THE OUTCOME

IN

THE UPPER GASTROINTESTINAL HAEMORRHAGE

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Introduction

Upper Gastro-intestinal haemorrahge (UGIHg) remains a common and important emergency condition encountered in our daily work and is a major cause of morbidity and mortality world wide [1].

Correct management and decision based upon accurate clinical data must be made at the right time . In spite of modern methods of diagnosis and care , mortality has remained essentially unchanged in the past 50 years , ranging from 5% to 20% [2].

Endoscopy is superior to radiology (Barium study) in identifying the source of bleeding. It is also unique in assessing the rate of bleeding, clarifying the underlying pathology as well as providing options for intervention if indicated [1].

THE AIM OF THE STUDY

This study was undertaken to :

- (One) Study of patients population and their characteristics in Iraq.
- *(Two) To determine the underlying causes of bleeding in these patients .*
- (Three) To determine which factors influence the out come in relation to mortality , emergency surgery or spontaneous resolution episode .

Methods

70 patients were randomly collected from different departments in *Saddam's Medical City Suffering* from UGIHg. from the period between February 1998 and August 1999, and data from these patients were analysed to study causes and effects of different parameters on the out come of these patients.

UGIHg. presented with either heamatemesis or maleana or both .

Heamatemesis was defined as the vomiting of blood clot or cofee-ground material.

Melana was defined as the passage of black tarry stool . After initial resuscitation , and bearing in mind that endoscopic diagnosis falls rapidly after 24 hours as small lesions may heal or develop after initial bleeding [3] .

Most of the endoscopies were done during the first 48 hours of the admission .

Endoscopy

Upper GIT endoscopy was carried out within 48 hours of admission . Premadication used consist of local xylocain spray 2% and metochloperamide (plasil) was titrated intravenously with difficult endoscopy .

The site of bleeding was documented by visualization of any one or combination of :-

- 1- An actively bleeding lesion.
- 2- A fresh or altered blood clot or black slough adherent to a lesion.
- 3- A vessel protruding from the base or the margin of an ulcer.
- 4- Presence of a lesion when no other lesion were present [3].

Gastric erosion was identified as the underlying cause of bleeding if sever erythema with or without erosion was actively bleeding, or there was a clot in the base of one or more of erosions.

Out Come Assessment

Out come was assessed in respect of :

- (One) Mortality within 30 days of admission .
- (Two) Emergency surgery defined as an operation performed within a week of admission.
- (Three) Spontaneous resolution of bleeding by conservative management and without emergency surgery or death within 30 days of bleeding episode.

The following risk factors at presentation were analysed in relation to out come.

Presence of heamatemesis, age, transfusion requirement, Asprin or other NSAID ingestion, presence of complicating concomitant disease, underlying chronic liver disease, active bleeding at time of endoscopy.

Asprin or NSAID intake was defined as ingestion of any amont of these compound prior to and within a week of the onset of symptoms.

Concomitant disease are ischeamic heart disease , hypertension D. M. , C. V. A. , burn , bleeding disorders (hemophilia, thalassaemia, ITP), congestive heart failure .

Statistical analysis

Fisher's exact test was used in the statistical analysis, p-value less than 5% considered the level of significant.

Results

Seventy patients [55 males (78.6%) : 15 females (21.4%)] with mean age of 44.9 years (range 7 to 83 years) with UGIHg. were studied randomly .

21 (30%) patients presented with heamatemesis.

12 (17%) patients presented with melena

and 37 (53%) patients with both.

Bleeding sites

Duodenal ulcer was the most common source of bleeding 34 (48.6%) patients . [table 1] . Esophageal varices 17 (24.4%) patients . Gastric erosion 12 (17.1%) patients . Ca stomach 3 (4.2%) patients . Mallory wiess syndrome 2 (2.9%) patients . Gastric ulcer 1 (1.4%) patient . Fundal varices 1 (1.4%) patient .

Age

The youngest patient was 7 years, the oldest age was 83 years, mean age 44.9 years.

Previous attack of bleeding

A history of previous UGIHg was elicited in 31 (44%) patients most frequntly in patients with D. U. 16 (22%) patients. Then esophageal varices 11 (15.7%) patients. Ca stomach 2 (2.5%) patients, gastric erosion 1 (1.4%) patients, fundal varices 1 (1.4%) patient.

Blood pressure on admission

Hypotension was associated with high mortality rate (table 3) . 30 patients presented with systolic blood pressure less than 100mmHg, of them 9 patients died (30%).

NSAID ingestion

14 patients (20%) with UGIHg gave history of NSAID intake within one week of the attack .

8 patients (11.4%) with gastric erosion.

5 patients (7.2%) with D. U.

1 patient (1.4%) with esophageal varices.

Concomitant disease

Concomitant disease was found in 17 (24%) patients .

15 (88%) patients were responding to conservative treatment [table 2].

2 (12%) patients required emergency operation of all patient with concomitant disease.

4 (23.5%) patients were died.

Liver disease

14 patients (20%) had underlying liver disease [table 2].

13 patients (92.8%) managed conservatively.

1 patient (7.2%) managed surgically.

Of all 5 patients (35.7%) died.

Active bleeding

12 patients (17%) had active bleeding on endoscopy . [table 2] .
8 patients (66.7%) responded to conservative treatment .
4 patients (33.3%) required surgical treatment .
Of all 3 patients (25%) died .

Transfusion requirement

17 patients (24%) required blood transfusion of more than 6 pints on admission [table 2].

7 patients (41%) required surgical treatment.

Of all 5 patients (29.4) died.

Out come

56 patients (80%) had spontaneous resolution on conservative treatment.

14 patients (20%) required surgical treatment.

9 patients (64%) as emergency operation.

5 patients (36%) as elective operation.

Recurrent bleeding occurred in 8 patients (11.4%) of those 5 patients (62.5%) died.

Of those treated conservatively 7 patients (12.5%) died because of rebleeding within a month of admission .

Of those treated by emergency operation 3 patients (33.3%) died.

None of those treated by elective operation died.

Mortality rate

In general mortality rate of the study was 14.3% [table 3].

The highest mortality rate was among those patients with rebleeding 62.5%, then chronic liver disease 35.7%, then patient treated by emergency surgery.

Other factors associated with high mortality rate are source of bleeding (esophageal varices, gastric erosion). Transfusion requirement of more than 6 pints of blood, concomitant disease, active bleeding at time of endoscopy, presence of Hypotension on admission, and patient's age above 50 years.

Discussion

This study shows that UGIHg. affect male more than female, male to female ratio 3.7:1.

D. U. was the commonest cause of UGIHg 48.6% then esophageal varices 24.4% then gastric erosion (17.1%).

The main age group affected is between (41-50) years with mean of 44.9 years .

In a study from Saudia Arabia male : female ratio was 2.7:1 [1].

The commonest site of bleeding was D. U. (29.2%) then esophageal varices (24.2%) [1].

In a study from USA P. U. contribute for 45% then esophageal varices 20% then gastritis 20% as a cause of UGIHg [5].

Blood transfusion is the main-stay of medical treatment, those patients not responding to medical treatment are usually brought to emergency surgery. The surgery plays the dominant role in the control of dangerous bleeding not responding to blood transfusion.

In this study the majority of patients 80% respond to conservative treatment while 20% required surgical intervention to stop bleeding.

The over all mortality rate was 14.3%. In a study from USA mortality rate was 8.5% [6]. In a study from Jordan mortality rate was 10% [2].

In our study the mortality rate is significantly increased with advancing age particularly for patients above 50 years . This suggests that surgery could be delayed until there is spontaneous resolution of bleeding without significant risk in younger patient , where as in older patient surgical intervention should be considered at an earlier stage of bleeding. Concomitant disease and chronic liver disease was an important risk factors of mortality and both of them might be an important factor in high mortality rate seen in patient with bleeding from esophageal varices .

Low blood pressure on admission associated with higher mortality rate (double the general mortality rate).

Blood transfusion requirement of more than 6 pints is associated with increased mortality rate and it may reflect continued bleeding.

Rebleeding was associated with the highest mortality rate in this study .

On endoscopy stigmata of active bleeding is associated with high mortality rate (25%).

Conclusion:

(1)- Patients affected by UGIHg are commonly males between age of 40-50 years.

(2)-The commonest cause of UGIHg in Iraq is D.U. followed by esophageal varices.

(3)-High risk group with UGIHg which require early surgical intervention are patients over 50 years of age and those with rebleeding, hypotension on admission, blood transfusion more than 6 pints, active bleeding on endoscopy and those with chronic liver disease.



Age distribution in UGIHg

Figure 1

Table 1

Causes of UGIHg

Bleeding site	No. of patients	%	Males	Females
D.U.	34	48.6	30	4
Esophageal varices	17	24.4	12	5
Gastric erosions	12	17.1	10	2
Ca stomach	3	4.2	1	2
Mallory Wiess Syndrom	2	2.9	1	1
G. U.	1	1.4	1	
Fundal varices	1	1.4		1
Total	70	100	55 78.6%	15 21.4%

Table 2

Risk factors in UGIHg

Factor	Surgery	Conservative	Total	Died
Concomitant disease	2	15	17	4
	11.8%	88.2%		23.5%
Underlying CLD	1	13	14	5
	7.2%	92.8%		35.7%
Active bleeding	4	8	12	3
	33.3%	66.7%	12	25%
Blood Transfusion	7	10	17	5
\geq 6 pints	41%	59%		29.4%
< 6 pints	7	46	53	5
	13.3%	86.7%	55	9.4%

Table 3

Main factors contribute for mortality

2-67	Factor	Mortality rate
1	Rebleeding	62.5%
2	CLD	35.7%
3	Emergency operation	33.3%
4	Hypotension	30%
5	Transfusion of more than 6 pints blood	29.4%
6	Active bleeding	25%
7	Concomitant disease	23.5%
8	Esophageal varices	23.5%
9	Age over 50 years	18.8%
10	Gastric erosions	16.6%
11	General mortality of the study	14.3%
12	D. U.	8.8%

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Summary :

This is a prospective study of (70) patients presented with upper gastrointestinal haemorrhage (UGIHg) over two years .All patients were endoscoped during the first (24) hours of admission.Duodenal ulcer was the commonest cause of UGIHg (48.6%) followed by oesophageal varices (24.3%) then gastric erosion (17.1%) then CA -stomach (4.2%) then Mallory Wiess syndrome (2.9%)then gastric ulcer (1.4%).80% of these patients responded to conservative treatment while 20% required surgical treatment as emergency operation in 64% or elective operation in 34%.The highest mortality rate was found in those patients with recurrent bleeding after stopping of bleeding episode (62.5%) then patients with chronic liver disease (37.5%) then patients with emergency surgery (33.3%) then patients presented with shock (30%) then patients who required blood transfusion of more than 6 units of blood (29%) then patients with active bleeding on admission (25%).