

Upper gastrointestinal endoscopic findings in patients with dyspeptic symptoms & upper gastrointestinal bleeding whom underwent esophagogastroduodenoscopy in South Darfur State Sudan (Sep 2016 – Feb 2017)

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ABSTRACT

BACKGROUND: Upper gastrointestinal endoscopy is the preferred investigative procedure for UGIB and dyspepsia because of its accuracy, low rate of complication, and its potential for therapeutic interventions.

OBJECTIVE: To assess endoscopic findings in patients with dyspeptic symptoms and upper GI bleeding who underwent OGD.

METHODS: The study is a descriptive, prospective study and hospital based was conducted in south Darfur state during the period (Sep 2016- Feb 2017). The sample size was 216 patients diagnosed with dyspepsia and UGIB. Data was collected using a questionnaire which filled directly from the patients and from the endoscopic reports.

RESULTS: Highest percentage of the patients 88 (40.7%) aged between 25-44 years, Male patients in the study sample were 123 (57%) while females were 93 (43%). Male to female ratio was

1.3:1. Indications for endoscopy were epigastric pain 164 (75.7%), indigestion and on 105 (48.7%), anemia 23 (10.6%), dysphagia 19 (8.6%), heart burn 18 (8.3%), hematemesis 9 (4.1%), melena 5 (2.3%). Reported causes of dyspepsia were gastritis 106 (49.07%), GERD 89 (41.2%), duodenitis 37 (17.1%), gastric ulcer represent 2 (0.92%), while malignancies were 7 (3.2%). Regarding causes of upper GI bleeding findings were esophageal varices 9 (4.1%), P. HTN gastropathy 7 (3.24%), Duodenal ulcer 2 (0.92%), gastric tumor 1 (0.46%), normal endoscopy reported in 35 subjects (16.1%).

CONCLUSION: 1-Upper GI endoscopy remain golden investigation in patients with dyspepsia and upper GI bleeding to determine the underlying pathology especially in whom have alarm features.

Key Words: GI bleeding; GERD; Dyspepsia; Dysphagia; Gastritis; Peptic ulcer diseases; Duodenitis; Esophageal tumor; Gastric cancer; odynophagia; portal hypertension; liver Cirrhosis

INTRODUCTION

Heart Upper gastrointestinal bleeding is important medical emergency; the most common causes of upper gastrointestinal bleeding are peptic ulcers and esophagogastric varices. Variceal bleeding most commonly occurs in the setting of portal hypertension less common causes of upper gastrointestinal bleeding are esophageal

tears, malignant disease, erosive disease, and vascular abnormalities. There are only few recent epidemiological surveys regarding acute upper gastrointestinal bleeding. Several surveys focusing on peptic ulcer disease showed a significant decrease in admission and mortality of peptic ulcer disease. Several more recent epidemiological surveys show a decrease in incidence of all cause of upper gastrointestinal

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bleeding [1,2].

The incidence of peptic ulcer bleeding remained stable [2]. Variceal bleeding is the cause of bleeding in cirrhotic patients in 50%–60%. Rebleeding in patients with upper gastrointestinal bleeding occurs in 7%–16%, despite endoscopic therapy. Rebleeding is especially high in patients with esophageal varices and peptic ulcer Disease. Mortality ranges between 3% and 14% and did not change in the past 10 years [2]. Mortality is increasing with increasing age and is significantly higher in patients who are already admitted in hospital for co-morbidity. Endoscopy of upper gastrointestinal tract is a safe and easily carried out procedure of high diagnostic value and also a therapeutic value in some cases. Endoscopy is not costly and has a remarkable low incidence of complications [1]. Dyspepsia is a common condition that reported by up to 40% of the general population [3, 4], patients with dyspepsia account for approximately 7% of all family physician visits in Canada [5]. Dyspepsia is defined as an upper gastrointestinal symptoms complex characterized by epigastric pain or discomfort, and may include heart burn, acid regurgitation, excessive burping/belching (abdominal bloating), feeling of abnormal or slow digestion, early satiety or nausea [5-7]. It may be associated with helicobacter infection, peptic ulceration, acid reflux, and occasionally upper GI malignancy [8-10].

Upper GI endoscopy is indicated to exclude mucosal injury in case of atypical symptoms, symptoms not responsive to antacid drugs, patient with alarm features. The alarm features are suggestive of serious diseases in dyspepsia such as malignancies they are:

- Weight loss.
- Anemia.
- Odynophagia/ Dysphagia.
- Unexplained recurrent vomiting.
- Occult or gross gastrointestinal bleeding.
- Palpable abdominal masses or adenopathy.
- Family history of gastrointestinal malignancies [7,13,10].

Upper GI endoscopy still the best investigation for diagnosis of dyspepsia. This is now performed as first initial examination instead of barium of its high value in evaluation and explores these symptoms [11, 12, 9]. Treatment of dyspepsia according to the cause like functional and GORD need general measures including ingestion of low fat diet, avoidance of snacks before bedtime, and elevation of the head of the bed, and some cases like tumors need surgical operation [10].

Objectives

To assess endoscopic findings in patients with dyspeptic symptoms and upper GI bleeding who underwent OGD in south Darfur state period (Sep 2016- Feb 2017).

METHODS

The study is a descriptive, prospective study and hospital based was conducted in south Darfur state during the period (Sep 2016-Feb 2017). The sample size was 216 patients diagnosed with dyspepsia and UGIB. Data was collected using a questionnaire which filled directly from the patients and from the endoscopic reports.

RESULTS

Total number of included subjects were 216, large percentage of them (40.7%) aged between 25 years-44 years, (28.7%) aged between 45 years-64 years, (19.4%) aged 65 years-74 years, (9.2%) aged below 25

years and lowest percentage (1.8%) aged above 85 years. Male patients in the study sample were 123 (57%) while females were 93(43%). Male to female ratio was 1.3:1.

Indications for endoscopy were epigastric pain 164 (75.7%), indigestion and on 105 (48.7%), anemia 23 (10.6%), dysphagia 19 (8.6%), acid symptoms 18(8.3%), hematemesis 9 (4.1%), melena 5 (2.3%). The reported complains were epigastric pain 164(75.9%), followed by indigestion 105 (48.6%), and heart burn 70 (32.4%), poor appetite 45 (20.8%), vomiting 35 (16.2%) as most frequent complains, while belching 27 (13.5%) early satiety 20 (9.2%), nausea 20 (9.2%), dysphagia 16 (7.4%), weight loss 14 (6.4%), regurgitation 13 (6.01%), distension 12 (5.5%), chest pain 5 (2.3%), as less common complains.

Regarding symptoms of upper GI bleeding hematemesis reported in 9 (4.1%) subjects and melena in 5 subjects (2.31%). In most of the patient 90 (41.6%) the duration of symptoms was ranged between 6 months to 1 year, and the lower percentage 8 (3.7%) the duration was more than 5 years. The most common risk factors of dyspepsia were cigarette smoking 24 (11.1%), alcohol consumption 16 (7.4%), caffeine 15 (6.9%) and intake of Aspirin and NSAIDs 12(5.5%), the last risk factors were chronic liver disease 6 (2.7%), diabetes 4 (1.8%), schistosomiasis and HBV 2 (0.92%) The commonest alarm features from history, examination and laboratory investigations were; weight loss 36 (16.6%), anemia 23 (10.6%), dysphagia 16 (7.4%) and occult or gross gastrointestinal bleeding 12 (5.5%), unexplained vomiting 9 (4.1), and odynophagia 4 (1.8%). The findings of endoscopy in patients with dyspepsia were gastritis 106 (49.07%), GERD 89 (41.2%), duodenitis 37 (17.1%), achalasia 5 (2.3%), G.O.J tumour 4 (1.8%), esophageal tumor, Gastric tumor and gastric ulcer represent 2 (0.92%), Gastric polyps, and Periapillary tumor 1(0.46%). With significant difference between males and females ($P < 0.05$) (Table 1). Two males (0.92%) had esophageal tumor while two other males had gastric tumor. Among females none had esophageal tumor while one female had gastric tumor (0.46%). The age of males with gastric tumor was above 45 years while the female aged less than 25 years.

TABLE 1
Distribution of the patients according to endoscopic findings in patient with upper gastrointestinal bleeding

Findings	Males		Females		Total		P value
	N	%	N	%	N	%	
Esophageal varices	7	3.24	2	0.92	9	4.1	0.084
P. HTN gastropathy	6	2.7	1	0.46	7	3.24	0.041
Duodenal ulcer	2	0.92	0	0	2	0.92	0.044
Gastric tumor	1	0.46	0	0	1	0.46	0.022

DISCUSSION

Esophago-gastro-duodenoscopy is a safe, widely available technique for which demand continues to grow. So, the appropriateness of indications for upper GI endoscopy is critical in assessing dyspeptic symptoms, improving diagnostic values and providing better patient care. This study aimed to assess endoscopic findings in patients with dyspepsia and upper GI bleeding who underwent EGD in south Darfur state- sudan, during the period (Sep 2016- Feb 2017).

Regarding the indication of upper GI endoscopy, the reported

indications for endoscopy were epigastric pain 164 (75.9%), followed by indigestion 105 (48.6%), and heart burn 70 (32.4%), poor appetite 45 (20.8%), vomiting 35 (16.2%) as most frequent complains, while belching 27 (13.5%) early satiety 20 (9.2%), nausea 20 (9.2%), dysphagia 16 (7.4%), weight loss 14 (6.4%), regurgitation 13 (6.01%), distension 12 (5.5%), chest pain 5 (2.3%), as less common complains.

This is similar to findings of previous studies summarized the indications for upper GI endoscopy by The Danish Dyspepsia Study Group as including FD, peptic ulcer disease, reflux esophagitis, and gastric or esophageal malignancy [12,13].

In this study, the endoscopic findings in patients presenting with dyspeptic symptoms and upper GI bleeding were gastritis 106 (49.07%), GERD 89 (41.2%), duodenitis 37 (17.1%), gastric ulcer 2 (0.92%), duodenal ulcer 2 (0.92%) while malignancies were 7 (3.2%) G.O.J tumor 4 (1.8%), esophageal tumor, Gastric tumor were 2 (0.92%), this as the findings reported by McColl, et al. who showed that the major endoscopic findings found as the following: gastric ulcer (1.6%-8.2%), duodenal ulcer (2.3%-12.7%), reflux esophagitis (0%-23%), and gastric malignancy (0%-3.4%). A substantial number of patients at least 50% had no detectable abnormalities, incidental findings, or changes of uncertain significance with regards to their symptoms [14].

The comparison of the findings in relation to gender in this study revealed significant difference between males and females ($P < 0.05$). This is similar to study by Johnson et al compared endoscopic findings in patients with dyspepsia with those in age and sex matched control [15]. The diagnostic findings, with the possible exceptions of peptic ulcer disease and duodenitis seen on endoscopy, showed no clinically relevant association with dyspeptic symptoms (Table 2).

In this study the commonest alarm features obtained from history, examination and or lab investigations were weight loss 36 (16.6%), anemia 23 (10.6%), dysphagia 16 (7.4%) and occult or gross gastrointestinal bleeding 12 (5.5%), unexplained vomiting 9 (4.1), and odynophagia. However, in previous studies a meta-analysis of 26 studies totaling more than 16000 patients with dyspepsia similarly showed a positive predictive value and negative predictive value of alarm symptoms for upper GI cancer of 5.9% and greater than 99% respectively. Moreover, another study showed that clinical impression, demographics, risk factors, patients history, and symptoms also do not adequately distinguish structural from functional disease in dyspeptic patients referred for endoscopy [16-18].

TABLE 2
Alarms symptoms

Alarm features for dyspeptic patients
Age >50 years
Family history of GI malignancy
Unintended weight loss
UGIB or IDA
Dysphagia
Odynophagia
Persistent vomiting
Abnormal imaging suggesting organic disease

RECOMMENDATIONS

Expand the service for Darfur area. Hospitals should acquire these equipments for these services, in order to improve quality of health care. Patients with simple dyspepsia especially those below 40yrs may be initially treated empirically. Nevertheless, those with the alarm symptoms need to be scoped immediately without being booked in a long waiting list. When alarm symptoms are present alone or in combination to dyspepsia, endoscopy should be done regardless of age or duration of symptoms.

CONCLUSION

This study approached several indications for upper GI endoscopy among dyspeptic patients including epigastric pain, indigestion, anemia, dysphagia, acid symptoms, hematemesis, and melena. The reported endoscopic findings in patients presenting with dyspeptic symptoms were gastritis, GERD, duodenitis, while in those with upper GI bleeding esophageal varices, portal gastropathy were most frequent. The indications and findings in endoscopy were not different from national and international studies. The comparison of the findings in relation to gender in this study revealed significant difference between males and females. Age and gender played a crucial role in the etiology of dyspepsia and upper GI bleeding. Upper GI endoscopy remain standard investigation in patients with dyspepsia and upper GI bleeding to determine the underlying pathology specially in patients have alarm features.

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