

Upper Gastrointestinal Bleeding: A Jamaican Perspective

M Kaliamurthy, MG Lee, M Mills, T Murphy

ABSTRACT

Background: Upper gastrointestinal bleeding (UGIB) remains one of the most common clinical life-threatening emergencies which is associated with a high morbidity, mortality and medical care costs.

Objectives: This study reviews the clinical features, management and outcomes of patients with UGIB seen at the University Hospital of the West Indies (UHWI), Jamaica, between January 2006 and December 2008.

Methods: Patients with UGIB admitted to the medical wards of the UHWI, Jamaica, between January 2006 and December 2008 were reviewed. Consecutive patients admitted with a confirmed diagnosis of UGIB were selected for analysis. Data collected included age, gender, presenting complaints, risk factors, clinical features and management. Endoscopic findings, treatment and outcomes were also reviewed.

Results: There were 104 patients, with a mean age of 55 years, admitted with UGIB. There were significantly more men than women (73 vs 31). Retching and vomiting were the most common presenting complaints followed by melaena and haemetemesis. Non-steroidal anti-inflammatory drug use was present in 28% of patients. Overall, 80% of patients had upper GI endoscopy (EGD) and 40% were done within 24 hours of admission. The median time for performing EGD was 24 hours (mean 46 hours). The leading causes of UGIB were duodenal ulcer (28%), erosive gastritis (20%) and gastric ulcer (13%). Proton pump inhibitors (PPI) were given to 95 (91%) patients intravenously. Blood transfusion was given to 40% of patients. The mortality was 5.7%, rebleeding occurred in 4.8% of patients and 5% underwent surgery. The average duration of hospital stay was 6.6 days.

Conclusion: Upper gastrointestinal bleeding was more common in men of middle age in this study. Proton pump inhibitors were used in most patients. The overall mortality of 5.7% is similar to other series. Early EGD and use of endoscopic therapy may lead to a decrease in mortality in high risk patients.

Keywords: Bleeding, gastrointestinal

La Hemorragia Digestiva Alta: una Perspectiva Jamaicana

M Kaliamurthy, MG Lee, M Mills, T Murphy

RESUMEN

Antecedentes: La hemorragia digestiva alta (HDA), o sangrado gastrointestinal alto (SGA) sigue siendo una de las emergencias clínicas serias más comunes, constituye un riesgo para la vida, y se halla asociada con alta morbilidad y mortalidad, así como altos costos de cuidado médico.

Objetivos: Este estudio examina las características clínicas, el tratamiento, y los resultados de pacientes con HDA vistos en el Hospital Universitario de West Indies (UHWI), Jamaica, de enero de 2006 a diciembre de 2008.

Métodos: Los pacientes con HDA ingresados en las salas de UHWI, Jamaica, de enero de 2006 a diciembre de 2008 fueron sometidos a examen. Pacientes consecutivos ingresados con un diagnóstico confirmado de HDA, fueron seleccionados para análisis. Los datos recopilados incluyeron edad, género, dolencias, factores de riesgo, rasgos clínicos y tratamiento. Se examinaron los hallazgos endoscópicos, el tratamiento y los resultados.

From: Department of Medicine, The University of the West Indies, Kingston 7, Jamaica, West Indies.

Correspondence: Professor MG Lee, Department of Medicine, The University of the West Indies, Kingston 7, Jamaica, West Indies. E-mail: michael.lee@uwimona.edu.jm

Resultados: Hubo 104 pacientes, con una edad promedio de 55 años, ingresados con HDA. Había significativamente más hombres que mujeres (73 contra 31). Arcadas y vómitos fueron las dolencias más comunes, seguidas por melena y hematemesis. El uso de medicamentos antiinflamatorios no esteroideos estuvo presente en 28% de los pacientes. En general, al 80% de los pacientes les fue practicada endoscopia GI alta (EGD), el 40% de las cuales fueron realizadas dentro de las 24 horas tras del ingreso. El tiempo promedio de la realización del EGD fue 24 horas (46 horas promedio). Las causas principales de HDA fueron la úlcera duodenal (28%), la gastritis erosiva (20%) y la úlcera gástrica (13%). A 95 (91%) pacientes se les administró inhibidores de la bomba de proton (IBP) de forma intravenosa. Al 40% de los pacientes se les hizo una transfusión de sangre. La mortalidad fue de 5.7%. Se produjo resangrado en 4.8% de los pacientes y al 5% se les practicó cirugía. La duración promedio de estadía hospitalaria fue de 6.6 días.

Conclusión: La hemorragia digestiva alta fue más común en los hombres de mediana edad en este estudio. Se usaron inhibidores de bomba de proton en la mayoría de los pacientes. La mortalidad general de 5.7% es similar a otras series. La EGD temprana y el uso de la terapia endoscópica pueden llevar a una disminución de la mortalidad entre los pacientes de alto riesgo.

Palabras claves: Sangrado, gastrointestinal

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INTRODUCTION

Although hospitalization rates have been stable over the past several decades, upper gastrointestinal bleeding (UGIB) remains one of the most common clinical life-threatening emergencies. It is associated with a high morbidity, mortality and medical care costs worldwide (1, 2). The prevalence is estimated to range from 50 to 150 cases per 100 000 population in developed countries (3).

Despite advances in treatment, the mortality rate for UGIB has remained at 5–10% (4). However, hospital mortality varies, partly because of the changing epidemiology in Western countries, in which a number of factors, including older age, co-morbidities, use of aspirin, non-steroidal anti-inflammatory drugs (NSAIDs) and anticoagulants are important (5). Therefore, it is important to regularly review the clinical features, management and outcomes of UGIB.

There has been no previous study reported on UGIB in the Caribbean. This study reviews the clinical features, management and outcomes of patients with UGIB seen at the University Hospital of the West Indies, Jamaica, between January 2006 and December 2008.

SUBJECTS AND METHODS

Patients with UGIB admitted to the medical wards of the University Hospital of the West Indies (UHWI), Jamaica, between January 2006 and December 2008 were eligible for admission to the study. Patients were identified from the admission registers on the medical wards as the majority of patients with UGIB are admitted to these wards. Upper gastrointestinal bleeding was defined as, *a*) vomiting of blood or coffee grounds, or aspiration of blood or coffee grounds from the stomach, *b*) melaena, or *c*) the passage of blood (fresh or altered) with either *a* or *b*. Consecutive patients admitted with a diagnosis of UGIB between January 2006 and December 2008 were selected for analysis. The

patients' records were reviewed and data were collected and analysed. Data collected included age, gender, presenting complaints, risk factors, clinical features, management, investigation and outcome. In addition, the endoscopic findings and treatment received were reviewed. The need for blood transfusions, various endoscopic procedures and surgical management was recorded. The duration of hospital stay and the incidence of rebleeding were noted. Patient outcomes were classified as survivor or non-survivor with UGIB. The study received ethical approval from the Ethics Committee of The University of the West Indies/the University Hospital of the West Indies.

RESULTS

There were 104 patients admitted with clinically confirmed UGIB with significantly more men than women (73 vs 31). The mean age of all patients was 55 years. Retching and vomiting were the most common presenting complaints followed by melaena and haemetemesis (Table 1). Most of the patients had more than one symptom.

Table 1: Presenting symptoms

Symptoms	No
Vomiting	65
Melaena	56
Haemetemesis	51
Abdominal Pain	45
Dizziness	24
Weakness/lethargy	22
Syncope	14
Loss of appetite/weight	9
Fresh blood per rectum	5

A recent history of non-steroidal anti-inflammatory drug (NSAID) use was present in 28% of patients. A third of

patients had a history of smoking and/or alcohol use. Risk factors of steroid use and anticoagulation with warfarin was present in 5% of patients. One patient was on low molecular weight heparin therapy.

A previously established diagnosis of peptic ulcer disease (PUD) was present in 28 patients (27%) and 16 patients had a past history of UGIB. Two patients had variceal bleeding in the past and one had received variceal banding. Two patients had gastrectomy in the past for peptic ulcer disease. Clinical evidence of liver diseases and/or portal hypertension was present in 16% of patients.

Two patients presented in circulatory shock with unrecordable blood pressure and 18% of patients had significant postural blood pressure changes. The mean haemoglobin was 9.9 gm/dL on admission.

Overall, 80% of patients had upper GI endoscopy (EGD) and 40% of the EGDs were performed within 24 hours of admission. The median time for performing EGD was 24 hours (mean 46 hours). The leading causes of upper GI bleeding on EGD were duodenal ulcer (28%), erosive gastritis (20%) and gastric ulcer (13%). Other less common causes included duodenitis, Mallory Weiss tear and oesophageal varices (Table 2). Malignancy was present in 4%.

Table 2: Aetiology of upper GI bleed

Diagnosis	Per cent
Duodenal ulcer	28
Erosive gastritis	20
Gastric ulcer	13
Oesophageal varices	9
Duodenitis	8
Gastric erosions	5
Mallory Weiss tear	7
Malignancy	4
Polyyps	2
Portal gastropathy	2
Others	2

Helicobacter pylori infection was found in 17% of patients (Clotest, histology).

In the present study population, 95 (91%) patients received intravenous proton pump inhibitors (PPI) on admission and 82 (79%) patients received oral PPI subsequently. Blood transfusion was given in 40% of the patients. Endoscopic therapy was utilized in 7% of the patients and 5% underwent surgery. The overall mortality was 5.7% and rebleeding was noted in 4.8% of all patients during admission. The average duration of hospital stay was 6.6 days.

DISCUSSION

Hospitalization for UGIB remains a major and common medical emergency. In the present study, there were significantly more males than females, which is similar to other studies in which there was a distinct male preponderance (1,

2, 6). Upper gastrointestinal bleeding tends to occur at an older age. The mean age of 55 years in this study is slightly younger than in other studies. In a recent Italian study the mean age of patients hospitalized for UGIB was 68 years, but 66 years in a Canadian series (2, 6).

Peptic ulcer disease is the most common cause of UGIB in most series, accounting for over half of all cases (1, 3). In the present series, 41% of patients had peptic ulcers with duodenal ulcer disease being more common than gastric ulcers. The use of NSAIDs is a common cause of PUD and also a major factor in many patients with UGIB (7). Overall, NSAID users have an estimated 2–3 fold increase risk of gastrointestinal bleeding (4). In the present study, 28% of patients were taking NSAID. In a recent study, the use of NSAIDs was a factor in 36% of patients admitted with UGIB. However, the severity of bleeding and mortality was unaffected in patients on NSAIDs (2).

Early endoscopy and endoscopic therapy may be associated with improved outcomes for patients with UGIB. In the present study, 80% of patients had endoscopy and 40% were performed within 24 hours of presentation to hospital. In the United Kingdom (UK), 50% of patients with UGIB had endoscopy within 24 hours (3). Endoscopy enables not only accurate diagnosis but risk stratification and identification of patients who are at high risk for rebleeding (8). Endoscopic predictors of rebleeding in bleeding peptic ulcers are active bleeding, visible vessel, adherent clot in the ulcer base, ulcer location (posterior gastric or duodenal) and large ulcer size (8, 9). Patients at high risk should be monitored carefully and early intervention considered. There may even be a role for routine second look endoscopy in these patients (10).

Proton pump inhibitors are widely used in patients with non-variceal UGIB, and in this study, 91% of patients received PPI therapy. In a recent study, PPI was given in 57.5% and combined with a histamine -2 receptor antagonist in another 10% (5). High dose PPI given after endoscopic haemostasis results in improvement in outcomes (11). Also, pre-endoscopy PPI therapy may downstage bleeding lesions and thus reduce the proportion of patients with high risk stigma on endoscopy (9, 12). The downstaging due to PPI therapy before endoscopy may be beneficial in situations in which early endoscopy may be delayed (9). In addition, the use of intravenous PPI may be generally cost effective in patients with UGIB (13).

Despite a decrease in some countries, mortality from UGIB remains relatively high (9, 14). The risk of death after UGIB is related to the rebleeding rate and this has not decreased despite modern endoscopic methods. In the present study, the overall mortality was 5.7% and surgery was required in 5%. This mortality rate is similar to an Italian study which reported an overall mortality of 4.85% and a Canadian study which reported a 5.3% mortality (2, 6). In a nationwide audit in the UK, mortality was 7.4% in those patients who had upper endoscopy (3). Clinical predictors of

increased risk for rebleeding or mortality include, age greater than 65 years, shock, comorbid illness, poor overall health status, low haemoglobin, blood transfusion requirement, fresh blood in the emesis or rectally and elevated urea, creatinine and transaminase levels (9).

The main limitation to the present study is the relatively small number of patients studied and restriction to the main teaching hospital in Jamaica. Therefore, the results may not be representative for other areas in Jamaica or the Caribbean. Despite this limitation, the results of this study are important and give an indication of the clinical features, management and outcome of this common medical emergency.

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