ACUTE UPPER GASTRO-INTESTINAL HAEMORRHAGE IN GHANAIANS — AN ENDOSCOPIC REVIEW AT KORLE-BU TEACHING HOSPITAL

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SUMMARY

Upper gastro-intestinal (UGI) endoscopy was performed at the Korle-Bu Teaching Hospital, between 1981-83, on patients with history of acute upper gastro-intestinal haemorrhage. Eighty six (86) such patients were endoscoped and results have been retrospectively analysed to establish the major symptomatology, the underlying lesions, and any other relevant contributory factors. The role of endoscopy in the management of acute upper gastro-intestinal haemorrhage as well as its potential cost effectiveness are discussed. The term endoscopy, in the text refers to oesophago-gastro-duodenoscopy, and GI bleed refers to upper gastrointestinal haemorrhage.

Key Words

Acute upper gastro-intestinal haemorrhage, oesophago-gastro-duodenoscopy, diazepam, gastric ulcer, duodenal ulcer, acute mucosal lesions, erosions.

INTRODUCTION

Gastro-intestinal endoscopy was started at the Korle-Bu Teaching Hospital, the main teaching hospital of the University of Ghana Medical School in 1979; the early experiences were published in 1980[1,2]. Before then endoscopy had not been performed to any significant extent in Ghana. This article is a retrospective analysis of endoscopy performed on patients who had developed acute upper gastro-intestinal bleeding and were admitted to the hospital for management between May 1981 - February 1983.

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PATIENTS AND METHODS

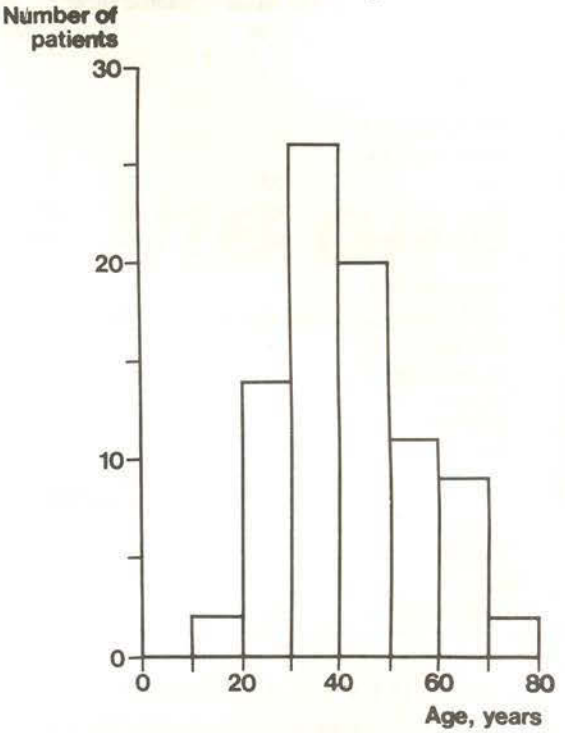
Patients admitted as emergency to medical or surgical wards, mainly from the Emergency Unit, Polyclinics, Private clinics, or referred from other parts of the country, with a history of acute upper gastro-intestinal bleeding, were referred by the attending Specialist. Each patient was assessed clinically prior to endoscopy, which was performed as early as possible, but usually after twenty-four to forty eight hours, provided the patient was haemodynamically stable and there were no contraindications. A protocol including details such as sex, age, major symptoms, alcohol and smoking history, was completed. The procedure was explained, in simple terms and through an interpreter, where necessary, and informed consent was obtained.

The patient fasted for not less than six hours, was given Atropine premedication 0.5mg intramuscularly before being transferred to the endoscopy room. A local anaesthetic throat spray was administered, and a titrated dose of intravenous diazepam was given as sedation. A mouth guard was placed between the patient's teeth and the endoscopy was performed by one of us, assisted by one nurse, using the forward-viewing Olympus pan-endoscope (GIFP3) and/or occasionally the side viewing Olympus JFP2 endoscope; a standard procedure was followed[3]. Any abnormal or suspicious lesions were documented, sometimes biopsy samples being taken for histology. The patient returned to the recovery area to rest and for vital signs to be observed for one hour before being transferred to the ward.

RESULTS

Three hundred and ninety-three (393) upper gastro-intestinal endoscopies were performed between May 1981 and February 1983. Eighty-six(86) [21%] were

Figure 1: Age Distribution of Patients Endoscoped for Acute G.I.T. Haemorrhage



for acute upper gastro-intestinal haemorrhage, 65 being males and 21 being females. The age distribution is shown in Fig 1 and the main clinical history in Table 1. Preceding upper abdominal pain — mainly epigastric — was the commonest symptom (74%), haematemesis and melaena occurred in 65% but melaena alone in 27% of the patients. History of smoking was documented in only 23% and of alcohol in less than half (42%) of the patients.

Drug history, including herbal medication, was poorly documented; in only four patients (4.7%) were drugs implicated, i.e. salicylates in three patients; the drug in the fourth patient was not clearly identified.

Endoscopic diagnosis are shown in Table 2 and Figure 2. The average ages of patients with duodenal and gastric ulcers were similar, 49.2 and 52.3 years respectively. The majority of patients with ulcers

Table 1: Acute Gastro-intestinal Haemorrhage Clinical Data

	Duodenal Ulcer	Gastric Ulcer	Acute Gastric Mucosal Lesions	Normal	Gastric Carcinoma	Oesopageal Varices	Total
No. of Patients	27	7	22	16	4	4	80 (100%)
1. Preceding Upper Abdominal Pain							
Yes	22	07	16	11	03	01	60 (75%)
No	03	00	06	05	01	03	18 (22%)
No Information	02	00	00	00	00	00	02 (3%)
2. Haematemesis and Malaena	14	05	14	13	03	04	53 (66%)
Malaena	13	02	03	02	01	00	21 (26%)
No Information	00	00	05	01	00	00	06 (08%)
3. Smoking	06	03	06	04	00	02	21 (26%)
Non Smoking	19	04	13	11	04	02	53 (66%)
No Information	02	00	03	01	00	00	06 (8%)
4. Alcohol:							
Yes	12	05	10	07	00	00	34 (42%)
No	13	02	08	09	04	04	40 (50%)
No Information	02	00	04	00	00	00	6 (8%)

were males (M:F = 5:1). The commonest lesion was duodenal ulcer, either active or chronic (31.4%). Active ulcers were those without endoscopic evidence of healing, whereas chronic ulcers showed features of healing, scarring and or duodenal bulb deformities. Gastric ulcer was relatively uncommon (8.1%), the ratio of duodenal to gastric ulcer being almost 4:1. One patient had both active gastric and duodenal ulcers, and duodenitis. In twenty-two patients (25.6%), endoscopy revealed acute gastric mucosal lesions in the form of gastritis or erosions. Over 50% were aged 21-40 years, and the majority were males (82%). Normal endoscopic findings were recorded in sixteen patients, 62.5% being males. The age distribution of these patients was similar to those with acute gastric mucosal lesions. (Figure 3).

Four male patients, age range 22-48 years, had oesophageal varices at endoscopy; three males and one female had advanced gastric carcinoma, (4.7%), the youngest being 31 years and the oldest 63 years old.

Table 2: Acute Upper Gastro-Intestinal Haemorrhage Endoscopic Diagnosis of 86 Patients

Endoscopic Report	No. of Patients
Duodenal ulcer (active and chronic)	27
Gastric ulcer	7
Acute Gastric mucosal lesions	22
Normal	16
Gastric cancer	4
Oesophageal varices	4
Others	5
Total	86

Miscellaneous causes included one each of Mallory Weiss and reflux oesophagitis. Multiple lesions were detected in four males including the patient mentioned above who had both active gastric and duodenal ulcers as well as duodenitis.

Figure 2: Acute Upper Gastro-Intestinal Haemorrhage Endoscopic Diagnosis of 86 Patients

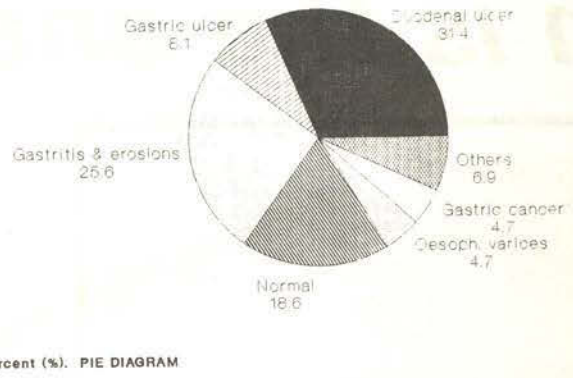
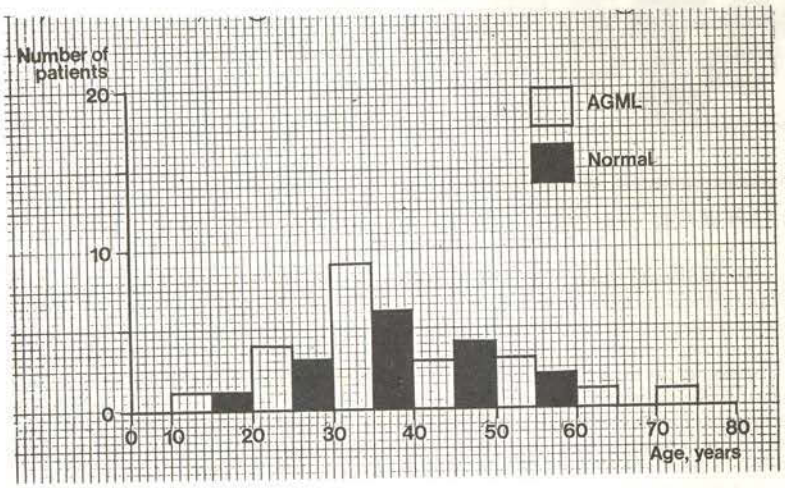


Figure 3: Age Distribution of Patients with Acute Gastric Mucosal Lesions/Erosions (22) and Normal Endoscopy (16)



Complications

No significant or serious complications were recorded. Except for gagging, most patients tolerated the procedure well.

DISCUSSION

The review of endoscopy performed on patients with acute upper gastrointestinal haemorrhage, is the first to be conducted at the Korle-Bu Teaching Hospital of the Ghana Medical School. A case review of haematemesis and melaena was reported by Nyame in 1973[4] before endoscopy became available as an important diagnostic tool. The results indicate that peptic ulcer disease, especially duodenal ulcer and acute gastric mucosal lesions are the commonest underlying causes, as reported in other series[4,5,6,7,8,9]. The peak age range of 30-50 years of patients with acute upper GI bleed is similar to that recorded in Ghana by Nyame[4] in 1973 and in Ibadan by Solanke[10] in 1978. Normal endoscopy was recorded in 18.6% of patients. It is likely that some of these included patients who had bled from acute gastric mucosal lesions namely gastritis or erosions by which had healed at the time of endoscopy. These lesions are known to heal quickly — within 48 hours — and will be missed when endoscopies are performed later. For various reasons, including probable late presentation after the onset of symptoms, most of our patients were endoscoped after

24 to 48 hours. Early endoscopy, performed within 24 hours of an acute bleeding episode, will identify the site and the lesion in most patients, but the longer endoscopy is delayed the lower the diagnostic yield[11,12]. In one study, normal endoscopy was reported in 24.6% of 122 patients, but of the 19 patients who were endoscoped within 24 hours bleeding, there were no negative endoscopic findings[5]. It is also almost certain that some of the twenty-three patients labelled as probable peptic ulcer by Nyame[4], because of negative barium meal X-ray fall into this category.

Bleeding due to oesophageal varices accounted for a small proportion (4.7%), although cirrhosis appears to be relatively common. Other studies have reported higher numbers (20%) of oesophageal variceal bleeding[8,13]. The small percentage in our series is difficult to explain; it may be that patients with stigmata of liver cirrhosis who developed acute upper gastrointestinal haemorrhage did not survive for long enough to be referred for endoscopy, but this is only a guess. A similar low percentage of oesophageal varices was reported by Nyame[4]. Gastric cancer was also rare.

Certain endoscopic stigmata in the upper GI tract have been identified as markers of probable rebleeding. These include "spots", adherent clots, or a visible blood vessel protruding from the ulcer base[9,13,16]. None of these were documented in our study.

Preceding upper abdominal or epigrastic pain prior to the bleeding episode was the commonest symptom (74%), regarded as common. Drug induced bleeding was apparently uncommon but this was almost certainly an under-estimate due to under-reporting, considering that salicylate containing and non-steroidal anti - inflammatory drugs are widely used. The role of herbal medication in the causation of acute upper GI bleed was not studied, due to inadequate data collection.

Endoscopy is generally regarded as being superior to conventional contrast radiology in detecting lesions causing acute upper GI bleeding, especially superficial mucosal lesions and small ulcers in a deformed duodenal bulb. Biopsy samples of lesions can be taken for histology, repeat examinations can be performed as necessary. Biopsy samples were not taken routinely during endoscopy; hence no histology was provided. Now that *Helicobacter pylori* infection is regarded as an important aetiological factor in peptic ulcer disease future endoscopic studies will need to include biopsy sampling. Most of our patients did not have barium meal X-rays; hence no comparison of the two procedures has been made. A study from Sudan, however, highlighted the cost effectiveness of upper GI endoscopy as compared with radiology in developing countries[14]. An expansion of gastrointestinal endoscopy facilities at Korle-Bu hospital will result in a much larger through-put of patients. Endoscopy, being an invasive procedure, has potential morbidity and, rarely, even mortality but is relatively safe. In our study, no significant side effects were documented.

The effect of endoscopy on the prognosis of acute upper GI haemorrhage has been widely studied. Although endoscopy usually establishes the source of bleeding, it does not seem to influence mortality of about 10% in Europe and the USA[10,14].

CONCLUSION

This retrospective review suggests that upper GI endoscopy is a convenient procedure for identifying the source of acute upper GI bleeding. Early endoscopy increases the diagnostic yield, and may identify stigmata of possible rebleeding which may influence eventual prognosis; therefore early referral is to be encouraged. Expansion of endoscopic facilities at the Korle-Bu Hospital will make the procedure cost effective.

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