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## Lower gastrointestinal tract bleeding, an interventional study

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### Abstract

Lower Gastrointestinal Tract Bleeding is a common universal emergency in clinical practice and remain a major medical problem. The study to diagnose the causes of lower Gastrointestinal Tract Bleeding. One hundred Patients presented with lower Gastrointestinal Tract Bleeding from July 2016 to July 2017 at AL-Yarmouk Teaching Hospital were studied and subjected to lower gastrointestinal endoscopy to elicit the causes of the bleeding. Sixty patients were male (60%) & 40 patients were females (40%) with male to female ratio of 1.5:1. The age ranged from 15 to 80 years, with mean age of the patients was 29 years + 5 years the majority being in the 5<sup>th</sup> decade of life constituting about 20 patients (20%). The commonest cause of bleeding was hemorrhoid (35 patients) (35%), and the next cause was ulcerative colitis (21 patients) (21%), followed by benign colonic Adenomatous polyp (13 patients) (13%), benign rectal adenomatous polyp (11 patients) (11%), solitary benign rectal ulcer (7 patients) (7%), colonic cancer (6 patients) (6%), rectal cancer (4 patients) (4%) and infective colitis (3 patients) (3%). Ninety patients (90%) stopped bleeding on the medical supportive measures, this took place from within few hours following admission to 3 days post-admission. In 10 patients (10%) the bleeding continued and were referred to emergency surgery, and laparotomy was done to them. The death rate in our study was 3 patients (3%).

**Conclusion:** Our study showed that the most common cause of bleeding were Haemorrhoids, ulcerative colitis, colonic benign adenomatous polyp, rectal benign adenomatous polyp, solitary rectal ulcer, colonic cancer, rectal cancer and infective colitis.

**Keywords:** Bleeding, colonoscopy, rectum

### Introduction

The bleeding from the gastrointestinal tract is classified into upper gastrointestinal tract bleeding (UGITB) and lower gastrointestinal tract bleeding (LGITB) <sup>[1]</sup> UGITB is bleeding above the level of ligament of Treitz, where LGITB is bleeding below the level of ligament of Treitz <sup>[2]</sup>. Ligament of Treitz is a fibromuscular band which extends from right crus of diaphragm to duodenojejunal flexure <sup>[2]</sup>. Patient with UGITB typically present with hematemesis <sup>[3]</sup>, or hematochezia if the bleeding is severe, or Gradul bleeding with melena, or occult blood detected by positive test for blood in the stool <sup>[4]</sup>. Hematemesis is defined as the vomiting of blood and is a cardinal sign of UGITB and usually from a source proximal to the ligament of Treitz <sup>[1]</sup> Melena is defined as the passage of black, tarry, sticky, shiny, smelly stool reflecting the presence of altered blood <sup>[1]</sup>. Hematochezia is defined as the passage of bright red blood per rectum <sup>[4]</sup> and may be darker <sup>[5]</sup> Hemorrhage is a serious life threatening complication of gastrointestinal disease and it continues to present the clinician with a major challenge <sup>[6]</sup> flexible endoscopy has largely replaced other method of diagnosis of bleeding.

### Patients and Methods

One hundred Patients presented with lower Gastrointestinal Tract Bleeding from July 2016 to July 2017 at AL-Yarmouk Teaching Hospital were studied and subjected to lower gastrointestinal endoscopy to elicit the causes of the bleeding. Those patients were referred from out Patients clinics, and from surgical and medical units. All patients were evaluated for age, sex, present and past symptoms, history of peptic ulcer disease, dyspepsia, history of cigarette smoking, alcohol consumption, steroid, aspirin and non-steroidal antiinflammatory drugs ingestion, anticoagulant drugs taken, liver disease, previous bleeding per rectum previous endoscopical examination, previous surgery. Colonoscopy had been done for all patients within 48 hours of bleeding.

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All patients were subjected to mechanical preparation before examination which is carried out as an out patient procedure except those who need admission or those already admitted. The endoscopy was done under intravenous diazepam 10 mg, we lubricate the tip of the endoscopy by xylocaine jelly 2%. During endoscopic examination a full survey of the anal canal, rectum, sigmoid colon, descending, transverse, ascending colon and caecum were done & biopsy was taken on need & sent for histopathology. On admission all patients were treated by bed rest and stoppage of oral intake and all patients received intravenous fluid on admission mainly crystalloids, antibiotic & sedation. Ten patients (10%) were need fresh frozen plasma & blood transfusion to resuscitate them from the state of shock.

## Results

Sixty patients were male (60%) & 40 patients were females (40%) with male to female ratio of 1.5:1. The age ranged from 15 to 80 years, with mean age of the patients was 29 years + 5 years the majority being in the 5<sup>th</sup> decade of life constituting about 20 patients (20%). The commonest cause of bleeding was hemorrhoid (35 patients) (35%), and the next cause was ulcerative colitis (21 patients) (21%), followed by benign colonic Adenomatous polyp (13 patients) (13%), benign rectal adenomatous polyp (11 patients) (11%), solitary benign rectal ulcer (7 patients) (7%), colonic cancer (6 patients) (6%), rectal cancer (4 patients) (4%) and infective colitis (3 patients) (3%). Ninety patients (90%) stopped bleeding on the medical supportive measures, this took place from within few hours following admission to 3 days post-admission. In 10 patients (10%) the bleeding continue and were referred to emergency surgery, and laparotomy was done to them. The death rate in our study was 3 patients (3%).

**Table 1:** Distribution of patients according to the age groups & sex.

Age group	No. of patient	Female	Male
11-20	10	4	6
21-30	18	8	10
31-40	17	7	10
41-50	20	6	14
51-60	8	2	6
61-70	15	6	9
71-80	12	7	5
Total	100	40	60

**Table 2:** The causes of the LGITB

Cause of bleeding	No. of patients	%
Haemorrhoids	35	35%
Ulcerative Colitis	21	21%
Benign colonic adenomatous polyp	13	13%
Benign rectal adenomatous polyp	11	11%
Solitary benign rectal ulcer	7	7%
Colonic cancer	6	6%
Rectal cancer	4	4%
Infective colitis	3	3%
Total	100	100%

## Discussion

Lower GITB is a complex clinical Problem that requires disciplined and sophisticated evaluation for successful management<sup>[8]</sup>. Our study showed that 60 patients were males (60%) & 40 patients were females (40%) & male to female ratio were 1.5:1. The age ranged from 15 to 80 years, the majority being in the age group of 41 years to 50 years constituting about 20 patient (20%) as shown in table number one and the mean

age of the patients was 29 years + 5 years. The commonest cause of bleeding was hemorrhoid (35 patients) (35%), and the next cause was ulcerative colitis (21 patients) (21%), followed by benign colonic adenomatous polyp (13 patients) (13%), benign rectal adenomatous polyp (11 patients) (11%), solitary benign rectal ulcer (7 patients) (7%), colonic cancer (6 patients) (6%), rectal cancer (4 patients) (4%) and infective colitis (3 patients) (3%) as shown in table number 2, while in study done by Anthony M Vernava *et al.* showed that the most common causes of bleeding are diverticulosis, inflammatory bowel disease (ischemic & infective colitis), colonic neoplasia, benign anorectal disease and arteriovenous malformation<sup>[8]</sup>. Our study showed that all causes of bleeding is from pathological diseases distal to the ligament of Treitz, but in another study showed that in 10-15% that the cause of bleeding is from diseases that are proximal to ligament of Treitz<sup>[8]</sup>. The introduction of fiberoptic endoscope as a major diagnostic tool was an important milestone in the management of LGITB, it allows for more precise diagnose of the pathology causing the bleeding. Endoscopy provides also a safe, rapid and flexible method for diagnosis and evaluation of such cases, this was true of our study. So endoscopic examination showed feasible, safe, accurate and available method used, and no failure or complication was recorded in our study and there was no suggestion that endoscopic examination provoked further bleeding. And a firm diagnosis was made in all patients of our study who are examined by endoscopy. Ninety patients (90%) stopped bleeding on the medical supportive measures, this took place from within few hours following admission to 3 days post-admission. In 10 patients (10%) the bleeding continue and were referred to emergency surgery, and laparotomy was done to them. The death rate in our study was 3 patients (3%), due to uncontrolled bleeding.

## Conclusion

1. LGITB is not an uncommon clinical problem which should be treated vigorously because of the potentially high morbidity and mortality.
2. Most patients stop bleeding on medical measures and early resuscitation is important in the management of these cases.
3. Our study showed that the best method used for the diagnosis of the causes of bleeding is the fiberoptic colonoscopy which is safe, available, not cost, gives accurate results and no complications resulted from its use.

## Recommendations

1. Early endoscope is very helpful in planning further management and plays a role in reducing morbidity & mortality.
2. Surgery should not be delayed if the bleeding is massive or not responding to medical measures or there is a possibility of re bleeding.

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