International Journal of Medical and Health Research
ISSN: 2454-9142
Impact Factor: RJIF 5.54
www.medicalsciencejournal.com
Volume 3; Issue 10; October 2017; Page No. 44-46

A study of esophageal gastro duodenoscopy and its finding in patients of severe iron deficiency anemia

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Abstract
Background and Objectives: Anaemia is a very common multifactorial condition both among adults and children. Anaemia is one of the major public health problems in India. Iron deficiency anemia due to occult gastrointestinal (GI) blood loss usually remains unnoticed until patient become symptomatic. There is sparse data in anemia patients with or without gastrointestinal symptoms. This study was designed to find out the frequency and predictors of endoscopic lesions in severe iron deficiency anemic with or without gastrointestinal symptoms.
Materials and Methods: A Cross sectional Study of 50 Consecutive patients with severe iron deficiency anemia meeting with Hb<8gm% attending medical services at K.V.G. Medical College Hospital, Sullia, D.K are subjected for upper gastrointestinal endoscopy during the study period.
Result: Of the 50 patients (M-35,F-15),22(M-15,F-7) had normal study,28 (M-20,F-8) had abnormal study of 28 patients 19 had erosive gastritis,4 had esophageal varices, 2 fundal varices, 3 had ca stomach.
Conclusion: There is significant correlation of patients suffering with severe iron deficiency anemia and their upper gastroendoscopic study.

Keywords: anemia, patients, blood, gastrointestinal, symptoms

Introduction

Anaemia is common among general population in developing Asian countries. Iron deficiency is a common cause of anaemia either due to poor intake or chronic blood loss. Iron deficiency anaemia is usually due to chronic gastrointestinal (GI) blood loss when there is no obvious source of bleeding. The standard of care for these patients with IDA includes evaluation of the Gastrointestinal (GI) tract for bleeding lesions [1].

Iron deficiency anemia is considered as an alarm sign for the presence of possible GI malignancies, and inadequate evaluation of patients with IDA may delay the diagnosis of GI tumors especially colorectal cancer [2].

In 20% of patients with IDA a routine upper and lower GI endoscopy may not ascertain GI cause during hospital admission [3].

The available literature, in heterogeneous groups including old age patients and postmenopausal women with IDA, has shown GI lesions in 40 – 70% [4-6].

Studies have shown that increasing age, male gender, ferritin level, prior NSAIDs use, positive fecal occult blood test were factors predictors of endoscopic lesions in patients with IDA with and without GI symptoms [7-11].

Studies have concluded that prevalence of endoscopic lesions in patients with IDA without GI symptoms is between 48 – 71%, [9- 12].

However there is a sparse data related to factors predicting GI lesions in this group.

Important implications for the recognition of iron deficiency anaemia include diagnosis and correction of underlying causes, most of which are identifiable, by means of conventional upper gastrointestinal endoscopy and colonoscopy [13].

Many studies have concluded that on evaluation of Gastrointestinal Tract for IDA; most of the lesions were in lower GI Tract and have recommended that evaluation for IDA should be started with lower GI examination [14-16].

There is scanty data to predict the nature and site of GI lesions in IDA patients without gastrointestinal symptoms. Therefore there is a need for studies especially from developing asian countries, which may establish endoscopic findings and their predictors in this group. Primary aim of the study was to identify the predictors of gastrointestinal lesions diagnosed endoscopically in patients with iron deficiency anemia without gastrointestinal symptoms.

In patients with site-specific symptoms, the sequence of diagnostic testing is guided by the symptoms.4,5 However, the approach to patients with IDA without GI symptoms is controversial due to a lack of data regarding the types and the locations of the lesions.

Both American and European guidelines for the evaluation of asymptomatic IDA recommend performing colonoscopy and/or oesophagogastroduodenoscopy (EGD) in an arbitrary order [17, 18].

Materials

Place of Study-KVG Medical College Hospital, Sullia.

Setting - In Patients and Outpatients attending in KVG

Medical College Hospital, Sullia.
Study Design: Cross-Sectional Study.
Period of Data Collection: One Year.
Study Population/ Sample Size -50(Sample Size Fifty).

Case Selection
Consecutive patients with severe anemia meeting the inclusion criteria, attending medical services at K.V.G. Medical College Hospital, Sullia, D.K. during the study period.

Methodology of data collection
A clinical study will be done on 50 patients of severe iron deficiency anemia attending as inpatient and/ or outpatient at department of medicine, KVG Medical College Hospital, Sullia. Patients will undergo upper gastrointestinal endoscopy and its findings will be correlated with severe iron deficiency anemia.
A detailed and thorough clinical history and physical examination is taken and relevant investigations are done.

Inclusion Criteria
- All patients with severe anemia (Haemoglobin < 8 g/dl).[8]

Exclusion criteria
- Any contraindication to endoscopic studies.
- Pregnancy.
- Non consenting participant

Investigation or intervention on patient
1. Blood tests (haemoglobin, red cell distribution width, peripheral blood smear, mean corpuscular volume, mean corpuscular haemoglobin concentration, fasting blood sugar, serum. albumin, serum. creatine)
2. Ultrasonography abdomen.
3. Upper GI endoscopy.

Prior consent for blood tests, Ultrasonography and endoscopy have been taken

Observations & Results
Of the 50 patients:
1. 35 were men & 15 women.
2. Mean age of 49+/-15 yrs.(Min 20,Max 77)
3. Mean Hb% - 5.9 +/- 1.7
4. 60% (30) patients had positive findings on endoscopy

Table 1

Endoscopic abnormal findings	No. of patients
Erosive gastritis	19
Peptic ulceration	3
Esophageal varicies	4
Fundal varix	2
Ca stomach	3

There is significant correlation between endoscopic findings in severe anaemia by chi square test ($p < 0.001$).

Discussion
Anemia is the most common hematological disorder encountered in general practice and iron-deficiency is the most common cause, worldwide.
In our study, 58% (29/50) had iron deficiency. We found no correlation between the gastrointestinal symptoms and presence of lesion. The majority of our patients were asymptomatic, comparable to study reported by Bini *et al*.
The most common cause of anemia in men and postmenopausal women is gastrointestinal blood loss.Evaluation of the gastrointestinal tract by using endoscopy is indicated in these patients, even in the absence of gastrointestinal symptoms and/or fecal occult blood.
Even in the absence of GI symptoms, upper GI endoscopy will help to identify the LESIONS in most anemic patients.

Table 2

	Our study	Kepczyk and Kadakia	Gordon *et al.*	Rockey and Cello	Mcintyre and Long	Hsia and Al Kawas	Zukermana and Benitez	Cook *et al.*
Number of Patients	50	70	170	100	111	70	100	100
Malignants lesion	6	7	0	1	7	0	1	6
Gastric or esophagitis	38	30	15	12	20	3	20	28

Comparison of our findings with those of recently published papers reveals that the percentage of pathologic lesions in the upper GI tract varies considerably, from 13 to 55%.

Conclusion
There is statistically significant correlation between patients with severe anemia and their endoscopic study. We strongly recommend the need for upper GI endoscopy in evaluation of every patient with severe anaemia.

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