



An Etiological Study of Upper Gastro-intestinal Bleeding with Special Reference to Helicobacter Pylori Infection in Peptic Ulcer Disease

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ABSTRACT

OBJECTIVE: Upper gastro intestinal bleeding is a common life threatening emergency resulting in a large number of hospital admission. Peptic ulcers are the most common cause of UGIB. Helicobacter pylori plays a pivotal role in the aetiology of peptic ulcer disease and eradication of infection has been known to alter the course of peptic ulcer disease. The present study was undertaken with the aim of studying the aetiological profile of upper gastrointestinal bleeding along with the frequency of helicobacter pylori infection in peptic ulcer disease.

MATERIALS AND METHODS: The total of 120 cases admitted between 1st September 2010 to 31st August 2011 and more than 13 years of age, presenting with haematemesis and or malaena were enrolled for the study. They were subjected to upper GI endoscopy after stabilisation. Causes of UGIB was assessed and biopsy material taken in patients with peptic ulcer disease for Rapid Urease test to detect presence of Hpylori.

RESULTS: The most common cause of UGIB was found to be peptic ulcer disease (54.16%) , followed by gastroesophageal varices 24.16%, erosive mucosal disease (14.17%), neoplastic lesion (3.33%) malory weiss tear (1.67%) and normal endoscopy was found in 2.5%. Helicobacter pylori infection was found in 56.92% patients with peptic ulcer disease, with higher incidence in duodenal ulcers (62.54%) then in gastric ulcer (48%)

CONCLUSION: The present study shows that peptic ulcer disease is the most common cause of UGIB followed by gastro esophageal varices in this part of the country. Helicobacter pylori is commonly associated with peptic ulcer disease. Hence it should be detected and treatment initiated for the effective recovery.

Keywords- peptic ulcer, helicobacter pylori.

INTRODUCTION

Upper gastrointestinal bleeding is a common life threatening emergency resulting in a large number of hospital admission. It accounts for over 300,000 annual hospital admission in United States¹. Peptic ulcers are the most common cause of UGIB, accounting for upto 50% of cases². Helicobacter pylori plays a pivotal role in aetiology of peptic ulcer disease and eradication of infection has been known to alter the course of peptic ulcer by promoting ulcer healing, reducing ulcer recurrence rate and its complication. (John Del Valle, 2018)

The prevalence of H. pylori varies throughout the world and depends largely on standard of living in the region. Two factors that predispose to higher colonization rate includes poor socio economy status and less education (John Del Valle.2008). Not many studies have been done on the aetiology of UGIB in this part of the country. With these fact in view, the study has been conducted to study the aetiological profile of UGIB and to study the frequency of helicobacter pylori infection in peptic ulcer disease.

MATERIALS AND METHODS

The present observational study was carried out in the department of medicine in Assam Medical College and Hospital, Dibrugarh from September 2010 to august 2011. The study was carried out on 120 cases presenting with UGIB with age more than or equal to 13 years. Patients presented with black tarry stool or vomiting of blood or both were taken up for study. Immediately following admission, vital signs of patients were assessed and resuscitated. Initial blood loss was combated with isotonic saline or synthetic colloid. Blood transfusion was given where required.

After haemodynamic stabilization, patients were subjected to thorough history taking and physical examination and routine laboratory test. Thereafter upper gastro intestinal endoscopy was done using the instrument Olympus Cv 70 to find the aetiology of UGIB. Biopsy material was taken in patients with peptic ulcer disease for Rapid Urease test to detect the presence of H.Pylori. Biopsy material was also

taken for histopathological examination whenever suspected malignant lesion were found.

RESULTS AND OBSERVATION

Out of 120 patients with UGIB maximum number of patients (29.16%) were in the age group of 41-50 years followed by 21.67% in the age group of 51-60 years. The age of patients ranged from 13-80 years with a mean of 46.92(+/-15.03sd) years. A male preponderance was found with 84.17% versus female cases (15.83%) the ratio being 5.32:1.

The most common clinical presentation was haematemesis and malaena (50%), followed by malaena (31.67%) and haematemesis alone (18.33%) In this study chronic liver disease was found in 24.17% patients, chronic kidney disease in 1.67%, hypertension in 8.33%, diabetes mellitus in 3.33% and COPD in 2.50% patients

Upper GI endoscopy showed peptic ulcer disease to be the most common cause of GI bleed (54.16%). Among them duodenal ulcer constituted 33.33% and gastric ulcer 20.83%. Second most common cause of UGIB was ruptured gastro esophageal varices (24.16%), followed by gastric erosion (9.17%), duodenal erosion (5%), Mallory Weiss tear (1.67%), esophageal growth (1.67%), adercarcinoma of stomach (1.67) and a normal endoscopic finding was found in 2.50% patients.

In this study peptic ulcer was found highest (26) in the age group of 41-50years, gastro esophageal varices were found highest between 41-50 years and gastro esophageal neoplasm between the age group of 50 to 70 years.

The Rapid Urease test for helicobacter pylori infection was found positive in 56.92% of peptic ulcer disease. H pylori was found in 62.50% of duodenal ulcer 48.00% of gastric ulcer. H pylori was found only in 17.67% of erosive mucosal disease.

Amongst peptic ulcer & erosive mucosal disease alcohol ingestion was found to be the commonest associated risk factor (35%) followed by non steroidal anti inflammatory drug use (14.63%), smoking (13.82%) and steroid (3.25%). Erosive mucosal disease was commonest endoscopic finding

in those taking non-steroidal anti-inflammatory drugs (77.78%) followed by gastric ulcer (16.66%) and duodenal ulcer (5.66%)

Among those taking alcohol (42 patients) gastroesophageal varices was the commonest endoscopic finding (69.05%) followed by erosive mucosal disease (16.67%), peptic ulcer disease (9.52%) and malory weiss tear (4.76%).

DISCUSSION

Upper gastro intestinal bleed is a common medical emergency with significant and mortality.

In our study maximum (29.16%) patients were of age group 41-50years, followed by 21.67% in the age group of 51-60 years. Age of patients ranged from 13 to 80 years with a mean age of 46.92 (± 15.03 SD) years. In a study by S. Mustapha, N.Ajayi and A. Shehu (2009) age ranged from 14-75 years with mean of 41.2 (± 15.1 SD) years⁽⁴⁾ A Timraj et al (2011) showed patients ranged from 12-100 years of age with a mean of 49 years⁽⁵⁾

A male preponderance of cases (84.17%) was found which resembled studies by M. Uddin et al (2008) with 88% male preponderance and Kashyap et al (2005) with 78.4%^(6,7)

In our study the commonest clinical presentation was haematemesis and malaena (50%) followed by malaena (31.67%) and haematemesis alone (18.33%). Other studies also showed haematemesis & malaena as the most common clinical presentation in UGIB. Kashyap et al (2005) reported 56.8% and M.Uddin et al showed 42 % cases with both haematemesis and malaena^(6,7)

The commonest associated co-morbidity in UGIB was chronic liver disease (24.17%) followed by hypertension 8.33%, diabetes mellitus 3.33% COPD (2.50%) and chronic kidney disease (1.67%).

On upper GI endoscopy, peptic ulcer was found to be the most common cause of UGIB (54.16%). Most studies in different parts of the world show similar findings .Paik et al (2007) in Korea reposted 50.9% Kashyap et al (2005) showed 61% and Van Leer dam ME (2008) in Netherland reported 50%^(7,8,9). In this study among peptic ulcer disease duodenal ulcer was 33.33% and gastric ulcer was

20.83%. Similar findings was reported by M Uddin et al (2008) duoderal ulcer 34% and C. Sugawa et al (1990) gastric ulcer 19%.^(6,10)

Gastro esophageal varices was the second most common cause of UGIB in the present study (24.16%) and all patients had a history of alcohol intake of varying duration. Similar findings were reported by A. Timraz et al (2011) 23% and Paik et al (2007) 28.3%.^(5,8)

Gastroduodenal erosion was found in 14.17% of patients in this study. In other studies Longstreth (1995) reported 14.3% and Faiza A Qari Showed 12% cases with gastroduoderal erosions.^(11,12)

No source of bleeding could be identified in 2.50% cases in the present study, whereas Lorenlaine mentioned that in 8-14% cases source of UGIB could not be identified.⁽²⁾ Here, the result of rapid ureas test for helicobaetor pylori infection was found positive in 56.92% of peptic ulcer disease. H. pylori was found in 60.50% of deodenal ulcer 48.00% of gastric ulcers and only 17.67% of cases with erosive mucosal disease.

Van Leer dam ME (2005) reported H.pylori infection in 50% of patients with peptic ulcer disease⁽⁶⁾ John Del valle (2008) in a compilation of data from three meta analysis reported the incidence of H.pylori infection in gastric ulcer as 30 to 70% and duodenal ulcer as 50-70%.

The commonest associated risk factor was alcohol (35.82%) and steroids (3.25%) in patients with peptic ulcer disease and erosive gastroduodenal disease. Alcohol take was found to be different in studies of different geographical areas ranging from 10% (A. Timraz, 2011)⁽⁵⁾ to 70% (Fiore et al, 2000).⁽¹²⁾ It depends on many factors like geographic distribution, religion, custom etc. Alcohol intake was found to be high probably because of taking traditional homemade alcohol and its association with local customs.

CONCLUSION

Observations made in the study reveal that peptic ulcer disease is the most common cause of UGIB in this part of the country. Helicobacter pylori was associated with more than half of the cases of peptic

ulcer disease. Hence all patients with peptic ulcer disease should be tested for H.Pylori infection and eradication treatment given. Alcohol was found to be the commonest avoidable associated risk factor. Hence patient education in this aspect may prove to be fruitful in bringing down the number of cases of UGIB.

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