Tripolitana Medical Journal; 2014, Vol. 3, No. 2, pp. 53-57

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Research Article
ISSN 2077-5628

Endoscopic Findings in Patients Presented with Frank Hematemesis and/or Melena to Gastroenterology Unit, Medical Department, Tripoli Central Hospital

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Received 3 November 2014/ Accepted 7 December 2014

ABSTRACT

Gastrointestinal bleeding (GIT) remains an important cause of emergency hospital admission with a significant related morbidity and mortality. GIT bleeding may relate to the upper or lower gastrointestinal tract lesions. History and clinical examination may guide investigations to the more likely source of bleeding.

One hundred twenty nine patients presented with history of hematemsis and/or melena were included in the study, and referred to the Endoscopy Unit at Medical Department, Tripoli Central Hospital for urgent endoscopy. The study was conducted out prospectively from Jan 2009 till May 2010, with written questionnaire.

The patients age was between 11 - 96 years (mean of 59 ± 1.6 years). They were 46 (35.7%) females and 83 (64.3%) males. Non-smoker were 114 patients (88.4%). Our results revealed that history of abdominal pain was detected in 81patients (62.8%), altered bowel habit was reported in 15 patients (11.6 %). Constipation reported in 12 patients (9.3%), Diarrhea presents in 13 patients (10.1%) and dysphagia reported only in 7 patients (5.4%). Only 14 patients (10.9%) presented with history of weight loss. History of hematemsis was reported in 111 patients (86%), while history of melena was reported in 86 patients (66.7%).

Twenty seven patients (20.9%) gave history of aspirin ingestion, only 8 patients (6.2%) recieved warfarin, and only 4 patients (3.1%) gave history of heparin injection. Previous endoscopy was performed in 51 patients (39.5%). Ten patients (7.8%) had history of malignancy. Hematemsis was seen in 108 patients (83.7%), while melena reported in 48 patients (37.2%).

Endoscopic findings revealed: reflux esophagitis in 33 patients (25.6%), gastric fundal tear (mallory weiss tear) in 8 patients (6.2%), 47 patients (36.4%) with esophageal varices, 17 patients (13.2%) has stomach ulcer, only 2 of them (1.6%) had macroscopic stomach wall infiltration.

Gastric erosions was found in 21 patients (16.3%), 4 patients (3.1%) had stomach polyp, fundal varices seen in 9 patients (7%). Duodenal ulcer was seen in 29 patients (22.5%), complicated with pyloric stenosis only in patients (1.6%), and only two patients (9.3%) had bleeding duodenal ulcer. Hemoglobin < 12g/dl was seen in 108 patients (84.8%), (mean Hb 10.8g/dl±2.5).

The study patients present with significant hematemsis and/or melena should have upper GIT endoscopy urgently to detect the underlying cause, while the commonest cause in the study was due to bleeding varices due to portal hypertension in addition to reflux esophgitis and duodenal ulcer. Furthermore, larger studies are needed to establish the commonest cause of haematemesis and melena in our region.

Keywords - *Gastrointestinal bleeding; Hematemsis; Melena; Endoscopy; Varices; Reflux esophagitis; Ulcer.*

INTRODUCTION

Gastrointestinal (GIT) bleeding is a common problem in daily clinical practice and may represent an acute medical emergency. An upper GIT bleeding is defined as a bleeding arises from GIT proximal to ligament of treitz, and usually presents with hematemsis and or melena, while hematochezia(fresh blood per rectum) is usually of lower GI source (distal to ligament of treitz). However, it can be seen with massive upper GIT bleeding.[1]

In USA between 300.000 and 350,000 annual hospital admissions that corresponds to about 100-165 cases per 100,000 per year, occur because of upper GIT bleeding, that costs about 2.5 billion USD.[2-4] In the United Kingdom, the overall incidence of acute upper GIT hemorrhage is 103 cases per 100,000 adults per year.[5] Studies from United States and United Kingdom have revealed a male-to-female ratio that is greater than that of other studies. Male-to-female ratio for upper GIT bleeding is approximately 2:1,[6] while the mortality rates are similar in males and females in the studies carried in the both countries. Upper gastrointestinal bleeding increases with age. In United States, about 44.5% of all patients were aged 60 years or older, and the morbidity and mortality

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rates also increased with age; 73.2% of deaths occurred in patients older than 60 years.[7] Other studies conducted in other countries are difficult to ascertain because of a paucity of large, retrospective studies and the use of indirect methods for calculation and estimation.[8]

The fatality rate due to GIT bleeding has remained unchanged at 7% to 10% despite the advances in the diagnosis and the therapy methods,[7] which might be due to more co-morbidity and increased living age than in the past.[9]

Peptic ulcers account for about 60% of severe cases of upper GI bleeding.[6]

The commonest causes of upper GIT bleeding are peptic ulcer disease, gastroesopheal erosion and others. Ulcers are the most common source of upper gastrointestinal hemorrhage (35%).[5] Fortunately, up to 80% of bleeding ulcers stop bleeding spontaneously without any intervention.[10] Gastroduodenal erosions account for about 12%.[7] Variceal bleeding accounts for a relatively small percentage (6%), but varices bleeding due to cirrhosis are less common but more dangerous. The mortality rate from a single episode of Variceal bleeding with underlying liver disease is up to 70% within One year.[11] Other less frequent causes include Mallory-Weiss tears, erosive duodenitis, Dieulafoy ulcer (a type of vascular malformation), other vascular lesions, neoplasm, aortoenteric fistula, gastric antral vascular ectasia and portal hypertensive gastropathy.[6]

About 30% of patients with bleeding ulcers present with hematemesis, 20% with melena, and 50% with both.[12] Hematochezia usually suggest a lower GI source of bleeding, since blood from an upper source turns black and becoms tarry as it passes through the gut(due to colonic bacterial action), producing melena. Hematochezia due to upper GIT bleeding occurs in about 5% of patients.[12] Hematochezia occurs when more than 1,000 ml of blood is lost into the upper GI tract, whereas only 50 to 100 ml is needed to cause melena.[13,14]

Hematochezia with signs and symptoms of hemodynamic compromise such as syncope, postural hypotension, tachycardia, and shock should therefore direct one's attention to an upper GI source of bleeding. Nonspecific features include nausea, vomiting, epigastric pain, vasovagal phenomena, and syncope. It has been reported that duodenal ulcer was most common, accounting for 53%, but esophageal varices occurred in 20%. Gastric ulcers and oesophagitis were surprisingly infrequent.[15] In Nigeria, nearly the same percentage in a prospective study, reported that peptic ulcer disease and erosions are the commonest endoscopic findings associated with upper gastrointestinal bleeding.[16]

The relative frequency of different causes of UGI bleeding in Egypt is bleeding esophageal varices followed by duodenal ulcer, gastritis, esophagitis, hiatus hernia, and neoplasm.[17]

In a study from Qatar, most common nationality was Qatari (42.2%) and the most common age group was between 50-60years old (28.4%). The most frequent cause of bleeding was peptic ulcer disease (50 patients out of 99 patient) followed by variceal bleeding.[18] The present study investigates the commonest causes of hematemsis, melena and hematochezia in patients referred for upper GI endoscopy in Medical Department at Tripoli Central Hospital.

MATERIALS AND METHODS

Patients presented with history of hematemesis and/ or melena referred to the endoscopy unit in Medical Department at Tripoli Central Hospital for urgent endoscopy. The study conducted prospectively from Jan. 2009 to May 2010. A pre-prepared questionnaire filled by endoscopists. The questionnaire contained the following information; age, sex, history of hematemesis and/ or melena, abdominal pain, altered bowel habit, diarrhea, constipation, smoking, dysphagia, and weight loss, as well as history of Aspirin, Heparin and Warfarin intake. Previous endoscopy, malignancy or surgery were even recorded.

Urgent complete blood picture, prothrombin time, INR, viral screen was done in highly suspicious cases of related disorders. Upper GIT endoscopy carried out in patient complained of hematemesis and/ or melena within 6-12 hours. Propafol was administered before the endoscopy procedure to sedate the patient, and pulse oximetry was connected to assess the pulse and the oxygen saturaiont. Endoscopic treatment of the upper GIT bleeding with diluted drenaline for bleeding peptic ulcer disease, sclerosant agent as (5% ethonalamine) or banding (Rubber band ligation) was used to treat bleeding varices and argon plasma coagulation (APC) was used for vascular abnormalities.

RESULTS

129 patients were studied prospectively during period from 01-January 2009 to 31 May 2010. All patients presented with hematemsis and/ or melena. All patients had an upper GIT endoscopy for diagnostic and if needed therapeutic purpose. They were aged between (11 - 96 years) with a mean age of 59 ± 1.6 years. 46 patients (35 .7%) Were females and 83 (64.3%) were males. Overall, significantly more males had UGIB than females.

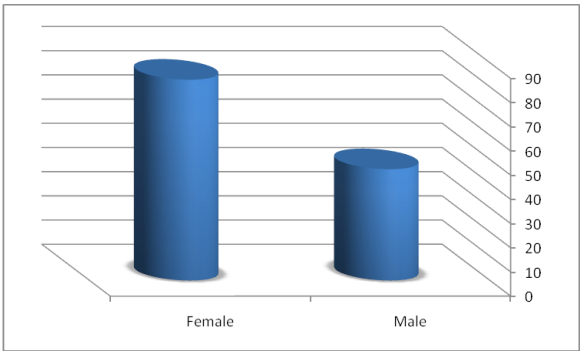

Figure 1: Sex incidence

Table 1: Presenting symptoms

Symptom	Hemat	Melena	Abd. pain	Alt. bowel hab.	Constip.	diarrhea	Dysphagia	Wt loss
No. pts	111	86	81	15	12	13	7	14
%	86%	66.7%	62.8%	11.6%	9.3%	10.1%	5.4%	10.9%

Abdominal pain presents as complaint in 81 patients (62.8%), altered bowel habit was reported in 15 patients (11.6%), constipation reported in 12 patients (9.3%), diarrhea presents in 13 patients (10.1 %). Most patients were non-smokers 114 patients (88.4 %), and only 15 patients were smokers (11.6%). Dysphagia reported only in 7 patients (5.4%). 14 patients (10.9%) presented with history of weight loss. History of hematemsis was reported in 111 patients (86%), while history of melena was reported in 86 patients (66.7%), Table 1.

27 patients (20.9%) gave history of aspirin ingestion. Only 8 patients (6.2%) received warfarin and 122 patients (93.8%) received no warferin. Four patients (3.1%) gave history of heparin injection. Previous endoscopy was performed in 51 patients (39.5%). 10 patients (7.8%) had history of malignancy. Hemoglubin (Hb) less than 12g/dl reported in 108 patients (84.8%) and no anemia in 21 patients (16.2%). The mean Hb value was 10.8g/dl±2.5.

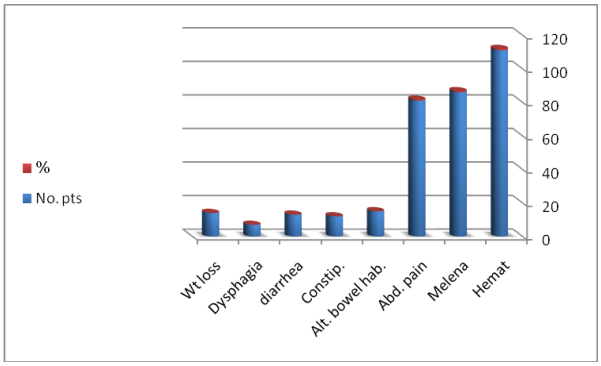

Figure 2: Presenting symptom in our patient

The indication of upper GIT endoscopy was hematemsis that reported in 108 patients finding of endoscopy; reflux esophagitis reported in 33 patients (25.6%) and gastric fundal tear (Mallory Weiss tear) seen in 8 patients (6.2%), where as 47 patients (36.4%) have esophageal varices 17 patients (13.2%) has stomach ulcers with only 2 patients (1.6%) had macroscopic stomach wall infiltrates mostly due to tumors.

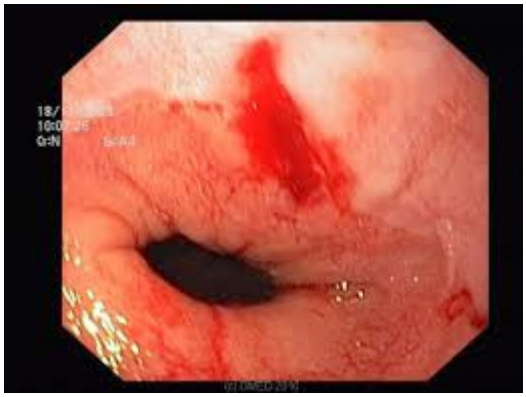

Figure 3: Gastro-esophageal junction tear.

Fundal erosion were found in 21 patients (16.3%), stomach was full of blood in 29 patients (22.5%). Furthermore stomach hematin revealed in 46 patients (35.7 %). 4 patients (3.1%) had a polyp in stomach. Fundal varices were seen in 9 patients (7%). Duodenal ulcer (DU) was seen in 29 patients (22.5%) that was complicated with pyloric stenosis only in patients (1.6%). Bleeding DU was seen in two patients (9.3%).

The aetiologic spectrum of upper gastrointestinal bleeding (UGIB) (Table 2); varices (esophageal and gastric) (43.4%) secondary to portal hypertension were the most frequent cause of bleeding followed by reflux esophigitis (25.6%) and duedenal ulcer (22.5%).

Table 2: Aetiological cause of upper GI bleeding

Endoscopy finding	Number of patient	Percentage
Varices (esoph and garstric)	56	43.4%
Reflux esophagitis	33	25.6%
Duodenal ulcer	29	22.5%
Gastric erosions	17	13.2%
Mallory wises tear	8	6.2%

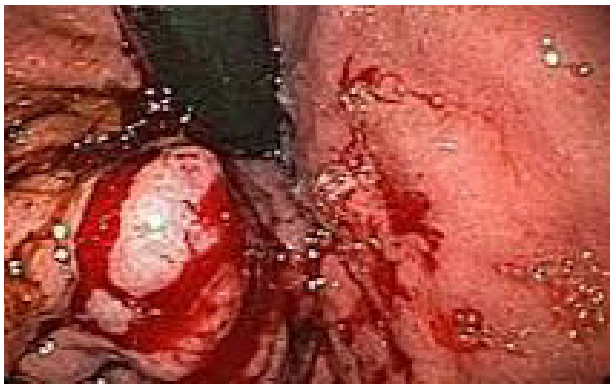

Figure 4: Fundal varices

Figure 5: Reflux esophegitis

DISCUSSION

Most of our patients in the study were males, In the United States, about 44.5% of all patients were aged 60 years or older, our patients were aged between (11 to 96 years) with a mean age of 59 ± 1.6 years which is compatible with others.[6] H/O hematemsis was reported in 111 patients (86%), while H/O melena was reported in 86 patients (66.7%). 27 patients (20.9%) gave an H/O Aspirin ingestion.

The commonest presentation was hematemsis, melena , and abdominal pain .commonest age was 59± 1.6 years of young age group. History of drug ingestion asprin in 79% only few with H/O warfarrin and heparin use. The use of NSAIDS is well known risk for upper gastrointestinal bleeding. Anemia was reported in 84% of hemoglubin less than 10.4 gm /dl .

The commonest cause of hematemsis and or melena was esophageal varices (36.4 %), and followed by duodenal ulcer (22.6%) which is not compatible with other centers. looking for information about the current epidemiology of acute UGIB in continental Western Europe, At 12 hospitals in the Amsterdam area endoscopy was performed within 24 hr prospectively for 78% of 951 patients with acute UGITB , and in 42% of them a gastroduodenal ulcer was found ..[19]

In North-Eastern Nigeria a total of 106 patients were studied looking for the aetiology of upper Gastrointestinal Bleeding. ,seventy-four (69.8%) were males while 32 (30.2%) were females. Their ages ranged from 14 to 75 years with a mean of 41.2 (±15.1SD) years. Oesophageal varices were the most frequent cause of bleeding (45.3%) followed by erosive mucosal disease (23.7%) and peptic ulcer disease (16.9%) [(20)]. Erosive mucosal disease (oesophagitis, 25.6% gastritis 13.2%). These findings are similar those reported from Europe, India and South America where erosive mucosal disease was identified as the second commonest cause of UGIB.[21-23] On the other hand, peptic ulcer disease which has been identified as the commonest cause of UGIB in the west [(24),] was the third commonest cause in our study, accounting for 35,7% of cases with duodenal ulcer (22.5%) being more common than gastric ulcers (13.2%). Mallory-Weiss syndrome (6.2%) and gastric cancer (1.6%) were the other causes of UGIB identified in this study. In conclusion, varices are the commonest cause of upper gastrointestinal bleeding in our area and responsible for most of the mortalities in UGIB patients. This could be due to early diagnose of duodenal ulcer and frequent use of eradication therapy as well as higher incidence of chronic liver disease.

CONCLUSION

We conclude that patients presented with significant hematemsis and/or melena should have an upper GIT endoscopy urgently to detect the underlying cause, while the commonest cause of bleeding in the study was bleeding varices due to portal hypertension, in addition to reflux esophgitis and duodenal ulcer. Furthermore, larger studies are needed to establish the commonest cause of haematemesis and melena in our region.

REFERENCES

1. Wilcox CM, Alexander LN and Coctsonis G (1997) A prospective characterization of upper gastrointestinal hemorrhage presenting with hematochezia, *Gastroenterol*., **92**, 231.
2. Krumberger JM (2005) How to manage an acute upper GI bleeding, *RN* **68** (3), 34-39.
3. Lewis JD, Bilker WB, Brensinger C, Farrar JT and Strom BL (2002) Hospitalization and mortality rates from peptic ulcer disease and GI bleeding in the 1990s: relationship to sales of non-steroidal anti-inflammatory drugs and acid suppression medications, *Am J Gastroenterol*. **97**, 2540–2549.
4. Viviane A and Alan BN (2008) Estimates of costs of hospital stays for variceal and nonvariceal upper gastrointestinal bleeding in the United States, *Value Health* **11**, 1-3.
5. Kandarpa K and Aruny JE (1996) Acute gastrointestinal bleeding. In: Handbook of Interventional Radiologic Procedures. 2nd edn, pp. 130-138.
6. Long treth GF (1995) Epidemiology of hospitalization for acute upper gastrointestinal hemorrhage; A population-

based study, *Am J Gastroenterol*. **90**, 206.

7. Yavorski RT, Wong RK and Maydonovitch C (1995) Analysis of 3,294 cases of upper gastrointestinal bleeding in military medical facilities, *Am J Gastroenterol*. **90**(4), 568-573.
8. Manish KV, Co author(s): Anthony W Allen and Michael AJ Sawyer (2008) Upper Gastrointestinal Bleeding, emedicine. medscape.com/article/417980-overview,*Updated*: Sep 10.
9. Kaplan RC, Heckbert SR, Koepsell TD, *et al.* (2001) Risk factors for hospitalized gastrointestinal bleeding among older persons. Cardiovascular Health Study Investigators, *J Am Geriatr Soc*. **49**, 126-133.
10. Laine L and Peterson WL (1994) Bleeding peptic ulcer, *N Engl J Med*. **331**,717–727.
11. Albeldawi M, Qadeer M, Vargo JJ (2010) Managing acute upper GI bleeding, preventing recurrences, *Cleveland clinical Journal of Medicine* **77**, 131-142.
12. Wara P and Stodkilde H (1985) Bleeding pattern before admission as guideline for emergency endoscopy, *Scand J Gastroenterol*. **20**, 72–78.
13. Jensen DM and Machicado GA (1988) Diagnosis and treatment of severe hematochezia. The role of urgent colonoscopy after purge, Gastroenterology **95**, 1569-1574.
14. Daniel WA Jr, Egan S (1939) The quantity of blood required to produce atarry stool, *J Am Med Assoc*. **113**, 2232.
15. Hansen D, Daly D (1978) A Fibreendoscopic Study of Acute Upper Gastrointestinal Hemorrhage in Nairobi, Kenya, *Am. J. Trop. Med. Hyg*. **27**(1), 197-200.
16. Tijjani BM, Borodo MM and Samaila AA (209) Endoscopic Findings in Patients with upper Gastrointestinal Bleeding in Kano, North-Western Nigeria, *Nigerian Hospital Practice* **4**, 3-4.
17. Nafea M, Muhammed A, Medhat A, *et al.* (1991) Relative frequency of upper gastrointestinal bleeding in Egypt, *Assiut Medical Journal*, **15**, 201-208.
18. Kamha A, Al Kaabi S, and Sattar HA (2003) Upper Gastrointestinal Bleeding in the Medical Intensive Care Unit (MICU) Doha, Qatar: A one – year survey, *Qatar Medical Journal*, **12**(1), 28-31.
19. Vreeburg EM, Snel P, De Bruijne JW, Bartelsman JF, Rauws EA and Tytgat GN (1997) Acute upper gastrointestinal bleeding in the Amsterdam area: incidence, diagnosis, and clinical outcome, *Am J Gastroenterol.* **92**(2), 236-243.
20. Mustapha S, Ajayi N and Shehu A (2009) Aetiology of upper Gastrointestinal Bleeding in North-Eastern Nigeria: A Retrospective Endoscopic Study, *Greener Journal of Medical Sciences* **3** (3), 93-97.
21. Rockall TA, Logan RF, Devlin HB and Northfield TC (1995) Incidence and mortality from acute upper gastrointestinal haemorrhage in the United Kingdom, *Br Med J*. **311**, 222-226.
22. Zaltman C, De Souza HSP, Castro MEC, Sobral MFS, Dias PCP and Lemos V (2002) Upper gastrointestinal bleeding in a Brazilian Hospital: a retrospective study of endoscopic records, *Arquivos de gastroenterología* **9**, 74-80.
23. Pruthi HS, Sharma SK, Singh B and Anand AC (2000) Aetiology of upper gastrointestinal bleeding: an endoscopic study, *MJAFI*. **56**, 188-191.
24. Gilbert DA, Silverstein FE and Tedesco FJ (1981) The national ASGE survey on upper gastrointestinal III. Endoscopy in upper gastrointestinal bleeding, *Gastrointest Endosc*. **27**, 94-102.
25. Erwin Biecker, Jörg Heller, Volker Schmitz, Frank Lammert, and Tilman Sauerbruch (2008) Diagnosis and Management of Upper Gastrointestinal Bleeding, *Dtsch Arztebl Int*. **105**(5), 85-94.