

# An Audit of Upper Gastrointestinal Bleeding at Seremban Hospital

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## Summary

We retrospectively analyzed all patients presenting with upper gastrointestinal bleeding to Seremban Hospital over a one-year period. A quarter of the oesophagogastro-duodenoscopies (OGD) performed were performed as emergency for upper gastrointestinal bleeding. Gastric ulcers and duodenal ulcers were the two most common findings. Our results suggest that there is a male preponderance of 2:1, the Chinese were more likely to be affected and the elderly (>60 years) were at highest risk.

## Introduction

Upper gastrointestinal (GI) bleeding is a common condition seen in our centre. The primary investigation in localizing the site of bleeding is an oesophago-gastro-duodenoscopy (OGD). This modality enables us to identify and attempt therapeutic intervention in these patients. We analysed all patients presenting with upper gastrointestinal bleeding to our centre. The aim of this study was to determine the age, gender, racial distribution and the endoscopic findings in patients who presented with upper GI bleeding

## Materials and Methods

This was a retrospective analysis of OGD performed on patients presenting with upper gastrointestinal tract bleeding between 1st January 2000 and 31st December 2000. Data was collected from the records in the endoscopy suite. We

analysed the sex, age and racial distribution as well as the OGDS findings for the patients with upper gastrointestinal tract bleeding presented for emergency scope.

## Results

There were a total of 886 OGD performed during the study period. A quarter of them (223) was performed as emergency procedures on patients presenting with haematemesis and/or malaena. Of these, there was a male preponderance of 65% (n=144). The peak incidence was in the 61-70 year age group with an age range of 16-90 years (Fig 1). The Chinese, while only representing 20% of the total hospital admissions, accounted for 36.5% of patients presenting for OGD, and 48% of patients presenting with upper GI tract bleeding. (Table 1)

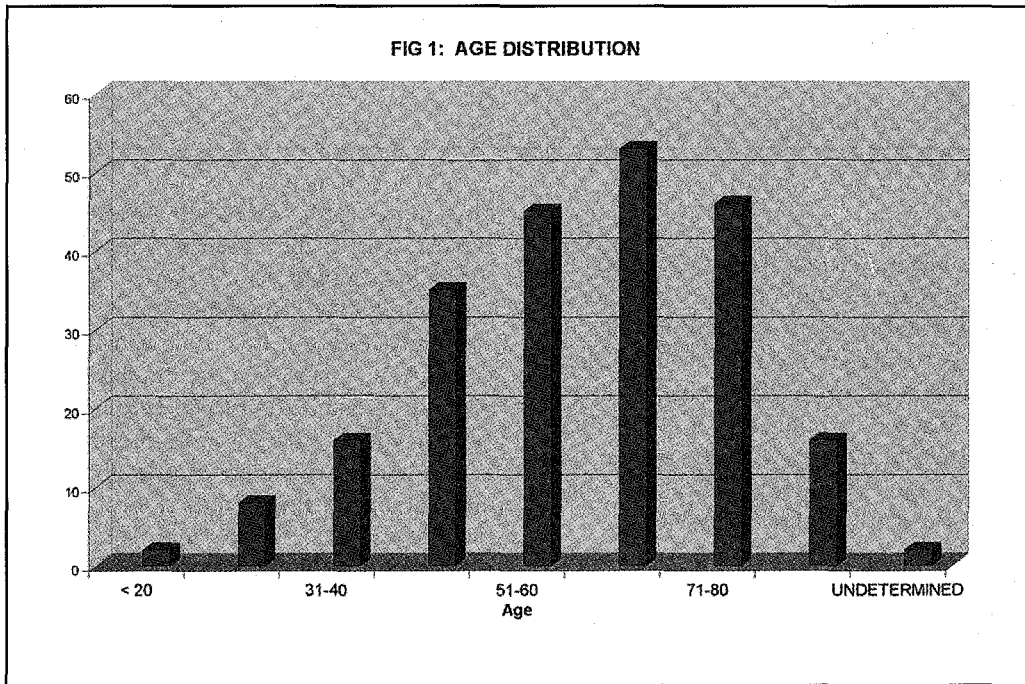
Gastric ulcers and duodenal ulcers, the two most common findings were observed in 69 and 62

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patients respectively. Oesophageal varices and gastric erosions were the next two common findings detected in 35 and 34 patients respectively. No obvious abnormality was

identified in 20 patients who presented with upper gastrointestinal bleeding. Only 5 patients required laparotomy for under-running of the bleeding ulcers.



**Table I: Summart of racial distribution**

	<b>Total Hospital Admissions</b>	<b>OGD</b>	<b>Upper GI Bleed</b>	<b>Relative Risk (95% CI)</b>
Malays	24389 (52.8%)	281 (31.7%)	70 (31.4%)	0.59 (0.48-1.19)
Chinese	9562 (20.7%)	325 (36.7%)	107 (48.0%)	2.32 (1.53-3.55)
Indians	11963 (25.9%)	267 (30.1%)	43 (19.3%)	0.75 (0.58-1.23)
Others	277 (1.6%)	13 (1.5%)	3 (1.3%)	0.81 (0.49-1.56)
<b>Total</b>	<b>46191</b>	<b>886</b>	<b>223</b>	

OGD = oesophagogastrroduodenoscopy

GI = Gastrointestinal

CI = Confidence Interval

**Table II: Summary of findings at oesophagogastroduodenoscopy**

Lesions	Frequency
Gastric Ulcer	69
Duodenal Ulcer	62
Oesophageal Varices	35
Gastric Erosions	34
Gastritis	21
Duodenitis	9
Carcinoma	1
Normal Findings	20
Others	13

### Discussion

Upper gastrointestinal tract bleeding from the peptic ulcer disease is one of the commonest causes of hospital admission<sup>1</sup> and it represents the major cause of mortality of the disease. There have been remarkable advances in our understanding of peptic ulcer disease in the recent years. The discovery of *Helicobacter pylori* in the eighties has revolutionized the treatment of peptic ulcer disease and promised cure for the disease.

The results of this analysis correlate with previous published local results. Men appear to be at higher risk of bleeding from peptic ulcers with a male to female ratio of 2:1. Older patients are at higher risk. Our results show that 51% of the bleeders were over 60 years of age compared to previously published figures of 40%<sup>2,10</sup>. While the Chinese population made up only 20% of the hospital admission, they are over represented in the number of patients presented for OGDS, more so in those with upper GI bleeding. This is perhaps not surprising when many local and Singaporean studies have demonstrated that *H. pylori* is more prevalent amongst Chinese, ranging between 26.7 to 57.5%, compared to Malays of 11.9 to 29.2%<sup>3,6,8,12</sup>. However, the Chinese subset with upper gastrointestinal bleeding is disproportionately higher when the number of patients presenting for OGDS were taken into consideration (Relative risk of 2.32 compared to 0.59 in Malays and 0.75 in Indians). It appears that Chinese are not only at higher risk of developing peptic ulcer disease, but

also more likely to bleed when they have the disease. As to the rationale why the Chinese are more susceptible to *H. pylori* infection, some researchers have suggested that it may be due to culturally related habits, such as meal sharing with chopsticks. This cultural tradition may be the route of transmission of *H. pylori*. However, it has been suggested that *H. pylori* infection occurs early in life, and newly acquired infection is uncommon after the age of five. Furthermore, higher *H. pylori* infection rates alone may not explain our observation of higher risk of bleeding from peptic ulcer disease.

Another possible factor is the common habit amongst Chinese of consuming herbal medicines, which are believed to improve "circulation". Reports on hospital admission from upper gastrointestinal tract bleeding have attributed herbal medicine consumption as a factor<sup>4</sup>. In addition, Gingko, a component commonly found in herbal medicine such as garlic, ginseng and ginger, has been reported to cause spontaneous bleeding and may interact with anticoagulants and anti-platelet agents<sup>5</sup>. Gastric ulcers and duodenal ulcers were the two most common OGDS findings while oesophageal varices and gastric erosions were also common findings. These observations are consistent with most other studies except one Arabian study in which oesophageal varices was the commonest cause of upper gastrointestinal tract bleeding<sup>2,9,11</sup>. Most patients with active upper GI bleeding were controlled by either injection therapy, banding or balloon tamponade. Only 5

of 223 patients required surgical intervention in the form of under-running of bleeding ulcers.

This study has demonstrated that, males, Chinese origin, and older age (>60 years) are risk factors for

upper gastrointestinal bleeding, most commonly from gastric or duodenal ulcers. The vast majority patients can be treated successfully pharmacologically or endoscopically.

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