed by esophagitis and gastritis are the main cause of upper gastrointestinal bleeding.

Key words: Causes, Upper gastrointestinal bleeding, Endoscopic method

INTRODUCTION

Upper gastrointestinal-bleed (UGB) is termed as bleed due to the reason of proximal to the treats ligament.¹ It is reported to be common cause mortality and requires emergent treatments and management for better survival of the patient. The mortality prevalence which has been reported with UGB ranges from 5 to 15%. The incidence of UGB has been reported as 50 to 150 cases within 100,000²⁻⁴.

Upper gastrointestinal-bleed has been reported in makes more than females, although the rate of mortality is same in both genders. Patients suffering from UGB can represent insignificant bleeding to a level of severe hemorrhagic critical condition. Within the cases there are almost 80% such where bleeding ceases spontaneously while in other 20% or so the presentation of GI bleeding is critical and requires intensive care and resuscitation³⁻⁶.

Due to variability in the treatment as well as logarithm, mechanism and prognosis of UGB, it has been classified as varices or as non varices. In cases where cirrhosis formation is observed varices bleeding is observed in 70% of the cases. Varices cases have been reported with high mortality than non varices. The scenarios where non varices cases are observed includes peptic ulcers, esophagitis, gastritis, malignancies as well as Mallory-Weiss tears⁷⁻⁹.

Endoscopy has been recommended as the safest procedure for the diagnosis of UGB and its reasoning. The sensitivity profile of UGB has been maintained as up to 92-98% in various researchers with specificity as 30 to 100 percent¹⁰⁻¹².

The present study was performed for identifying various causes of UGB through endoscopic approach. The results of this study would better determine the reasoning of UGB and upgrades the health outcomes in accordance with better and early management and treatment strategies of UGB.

MATERIALS AND METHODS

This descriptive observational based study after IRB permission was performed at Department of Medicine, SKZB, CMH Muzaffarabad from 1st January 2021 to 30th June 2022. There were 90 patients of UGB which were clinically and endoscopically confirmed of their state. The demographic details of the patients as well as previous history were documented. Patients diagnosed with viral hepatitis were not included in this study. A written informed consent was taken from each patient for their participation. Majority

of the patient underwent endoscopy within first 24 hours of third UGB complain. Biopsy sampling was also performed for excluding the lesion suspicion in all the patients. Endoscopy procedure was conducted using lignocaine gargling as analgesia. Grading system was utilized for scoring endoscopy results as Grade I to IV. In cases with peptic ulcers with the application of FORREST classification was made where FI was considered for active bleeding status while FII was stigmata of current hemorrhagic and FIII presented lesions which were without active bleed. Clinical symptoms as erosion with dark brown color in multiples times were termed as LOS Angeles classification. All the reasoning for the UGB were recorded and documented in black and white. The data was analyzed using SPSS-26.0.

RESULTS

There were 52(57.8%) males and 38(42.2%) females and mean age of the patients was 48.5±3.3 years. Most of the males and females were observed to be within the age group of 47-66 years (Table 1).

It was seen that majority of the males as well as females had esophageal varices as the main cause of UGB. This was followed with gastritis and esophagitis in both genders. Only males were reported with esophageal carcinoma cases while duodenal carcinoma was only presented in female cases (Fig. 1).

The other type of determinant post endoscopy showed highest percentage of peptic ulcer followed by gastroduodenitis among other causes. There were zero male and 08 female cases which could not be determined for their cause of UGB through endoscopic procedure (Table 2).

Table 1: Distribution of age according to genders (n=90)

Age (years)	Males(n=52)	Females(n=32)	Total
<25	4 (7.7%)	2 (5.2%)	6 (6.66%)
26-46	18 (34.6%)	15 (39.5%)	33 (36.6%)
47-66	23 (44.2%)	17 (44.7%)	40 (44.4%)
>66	7 (13.46%)	4 (10.5%)	11 (12.2%)

Table 2: Distribution of gender wise endoscopic findings

Endoscopy findings	Females	Males	Total
Esophageal varices	16 (42.10%)	20(38.46%)	36 (40%)
Gastro-duodenitis	4 (10.5%)	5 (9.61%)	9(6.6%)
Peptic ulcer	14(26.9%)	10 (26.31%)	24 (26.6%)
Hiatus hernia	2 (3.8%)	-	3 (3.3%)
Cancer stomach	1 (2.63%)	2 (3.84%)	3 (3.3%)
Gastric polyp	-	1	1 (1.1%)
Un identified	-	8 (21.05%)	8 (8.8%)

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DISCUSSION

The present study highlighted that esophageal varices was the most common determinant of endoscopic findings in upper gastrointestinal bleeding patients. It accounted for more than 20-25% of the cases. A study from Africa has reported even higher percentage of esophageal varices in cases with 40.6% suffering from this condition¹³. An obvious gender variance is observed in the UGB cases as reported in earlier studies as well where males verses females was found to be 2:1 in esophageal varices cases.¹³ Esophageal varices as the main cause of the UGB has also been reported in various other researches emphasizing on its significance in patients which are presented in the emergency with upper gastrointestinal related bleeding^{14,15}.

There is various literature presented on the success of endoscopic method not only in determining the reason of the UGB but also in treatment of various types of UGB causes. This includes esophageal varices as well as peptic ulcer. Peptic ulcer has been found to occur in more high prevalence with 94% of the cases which could be treated through endoscopic method.¹⁶ There has been reports where rebreeding and failure in proper determination of the UGB has not been accomplished through endoscopic procedure.^{17,18} In the current research as well there were 8.8% such cases of females where endoscopic determination of the UGB causes was not possible.

Many reasons interfere in the proper determination of UGB which includes age, hemoglobin levels, heart rate and location or site of bleed. Variceal bleeding has also been reported to be affected by the portal-hypertension.¹⁹ The pressure gradient formed by the hepatic-venous is highly significant. In most of the cases where variceal bleeding is observed the risk of cirrhosis may be considered with concern as it has been reported as the main lead of esophageal varices and other variceal bleedings.²⁰

CONCLUSION

Esophageal varices, peptic ulcers followed by esophagitis and gastritis are the main cause of upper gastrointestinal bleeding. Endoscopic procedure is an efficient procedure for determining upper gastrointestinal bleeding.

Conflict of interest: Nil

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