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ORIGINAL ARTICLE

ENDOSCOPIC EVALUATION OF DYSPEPTIC PATIENT IN TERTIARY CARE HOSPITAL

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Abstract:

Objectives: *To observe the organic change occurs in dyspeptic patient by upper gastrointestinal endoscopy.* ***Methods:*** *The present prospective, observational, cross sectional study was conducted at Medicine and Gastroenterology department of Sir Salimullah Medical College & Mitford Hospital, over a period of 6 month from 2019 to 2020.The study population was 200with aged18 years and above, irrespective of sex and who were suffering from dyspeptic symptoms for at least 6 months duration. Data regarding the demographic profile of study population nand endoscopic findings were processed and analyzed using software SPSS (Statistical Package for social science) version 26.* ***Results:*** *It was observed that most of the dyspeptic patients 71%were showing normal endoscopic findings and 29% have abnormal endoscopy findingwhere majority of the patient were 51 – 70 years of age.Out of them 41% of male and 26% of female had organic changes. It was also found that 46% of the patients were smoker and among them 34(37%) had abnormal endoscopic finding where 24(22%) non-smokerpatient had abnormal finding, which were statistically significant (p,0.05) between two group. Among abnormal endoscopic finding, 11% gastric erosions, 08% gastric ulcer, 04% duodenal erosions, 03% duodenal ulcer, 02% reflux oesophagitis, and carcinoma stomach rare 01%.* ***Conclusion:*** *The study concludes that majority of patients with complaints of dyspepsia have no organic lesion and can be considered non ulcer dyspepsia. The common abnormal endoscopic findings included gastric erosion and gastric ulcers relating to dyspepsia. The study findings also suggest that smoking is a risk factor for developing organic changes in dyspeptic patients specially in middle age group.*

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Introduction:

Dyspepsia is any symptom of the upper gastrointestinal tract (GI), present for 4 weeks or more, including upper abdominal pain or discomfort, heartburn, acid reflux, nausea, or vomiting[1]. Functional dyspepsia is diagnosed when an organic etiology for the symptoms is not identified. The disorder is defined by Rome IV criteria and sub classified into postprandial distress syndrome and epigastric pain syndrome[2].Dyspeptic symptoms can be classified as reflux-like, ulcer-like, dysmotility-like, and unspecified (non-specific) dyspepsia.[3] Chronic dyspepsia was defined as dyspeptic

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symptoms present for at least 25% of the time for at least one month.[4]

Chronic and recurrent dyspeptic symptoms such as epigastric pain, postprandial fullness and early satiety are common in the general population.[5,6]Dyspeptic symptoms may be associated with endoscopically negative conditions such as functional dyspepsia, or with organic lesions such as peptic ulcer, oesophagitis and carcinoma stomach, which are easily detected by endoscopy. On the other hand, such lesions may also be asymptomatic and there is not always a clear cause and effect relationship between endoscopic findings and symptoms.[7,8], the recent decline in the prevalence of Helicobacter pylori and peptic ulcer and the parallel increase in oesophagitis may also have an impact on the association between dyspeptic symptoms and endoscopic findings.[2,8] An improved understanding of the association between dyspeptic symptoms and endoscopic findings is essential to improve the management of patients with uninvestigated dyspepsia whose approach is initially empiric and symptom based.[4,5,9] In this study our aim was to obtain the endoscopic findingsin patient having dyspeptic symptoms and to improve themanagement of patient in the light of the findings thoseare more common.

Methods:

The present prospective, observational, cross sectional study was conducted on dyspeptic Patient undergoing upper gastrointestinal endoscopy in medicine and gastroenterology department of Sir Salimullah Medical College & Mitford Hospital, over a period of 6 months from 1st November 2019 to 1st April 2020. Criteria for entry into the study were follows :i)Age>18yrs ii)Both sexes iii)All patient with one or more than one of the following symptoms : Bothersome post prandial fullness ,Early satiety, Epigastric pain, Epigastric burning sensation. Patients having following conditions were excluded: i) Patient refusing to give written consent to participate the study. ii) Patient with hepato-billiary and pancreatic disorders(eg: cholelithiasis, chronic pancreatitis and pancreatic cancereтc). iii)Patient who had underwent gastric surgery. iv)Pregnant woman. All selected dyspeptic patients(200) were interviewed with a preformed questionnaire. After maintaining full sterilization and proper technique upper gastro-intestinal endoscopy was done and record the upper G.I. endoscopy findings and data was recorded on the questionnaire. Participants were encouraged to take part in the study voluntarily. Informed written consent was obtained after a brief of the study in Bengali described to all respondents. It was made clear to them that they are free to take part or refuse the study. Every attempt was taken to conduct the interview privately. Statistical analyses related with this study were performed by use of SPSS 26 package program. In the course of the evaluation of the data gathered, descriptive statistical methods were used. Data cleaning, validation and analysis were performed. Descriptive & analytical statistics was applied where needed.

Operational definitions:

Dyspepsia

Dyspepsia is any symptom of the upper gastrointestinal tract (GI), present for 4 weeks or more, including upper abdominal pain or discomfort, heartburn, acid reflux, nausea, or vomiting.[1]

Endoscopic gastritis

Endoscopic inflammation may be diagnosed when some or all of the following abnormalities are unequivocally present: edema, erythema,exudate, evidence of mucosal breaks, intramural bleedingspots, rugal changes, etc.

Endoscopic atrophic gastritisis diagnosed when the vascular ramifications are visible when the stomach is not overdistended

Gastric ulcer

Defect or tissue loss that extends through the muscularis mucosa into the submucosal layer. Uniform colour without nodularity or irregularity meets the ulcer base in a benign ulcer. Any pattern other than this normal appearance should suggest possible malignancy . At least 6–10 biopsies should be taken from any gastric ulceration, not only from the base but also from the four quadrants of the edges.

Gastric cancer

Early gastric cancer may be potruded, superficial, or excavated. Advance gastric carcinoma may be large polypoid cauliflower-like mass ,ulcerated mass or fungating lesion with sharp margins ,diffusely infiltrating with superimposed ulcerations.[10]

Results:

Table 1 shows that total71% patients have normal endoscopic findings and 29% patients have abnormal endoscopic findings where 83% patients below 30 years were normal.

Table - I

Distribution of dyspepsia by age (n = 200)

Age(years)	Frequency	Percentage	Normal endoscopic findings	Abnormal endoscopic findings
<30	86	43.0	72(83%)	14(17%)
31-40	46	23.0	32(69%)	14(31%)
41-50	24	12.0	14(58%)	10(42%)
51-60	20	10.0	10(50%)	10(50%)
61-70	16	08.0	10(62%)	06(48%)
>70	08	4.0	04(50%)	04(50%)
Total	200		142 (71%)	58 (29%)

Table II

Distribution of dyspepsia by sex

Sex	Frequency	Percent+age	Normal	Abnormal
Male	116	58%	80(69%)	36(31%)
Female	84	42%	62(74%)	22(26%)
Total	200		142	58

Table II shows that of 200 dyspeptic patients 116 were male and rest 84 was female.

Table-III

Distribution of patient by behavioral factors (n= 200)

Patients habit	Frequency	Percentage
Smoker	92	46%
Tobacco chewer	24	12%
Taking tea	96	48%

Table III shows 46% patients were smoker and almost all of them were male, 12% patients were tobacco chewer and 48% taking tea.

Table-IV

Abnormal endoscopic findings among smokers

	Normal endoscopic findings	Abnormal endoscopic findings
Smoker	58(63%)	34(37%)
Non smoker	84(78%)	24(22%)

P= 0.022

Table IV shows that 34(37%) patients had abnormal endoscopic finding in smoker and 24(22%) patients had abnormal endoscopic finding in non smoker. The difference was statistically significant ($p<0.05$) between two group.

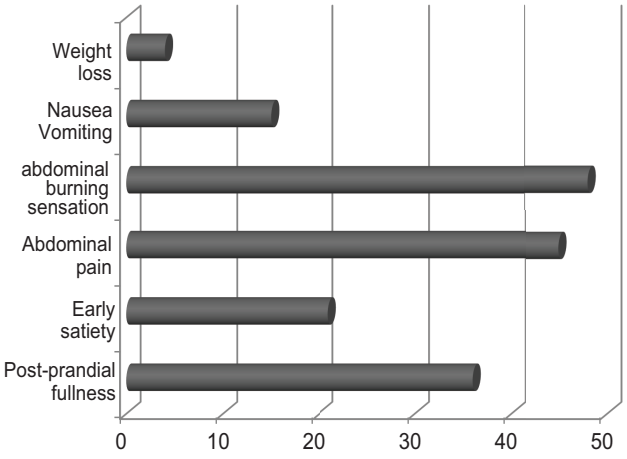

Fig.-2: *Distribution of patient by presenting complaints and associated symptoms*

Figure:2 Almost all patients (90%) had at least two dyspepsia symptoms at baseline, and more than 70% had at least three symptoms. Among them most of them presented with abdominal pain (45%) and abdominal burning sensation (48%).other symptoms post prandial fullness (36%), early satiety (21%), nausea vomiting (15%), weight loss(4%)

Table V
Distribution of patient by types of endoscopic findings

Types of abnormal endoscopic findings	Total
Normal	142(71%)
Gastric ulcer	16(8%)
Gastric erosion	22(11%)
Duodenal ulcer	06(3%)
Duodenal erosion	08(4%)
Reflux esophagitis	04(2%)
Carcinoma stomach	02(1%)

Table-V shows majority (71%) of dyspeptic patients did not exhibit any abnormality on endoscopy examination. Different types of abnormal endoscopic findings are illustrated in table (VII). The commonest ones are gastric ulcer (8%), gastric (11%) erosion and duodenal ulcers (4%).

Discussion:

This prospective study was conducted with an aim to observe organic changes occurs in dyspeptic patients by upper gastrointestinal endoscopy.In this present study 200 patients presenting with dyspepsia at hospital over a 6 months period were assessed. Our goal was to describe association between demographic variableand endoscopic findings among patients with dyspepsia. The study findings were discussed and compared with previously published relevant studies.

In this study,71% patients have normal endoscopic findings and 29% patients have abnormal endoscopic findings where majority of the patient were 51 – 70 years of age.We observed thatpatient below age of 30 years presented with dyspepsia were normal andendoscopy not routinely needed for further management. A study conducted in south Africa suggested that,Patients > 60 years with dyspepsia symptoms should undergo a routine endoscopy[12]. Another study which was conducted in America, observed that abnormal endoscopic findings are more common in age group more than 55 years [14].

In this study, we found that abnormal endoscopic finding was slightly higher in male than female. We observed that 36(41%) male had abnormal finding among 116(58%) patients and 22(26%) female had abnormal finding among 84(42%) patients.Ghosh D et al. [15] conducted study in Bangladesh, reported that out of 72 patients, 46 (63.9%) individuals were male and 26 (36.1%) individuals were female which is almost comparable to our study.A study conducted in India, Out of two hundred and seven patients with dyspepsia., (58.4%) were male and 86(41.5%) were female. Our study was similar to those studies[17]

In our present study, over 46% of the patients were smoker, 12% and 48%had habit of tobacco chewing &taking tea.Among smoker 34(37%) had abnormal endoscopic finding and among non-smoker 24(22%) had abnormal finding, which were statistically significant (p,0.05) between two group. Among smokers abnormal endoscopic findings are, 11% gastric erosions,08% gastric ulcer, 04% duodenal erosions,03% duodenal ulcer, 02% reflux oesophagitis, and carcinoma stomach rare 01%.This study is almost comparable to the findings of Ghosh D et al.study[16]conducted in Bangladesh.

Overall findings of endoscopy of upper GIT were 55.6% normal, 8.3% reflux oesophagitis, 22.2% gastric erosions, 2.8% gastric ulcer, 5.6% duodenal erosions and 5.7% duodenal ulcer . In another study, Zagari R et al. reported that out of 1,033 study population, endoscopic findings was normal in 76.8%. Abnormal endoscopic finding was present in 23.2% whereesophagitis was 11.8%, Barrett's esophagus 1.3%, Peptic ulcer 5.9%, Gastric ulcer 2.0%, Duodenal ulcer 3.9%, Gastroduodenal erosions 5.3%, Gastric neoplasia 1.1% also comparable to this study.[13]

Conclusion:

The study concludes that majority of patients with complaints of dyspepsia have no organic lesion and can be considered non ulcer dyspepsia. The common abnormal endoscopic findings included gastric erosion and gastric ulcers relating to dyspepsia. The study findings also suggest that smoking is a risk factor for developing organic changes in dyspeptic patients specially in middle age group.

Limitations:

The present study was conducted on small sample size as such the findings cannot be generalized to reference population.As the study was hospital based study the findings may not truly reflect the dyspepsia of community populations.

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Declaration of interest:

The authors report no conflict of interest.

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Ethical consideration:

The study was conducted after approval from the ethical review committee. The confidentiality and anonymity of the study participants were maintained.

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