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Role of Upper Gastrointestinal Endoscopy as a Diagnostic Tool in Gastro Esophageal Reflux Disease – Prospective Study

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Abstract
Aims and Objectives: *One of the common condition presenting in the surgical outpatient department is uninvestigated dyspepsia. The prevalence and predictability of the upper gastrointestinal findings in a case of uninvestigated dyspeptic patient is unknown by history. A study was undertaken using upper GI endoscopy as a diagnostic tool to find various causes of dyspepsia / Gastro eosophageal reflux disease prevailing in our rural locality aiming to study the outcome of Upper GI endoscopy in dyspeptic patients and the co-relation of alarm symptoms with GI endoscopy finding.*
Materials and Methods: *Prospective observational study was conducted on 150 patients aged between 18 – 80 years presenting with untreated, uninvestigated and uncomplicated dyspepsia admitted with upper gastrointestinal symptoms. After obtaining ethical committee approval, and getting informed and signed consent from the patients upper gastro-intestinal endoscopy was performed and documented.*
Results: *Most common presenting complaint was epigastric pain and discomfort; and most common endoscopic finding was gastritis followed by GERD. 71.3% of patients had clinically significant endoscopic findings with un-investigated dyspepsia.*
Conclusion: *In the study conducted it was found that 71.3% of them with un-investigated dyspepsia had clinically significant upper GI endoscopic findings. Most of them had three or more dyspeptic symptoms. Low incidence of malignancy and larger number of inflammatory lesions were noted in the study group. Based upon this study it is suggested that un- investigated dyspeptic patients who present to the outpatient department can be safely treated conservatively initially with acid suppressive therapy, diet and life-style modification. Review endoscopy may be undertaken in patients with recurrent symptoms or in whom drug therapy fails.*
Keywords: *Upper GI endoscopy; dyspepsia; GERD.*

Introduction

The term dyspepsia mean discomfort / pain localized to the upper abdomen and mid chest [= Rome]. The key symptom being upper abdominal pain. Unexplained uneasiness in upper abdomen is termed discomfort, which include early satiety, fullness in upper abdomen, acid regurgitation, nausea, bloating and vomiting as symptoms. Both

pain and discomfort may occur individually or may co exist. Dyspepsia is symptoms in patients that may be continuous or intermittent where the duration is not specified which can be long or short. Dyspepsia which is acute is usually self – limiting does not require any further evaluation is excluded in this study. Chronic dyspepsia with unexplained findings have been classified as Non –functional / ulcer dyspepsia. Though causative factors and patho –physiology of the Functional dyspepsia is unclear, motor and sensory diseases of the duodenum and stomach has got a pivotal role in subset of cases.

Materials and Methods

Prospective observational study was conducted on 150 patients aged between 18 – 80 years presenting with untreated, uninvestigated and uncomplicated dyspepsia admitted with upper gastrointestinal symptoms .After obtaining ethical committee approval, and getting informed and signed consent from the patient's upper gastro-intestinal endoscopy was performed and documented. The patients admitted with upper gastrointestinal symptoms were studied in terms of: History; Blood investigations: complete heamogram, random blood sugar, HbsAg, HIV; Radiological investigations: X ray Chest PA view, Ultrasound abdomen and pelvis. Patients on Proton pump inhibitors, known cases of chronic pancreatitis and liver disease, NSAID's for more than one month duration, aged less than 18 years ,had received Anti-Helicobacter pylori treatment and unwilling or unfit for endoscopy were excluded from the study. All patients underwent upper gastro-intestinal endoscopy to document the various findings. Biopsies were taken in every patient from the gastric antrum and pathological site. The biopsy specimen was subjected to histopathological examination for confirmation. The findings were documented and analysed.

Study

Out of 150 patients presented to our hospital with symptoms of dyspepsia for 4 or more than 4 weeks Upper Gastro Intestinal endoscopy was done. Various dyspeptic findings observed on endoscopy were recorded and studied. Post procedure all the patients were observed for any complication and discharged in stable condition with appropriate treatment, relevant advice and follow-up.

Table-1: Various endoscopic finding in patients with dyspepsia

S. No	Diagnosis	Total	%
1	Normal	43	28.7
2	Gastritis	43	28.7
3	Eosophagitis	16	10.6
4	Hiatus hernia	15	10
5	Duodenitis	07	4.6
6	Duodenal ulcer	05	3.3
7	Lax hiatus	04	2.7
8	Carcinoma stomach	03	2
9	Gastric ulcer	03	2
10	Gastric outlet obstruction	03	2
11	Antral polyp	02	1.3
12	Eosophageal stricture	02	1.3
13	Eosophageal varices	01	0.7
14	Eosophageal candidiasis	01	0.7
15	Epiglottic cyst	01	0.7
16	Carcinoma duodenum	01	0.7

Fig 1: Histogram depicting various dyspeptic conditions

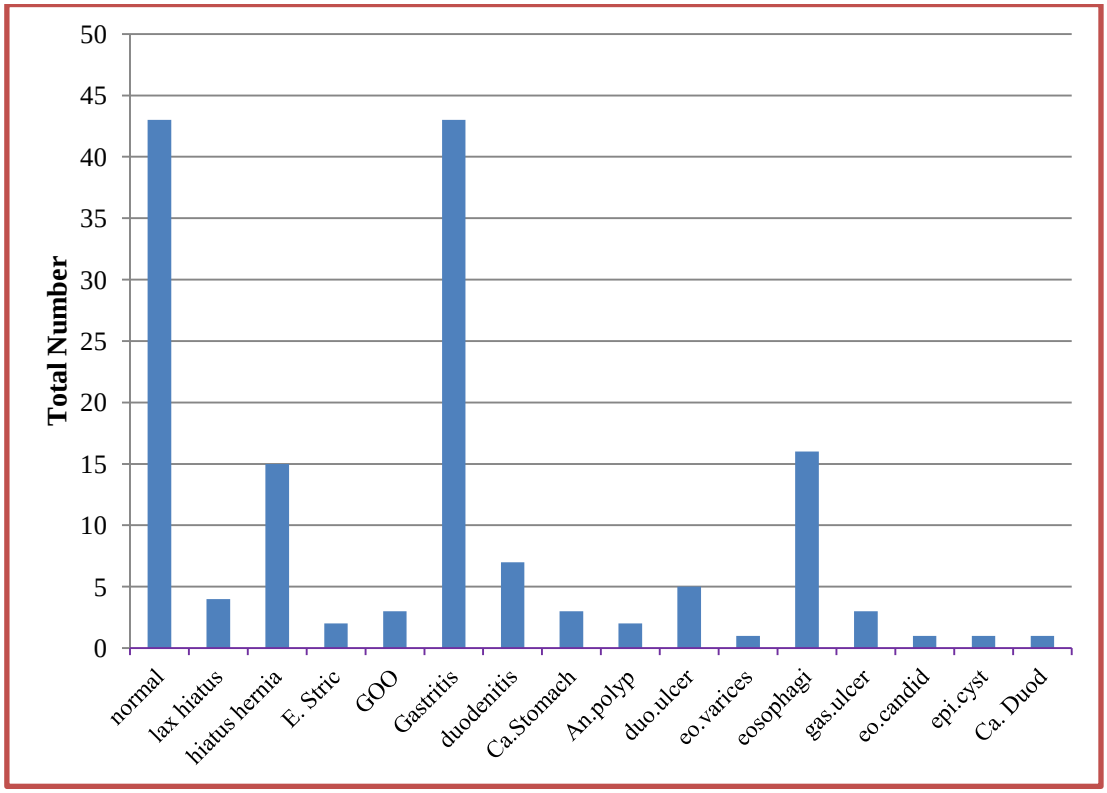
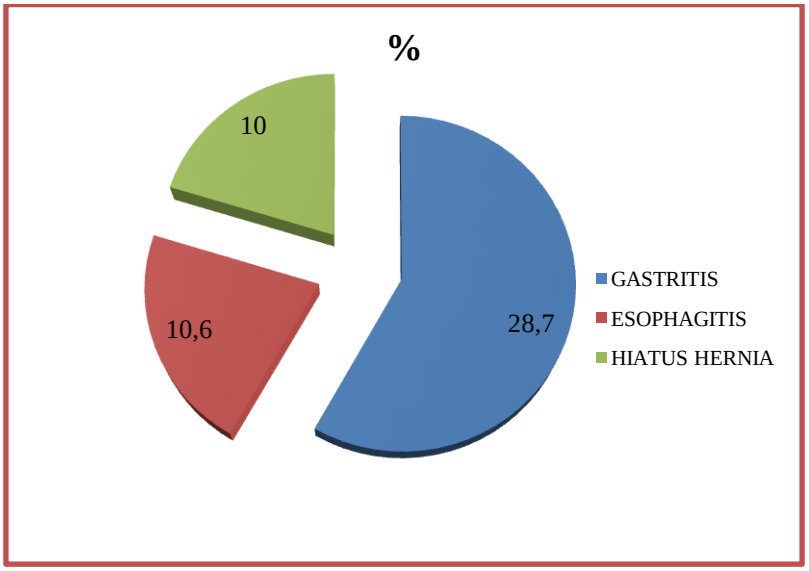


Table 2: Most common cause of GERD

S. No	Diagnosis	%
1	Gastritis	28.7
2	Esophagitis	10.6
3	Hiatus hernia	10

Fig 2: Most common cause of GERD



Majority of the cases of dyspepsia were Gastritis, Esophagitis and Hiatus hernia

Table 3: Frequency of various diseases on endoscopy

	Normal Study	H.H/ GERD	Infla lesion	Malig	Ulcer	Others	Total	%
Total	43 (28.7%)	18 (12%)	66 (44%)	05 (3.3%)	08 (5.3%)	10 (6.7%)	150	100%

Fig 3: Frequency of various diseases on endoscopy

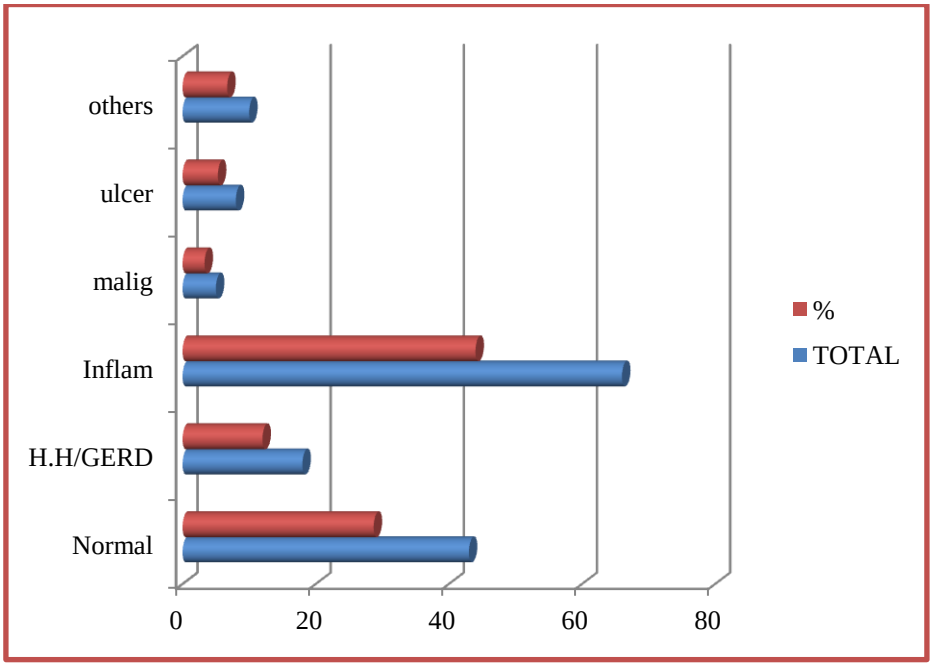
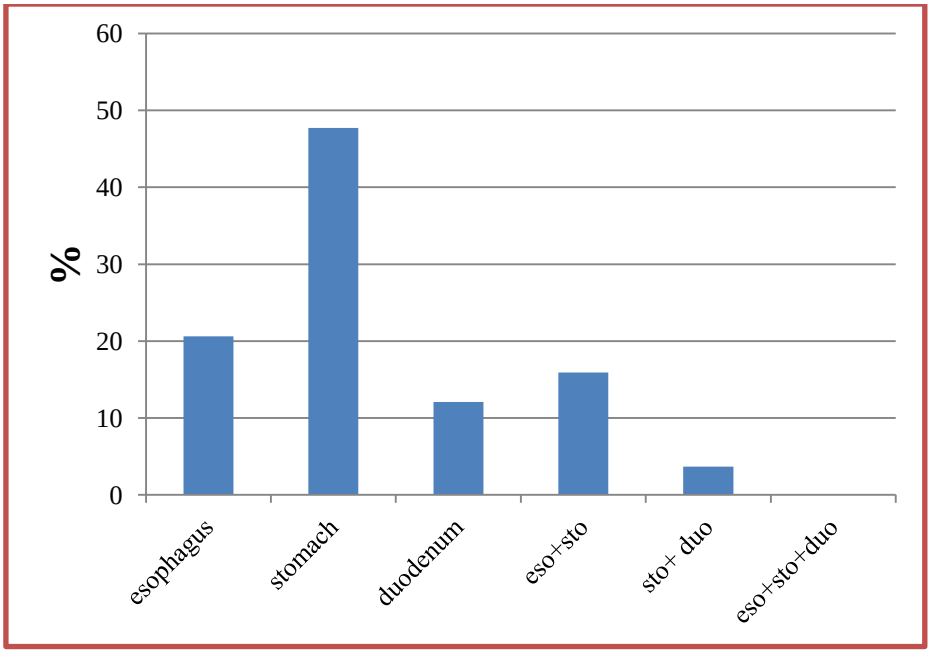


Table 4: Prevalence of clinically significant endoscopic finding according to the site of lesions

S. No	Site	Total	%
1	Esophagus	22	20.6%
2	Stomach	51	47.7%
3	Duodenum	13	12.1%
4	Esophagus + Stomach	17	15.9%
5	Stomach + Duodenum	4	3.7%
6	Esophagus + Stomach + Duodenum	0	0%
	Total	107	100%

Fig 4: Prevalence of clinically significant endoscopic findings according to the site of lesion

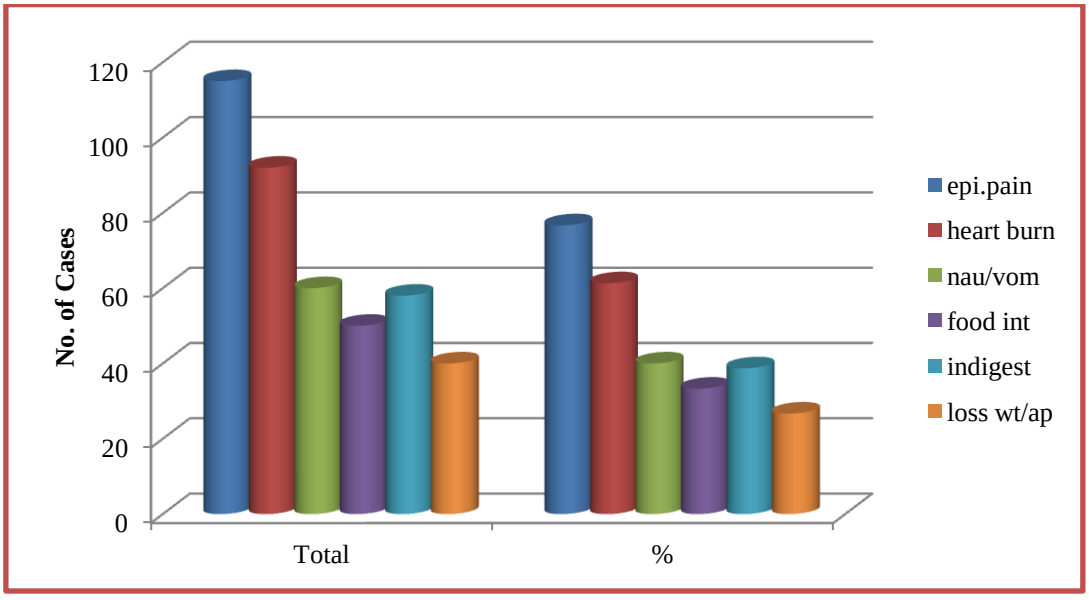


Out of 107 patients with clinically significant endoscopic findings, most common pathology was seen in stomach of 51 (47.7%), patients followed by esophagus 22 (20.6%) and esophagus with stomach 17 (15.9%).

Table 5: Frequency of various symptoms of dyspepsia

S. No	Clinical presentation	Total	Percentage
1	Epigastric pain	115	76.7%
2	Heart burn	92	61.3%
3	Nausea/vomiting	60	40%
4	Food intolerance	50	33.3%
5	Indigestion	58	38.7%
6	Loss of weight/appetite	40	26.7%

Fig 5: Frequency of various symptoms of dyspepsia



Out of 150 patients, the most common component of dyspepsia was epigastric pain and discomfort, seen in 115 (76.7%) patients, followed by heart burn in 92 (61.3%) patients nausea and/or vomiting 60(40%) patients, food intolerance in 50 (33.3%) patients, indigestion in 58 (38.7%) patients and loss of appetite and/or weight in 40 (26.7%) patients.

Comparison of Various Endoscopic Findings

In the present study, clinically significant endoscopic findings were observed in 107 patients accounting for 71.3%. Gastritis was by far the most common finding (28.7%), while GERD was found in 12%. The next common findings were esophagitis 10.6%, hiatus hernia 10%, duodenitis 4.6%, duodenal ulcer accounting for 3.3 and gastric ulcer 2%. The percentage of cases with gastritis in this study was higher than that observed in studies by Sarwar et al and Ziauddin. The percentage of patients GERD were less than that observed by Sarwar et al.

Table 6: Comparison study

S. No	Name of the study	Gastritis	Reflux esophagitis/GERD
1	Sarwar et al.39	13%	20%
2	Ziauddin40	18%	14%
3	Present	28.7%	12%

Results

- Most common presenting complaint was epigastric pain and discomfort
- Most common endoscopic finding was gastritis (28.7%) followed by GERD
- Malignancy was diagnosed in 2.7% patients with dyspepsia.
- 71.3% of patients had clinically significant endoscopic findings with un-investigated dyspepsia.

Majority of patients presented with three or more dyspeptic symptoms and the symptom profile was not predictive of the endoscopic findings. Since most patients presented with gastritis, can be safely managed initially with acid suppressive drugs given the high prevalence of gastritis (28.7%).

Conclusion

In the study conducted it was found that 71.3% of them with un-investigated dyspepsia had clinically significant upper GI endoscopic findings. Most of them had three or more dyspeptic symptoms. Low incidence of malignancy and larger number of inflammatory lesions were noted in the study group. Based upon this study it is suggested that un- investigated dyspeptic patients who present to the outpatient department can be safely treated conservatively initially with acid suppressive therapy, diet and life-style modification. Review endoscopy may be undertaken in patients with recurrent symptoms or in whom drug therapy fails.

Declaration of Conflict of Interest: There is no conflict of interest

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