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Gastroenterology

PROFILE OF UPPER GASTROINTESTINAL BLEEDING AT A TERTIARY CARE HOSPITAL

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ABSTRACT Upper gastrointestinal bleeding (UGIB) is a common medical emergency associated with significant morbidity and mortality. The presentation of bleeding depends on the amount and location of hemorrhage and the endoscopic profile varies according to different etiology and carries a considerable economic burden on health care system. At present, there is a paucity of data on clinical and endoscopic profile of patients of UGIB and their risk factors for mortality from India and particularly from this region. Therefore, this study was planned with an aim to identify clinical and endoscopic profile of patients with UGIB attending the Emergency Department of our hospital. There were 200 patients with UGIB and the mean age of patients was 43.4 ± 179. Majority of them were males127(63.5%) and male to female ratio was 1.7:1. The most common cause of UGIB was peptic ulcer-related bleed and was seen in 48.5% patients, followed by esophageal mucosal disease(EMD) in 18.5%,esophageal varices in 14.5%patients, gastric malignancy accounted for 6.5%, Mallory–Weiss tear was seen in 1.5%, of cases, GAVE and Deulofeu's lesion was responsible for bleed in 01% cases each.

KEYWORDS : Upper gastrointestinal bleed, peptic ulcer, Endoscopy

INTRODUCTION:

Upper gastrointestinal bleeding (UGIB) is defined as bleeding from a source in the Gastrointestinal tract proximal to the ligament of Treitz. (1) Patients with acute upper gastrointestinal bleeding commonly present with hematemesis (vomiting of blood or coffee-ground-like material) and/or melena (black, tarry stools). Acute gastrointestinal (GI) bleeding is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization.(2,3) Bleeding from the upper GI tract may present as hematemesis, melena, hematochezia, occult GI bleed and Anemia. The UGIB presents with wide spectrum of clinical severity and with variable clinical symptoms and signs ranging from simple pain abdomen to a syncope.(4) The etiology of UGIB varies in different geographical regions depending on the demographic and socioeconomic characters of the population.(5) The common causes include duodenal and gastric ulcer, gastric erosions. Mallory Weiss syndrome, portal varices and less common esophagitis, neoplasm and angiodysplasia. (6) The initial evaluation of patients with acute upper GI bleeding involves an assessment of hemodynamic stability and resuscitation. Diagnostic studies (usually endoscopy) follows, with the goal of both diagnosis, and when possible, treatment of the specific disorder. These different etiologies have changed over time with the changes in the diagnostic methods and the therapy.

The incidence of UGIB is approximately 100 cases per 100,000 population per year.(7) Bleeding from the upper GI tract is approximately 4 times more common than bleeding from the lower GI tract and is a major cause of morbidity and mortality.

MATERIAL AND METHODS:

This was a prospective study performed over a period of two years from August 2017 to August 2019 in the department of Emergency Medicine and medical gastroenterology SKIMS Soura, Kashmir India. The study was performed upon patients who presented in the medical emergency with acute upper gastrointestinal bleeding. A total of 200 patients were included in the study. Information about demographic data and detailed clinical history like history of acid peptic disease, presence of cirrhosis, cause of cirrhosis, NSAID use, regular ingestion of low dose aspirin, previous history of acute UGI bleeding and its cause, history of comorbidities was also obtained. Detailed Physical examination of all patients was performed. Baseline investigations (CBC, KFT, LFT, Coaglogram, USG Abdomen) were performed. Upper GI endoscopy was performed within 24 hours of admission and patients were followed for 15 days. Patients were resuscitated in medical emergency with blood transfusion or fluids when and where it was needed. Statistical analysis of data was done by utilizing SPSS 20 software. Continuous variables were expressed as mean ± SD and categorical variables were summarized as frequencies and percentages.

RESULTS:

The study population comprised of 200 patients of UGI Bleed who presented to the Emergency Department of SKIMS Soura Srinagar. There were 127 males and 73 females with a male to female ratio of 1.7**:**1. The mean age of study population was 43.5 ±17.79. Clinical presentation of patients (table 01). Melena was the most common clinical presentation and was found in 112(56%) of the patients which was followed by hematemesis 48 (24%). Hematemesis + melena was present in 17 (8.5%), syncope with (melena or hematemesis) in14 (07%) and pain abdomen with melena or hematemesis in 09 (4.5%) of patients. The major comorbidities observed in the patients included , history of NSAID intake was present in 6.5%, use of anti-platelets drugs was observed in 3% while as 1% of patients were on anticoagulants, Smokers were 48 (24%) and only 01 (0.5%) was alcoholic. Endoscopic findings are described in table 02. Peptic ulcer was seen in 48.5%, EMD in 18.5%,esophageal Varices in 14.4%,Gastric Malignancy in 6.5%, No visible source in 4%, Gastric polyp in 2%, Mallory Weiss syndrome and GIST in 1.5% each, Dieulafou,s ulcer and GAVE in 1% each

Table 1: Epidemiological and clinical features of patients presenting with upper gastrointestinal bleeding

Parameter	No of patients	%age
Males	127	63.5%
Females	73	36.5%
Smoking	48	24.0
NSAID	13	6.5
Alcoholism	1	0.5
Melena	112	56
Hematemesis	48	24
Hematemesis Melena	17	8.5%
Syncope+hematemesis or Melena)	14	7

Table 02: Endoscopic diagnosis of patients with upper GI bleed

Final Diagnosis	No of patients	%age
Peptic Ulcer	97	48.5
EMD	37	18.5
Variceal Bleed	29	14.5
UGI Malignancy	13	6.5
No source located	9	4.5
Gastric Polyp	4	2.0
GIST	3	1.5
Mallory Weiss tear	3	1.5
Dieulafoy's lesion	2	1.0
GAVE	2	1.0

Angiodysplasia	1	0.5
Total	200	100

DISCUSSION:

UGI bleed is one of the common, significant & potentially serious problem encountered in medical emergencies of hospitals. The etiology of upper gastrointestinal bleed (UGIB) varies in different geographical regions and is influenced by the co morbid factors also. Despite developments in diagnosis and treatment, mortality and morbidity have continued to remain more or less constant. UGIB is four times as common as LGIB. We prospectively studied 200 patients with UGIB at Sher-I-Kashmir Institute of Medical Sciences , Srinagar Kashmir. This hospital is one of the tertiary care referral centers, in union territory of Jammu & Kashmir North India. Clinical assessment is rather poor at predicting the source of upper GI bleeding; physicians are correct in only 40% of cases. In spite of advances like push enteroscopy, angiography, intraoperative endoscopy and nuclear scan upper GI endoscopy has remained the prime modality of assessment of UGIB. The diagnostic yield of upper GI endoscopy has a sensitivity and specificity of 92% and 100% respectively. Mean age of the patients was 43.5 ± 17.79 years. There were 127 (63.5%) males and 73 (36.5%) females with a male to female ratio of 1.7:1. In our study the majority of patients with UGIB were males 127(63.5%) this is consistent with the observation of higher incidence of UGIB in males of 84.5%, 85.5% and 70 % by others.(9,10,) The UGI bleeding is categorized as variceal and non- variceal bleeding. Variceal bleeding results mostly from complications of end stage liver disease in our context, and non-variceal. Bleeding is associated with peptic ulcer, erosions, Mallory Weiss tear, neoplasm, esophagitis, Dieulafoy's lesion, etc. They are diagnosed by endoscopy and are dealt with individually. Clinical assessment is rather poor at predicting the source of upper GI bleeding; physicians are correct in only 40% of cases. Hematemesis is defined as vomiting of blood or clots (11) It includes vomiting of bright red blood or coffee ground material that suggests bleeding that stopped some time ago.(12) It is a common presentation of UGIB vomiting of bright red blood which suggests recent or on going bleeding and dark material Melena is defined as passage of black tarry stools confirmed subjectively by medical staff or by digital rectal examination. (12) The commonest clinical presentation was hematemesis and melena in over half of the patients like other studies from high altitude. Melena was the commonest presentation in and was observed in(56%) followed by hematemesis in (24%) which is consistent with other studies ((13,14,15). In a study by Minakari M and colleagues in AL Zahra referral hospital (in Isfahan) during 2010-2015, a total 4747 patients were studied of which 69.2% were males with a mean age of (55.46□±□21.98□years). Peptic ulcer was seen as the main reason for UGIB in 48.5% while others have observed peptic ulcer in(42.4%) and 62% of patients with upper gastrointestinal bleed. (10,15)Out of 200 studied patients, 24 patients had history of smoking while 01(0.5%) was alcoholic. Alcoholism has been found in large number of patients 52% in other study. (10) History of use of NSAIDS was observed in 6.5% patients. Etiological spectrum of UGIB has been variable in the studies from India with some studies showing variceal bleeding as the most common cause of UGIB while other studies showing peptic ulcer disease as the most common cause of UGIB. In the present study, fundal varices were seen in 14.5% , gastric and duodenal ulcer in 48.5% , Mallory–Weis tear in 1.5% , gastric malignancy in 6.5% and Dieulafoy's lesion in 03(1.5%) In contrast, in a recent study from eastern India in 2013, the endoscopic diagnosis was duodenal ulcer in 57.6% patients, variceal bleed in 12.8% patients, gastric ulcer in 1.8% patients, Mallory–Weiss tear in 1.8% patients, erosive gastritis in 1.8% patients and malignancy comprised of 7.7% of cases. (16) In another study done by Anand et al. from North India, causes of bleeding were esophageal varices in 45.5%, duodenal ulcer in 25%, gastric ulcer in 5% and gastritis in 8.5%. (17) Study done by Dilawari et al. found variceal bleeding due to portal hypertension in (36%) as the most frequent cause followed by peptic ulceration in (24%) and gastric erosions in (19%). (18) Daily use of NSAID causes a 40-fold increase in gastric ulcer and an 8-fold increase in duodenal ulcer. NSAID use was observed in 6.5%of our patients.

03:Comparison of etiological spectrum of UGI bleed in different regions of India

	Present Study Kashmir	Kolkata [21]	Odisha [09]	Kerala [22]	Ahmedabad [23]	Chennai [24]	Shimla [25]	Mumbai [26]	New Delhi [17]
Study year	**2019**	2016	2012	2009	2008	2007	2005	2001	1983
Patient No	200	337	608	1582	100	408	111	398	408
PUD (DU+GU) %	48.5	40.2	58.75	35	14	17.88	61.9	15.3	30
Variceal bleed %	14.5	33.8	12.83	30.97	37	33.33	10.8	56	45.5
EMD %	18.5	10.6	1.18	13	14	43.6	11.7	4.5	8.5
Malignancy %	6.5	2.9	7.89	2	9	2.4	7.2	0.75	NA

This shows that the trend for UGI bleed etiology is similar; however, this is in contrast to that reported from Northern (Dehradun) India & Western India where Variceal bleed was the most common cause of UGI bleed. (19) This may be due to regional differences in the prevalence of chronic liver disease.

In this study, we found that the commonest cause of upper GI bleeding was peptic ulcer in (48.5%), followed by EMD (Erosive mucosal disease) in (18.5%) and Variceal bleeding (14.5%). A study by Kin et al(20) in 2014 in the US showed most common causes were ulcers in 654 patients (34%), Varices in 633 (33%), and erosive esophagitis in 156 (8%) out of 1073 cases, which are not consistent with our study in that EMD has replaced Variceal bleeding to become the 2nd most common etiology of UGI bleeding. Upper GI malignancy was seen in 13 (6.5%) patients who presented with UGI bleed, most of patients had age more than 60 years & were chronic male smokers. In nine (4.5%) patients we could not locate any source of UGI bleeding, they may have been bleeding from mid or lower gut ,4 (2%) of patients were having gastric polyp as a cause of bleeding, which proved to be benign. Three (1.5%) patients who presented with acute UGI bleed had GIST and after stabilization underwent surgery. The overall mortality was 4%

CONCLUSION:

It can be concluded from our study that peptic ulcer disease is the most common cause of upper GI bleed (48.5%) and UGI bleeding is more commonly seen in males. Melena was the most common chief complaint of patients .

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