ORIGINAL RESEARCH PAPER

General Surgery

EVALUATION OF UPPER GASTROINTESTINAL LESIONS IN ANEMIA WITH AND WITHOUT GASTROINTESTINAL SYMPTOMS:-PROSPECTIVE STUDY.

KEY WORDS: oesophago-gastroduodenal scopy (OGDscopy), Gastrointestinal (GI) tract, Iron deficiency anemia (IDA).

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ABSTRACT

Background: Anemia is a global public health problem affecting both developing and developed countries at all ages. Iron deficiency is common cause of anemia. It is either poor intake or chronic gastrointestinal bleeding. Goal of this study is to identify the prevalence of upper GI lesions, identified by OGDscopy in patients in anemia with or without gastrointestinal symptoms. **Methods:** In this prospective study we analysed data of 100 patients who underwent OGDscopy procedure in tertiary care centre. On OGDscopy study 33% had normal GIT and 67% had GI lesions majority were erosive gastritis, erosive oesophagitis gastric and duodehal ulcers, other lesions like congestive gastropathy reflux oesophagitis and malignant lesions like carcinora of stomach and carcinora of oesophagus. **Conclusion:** OGDscopy procedure is essential in evaluating lesions of upper gastrointestinal tract in anemia for diagnostic and therapeutic purpose.

INTRODUCTION

Anemia is a global public health problem affecting both developing and developed countries at all ages. According to the World Health Organization (WHO) anemia is defined as haemoglobin (Hb) levels <12.0 g/dl in women and <13.0 g/dl in men. The term anemia refer to lack of red blood cell or dysfunction of red blood in body this leads to reduced oxygen flow to the organs(1). Iron deficiency is common cause of anemia either due to poor intake or chronic gastrointestinal (GI).blood loss. When there is no obvious source of bleeding, standard care for these patients with IDA includes evaluation of gastrointestinal (GI) tract for bleeding lesions (1).

The available literature in heterogenous groups including old age patients and postmenopausal women with IDA shows GI lesions in 40-70% (2-4).

Main aim of this study

1. Evaluating upper Gastrointestinal (GI) leisons in anemia with and without GI symptoms.
2. Association of lesions with anemia and find out common upper GI lesions in anemia.

MATERIALS AND METHODS

In our prospective study we analyzed collected data of 100 patients who underwent oesophagastroduodenoscopy (OGDscopy) at tertiary care center from september 2019 to march 2020.

Exlusion criteria:-

1. Active bleeding (active GI loss, epistaxis, menorrhagia, heavy menstrual loss)
2. Not willing to consent for OGDscopy
3. Coagulation disorder.

Inclusion criteria: - Individuals of age > 18 years both male and female patients were included. Patients with GI symptoms which included dysphagia, heart burns vomiting, and anorexia were included. Eligible subjects coming in OPD with upper GI symptoms like dysphagia heartburns anorexia were included, and patients referred from medicine and other departments were admitted in the ward and enrolled in study. Proper clinical history including GI symptoms and physical examinations was done. Baseline investigations including haemoglobin, total leucocyte count, platlets with peripheral blood film done.

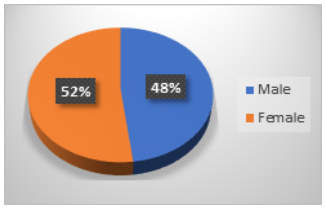
Preoperative preparation: Patients were kept nil by mouth for 6 hours before procedure.

All procedure were done under anesthesia (10% xylocaine spray) with patient in left lateral position to avoid chances of aspiration. Oxygen saturation, heart rate and blood pressure monitored every 5 minutes using cardiac monitor. All oesophaogastroduodenoscopy (OGDscopy) procedures performed with Olympus CV-170 videoscope.

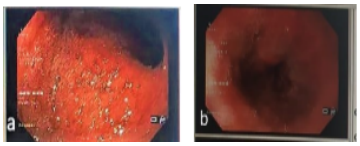
RESULTS

In this prospective study total 100 adult male (48) and female (52) were selected. Data were collected through clinical history, examination and document review. Majority of patients were 55 to 65 years age group (35%). Only 5% patients were in age group 25 to 34 years, which got lowest position, mean age of this study subject is 54 years with maximum and minimum age 80 and 25. In this study more than 50% patients were female (52) and rest were male (48). Among the study subjects (67%) patients had GI symptoms. On OGDscopy (33%) had normal GIT, and (67%) had lesions? Majority of these lesions were ulcers and erosions (31%), malignancies like ca stomach, ca oesophagus (4%), others (which includes congestive gastropathy, reflux oesophagitis, hiatus hernia with Cameron lesions) were (32%), Patients with upper GI endoscopy-(67%) had GI symptoms and (33%) had non GI symptoms, Significant (malignant) lesions on upper GI endoscopy were 4%

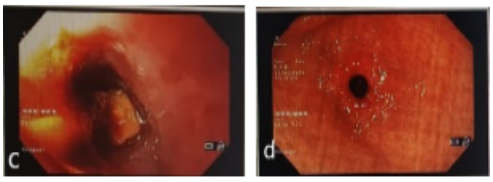
CHART



ENDOSCOPIC IMAGES OF UPPER GI TRACT



a- erosive gastritis b-reflux esophagistis



c- ca-oesophagus d-pangastritis

TABLE 1: Age group of patients (N=100)

Age group (years)	Percentage (%)
25-35	5%
35-44	17%
45-54	25%
55-64	35%
>65	18%

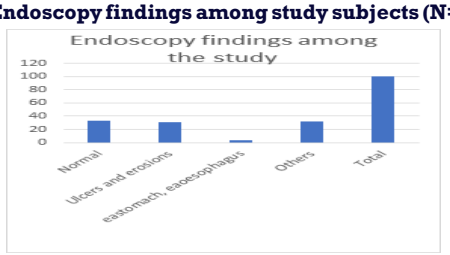
TABLE 2: Frequency of GI symptoms among the study subjects (N=100)

GI symptoms	Percentage (%)
Abdominal pain	29%
Heart burns	14%
Anorexia	9%
Vomiting	7%
Dyspepsia	8%
Total	67%

TABLE 3: Non GI symptoms among study subjects (N=100)

Non GI symptoms	Percentage (%)
Generalise weakness	45%
Breathlessness	20%
Leg swellings	15%
Chest pain	6%
Fatigue	10%
Weight loss	4%
Total	100%

Fig 1: Endoscopy findings among study subjects (N=100)



DISCUSSION

Using WHO criteria for anemia which is haemoglobin level less than 13 g/dl in men and 12 g/dl in women. Iron deficiency anemia (IDA) is most prevalent anemia. IDA due to chronic blood loss usually silent and become evident when patient become symptomatic (5). Following lesions were considered as source of anemia on upper GIscopy (6, 7, 8) Esophagitis with erosion involving at least 5mm of mucosal surface of oesophagus, gastric and duodenal ulcers (>0.5cm in diameter), ademotous polyps (>0.5 cm in diameter), 5 or more vascular ectasia; erosive gastritis or duodenitis (defined as multiple mucosal defects encircled by erythema), hiatus hernia with Cameron lesions, portal hypertensive gastropathy on oesophagogastric varices

Non bleeding causes of anemia included the following:- histologically proven celiac disease (6,7,8), helicobactor pylori associate with chronic gastritis were considered as possible causes of anemia when all other causes were excluded.Studies in patients with IDA without gastrointestinal symptoms are few. It is difficult to conclude what is usual pattern of diseases and factors which can predict the endoscopic outcome in IDA patients without gastrointestinal symptoms (9). In this study the respondents aged 25-80 were selected. The mean age of respondent was 54 years and (33% respondents were 55-64 age group) Maximum and minimum age were 80 and 25 years. More than half of the patients were female 52% and rest were male 48%. Less than one third of the subjects having severe anemia 22% (Hb 6.5-<8g/dl) Most of the subjects had moderate anemia 46 %(Hb8 -<10g/dl) followed by mild anemia 34 %.(Hb 10g/dl to levels within normal limits)

Among the study subjects 33% had normal upper GIT, 67% had lesions on endoscopy, and 31% had ulcers and erosions. 32% had other findings like congestive gastropathy, reflux oesophagitis-hiatus hernia and vascular ectasia of stomach.and 4% lesions are malignancy. Available data in patients with IDA having gastrointestinal symptoms revealed the prevalence of endoscopic lesions is upto 70% while in asymptomatic IDA patients the cause (bleeding and non-bleeding) was found in 85% and bleeding related lesions were found in 37-44%(10) In another study showed that more than half (70.58%) of the respondents having GI lesions on endoscopy had gastrointestinal symptoms and rest had no such symptoms (10) Studies have concluded that prevalence of endoscopic lesions in patients with anemia without GI symptoms is between 48 to 71%(11,12,13), However there is sparse data related to factors predicting GI lesions in this group. High proportion of upper gastrointestinal lesions warrants upper gastrointestinal endoscopy as initial endoscopic procedure in patients with iron deficiency anemia without gastrointestinal symptoms. (14) Effective treatment of patients with IDA is predicted on the identification of a specific reason. (15)

In our study we demonstrate that OGDscopy should be considered in all patients of anemia to identify the cause of anemia. In our study we demonstrate that upper GI endoscopy is valuable in detecting the cause of IDA in patients whether they have symptoms or not so upper GI evaluation by OGDscopy is very important in patients with anemia but sample size of this study was small to draw any reasonable conclusion.

CONCLUSION

Any lesions in gastrointestinal tract can bleed in an occult or obscure fashion. The most common manifestation of occult bleeding in IDA. In our study most of study population had lesions on upper GI endoscopy including malignant lesions, study demonstrate that lesions are more common in patients with GI symptoms than those without GI symptoms. Most common lesions in our study was gastric erosions, oesophageal erosions, gastric and duodenal ulcers followed by congestive gastropathy, reflux oesophagitis, hiatus hernia and malignant lesions like ca oesophagus and castomach.

So routine upper GI endoscopy procedure is essential in evaluating patients with IDA for diagnostic and therapeutic purpose. Effective treatment of patients can be done on identification of specific lesions.

Limitations of our study- In our study we evaluated only upper GI lesions and further study of lower GI lesions by colonoscopy will be required. In this study small intestine distal to 2nd part of duodenum was not visualized, lesions in that part causing anemia could not be detected. Therefore evaluation of small intestine by enteroscopy or capsule endoscopy may identify lesions in those with apparently normal GIT. So we recommend that upper GI endoscopy (OGDscopy) procedure is valuable in patients of anemia with or without gastrointestinal symptoms.

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