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Clinical Profile and Oesophago- Gastro- Duodenal Endoscopic Findings in Elderly

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Abstract: The endoscopic procedures are becoming widely available all over the world. The level of expertise needed for endoscopy has also risen significantly. As a result, the number of endoscopic procedures has increased in countries like India. Among the patients undergoing endoscopic investigations and therapy, the patients of age 60 years and above are very high in numbers. The indications range from very much benign to malignant diseases. This study focuses on the elderly patients i.e. patients, more than 60 years of age, who underwent the Oesophago-gastro-duodenoscopy (OGD scopy) for various indications. Total of 198 patients were enrolled by serial recruitment in this observational study, out of which 134 were males and 64 were females. Addictions were found in 71 of these patients, in the form of either tobacco use or alcoholism or both. Most common indications for OGD scopy in our study were hematemesis, dyspepsia and dysphagia. Other indications being anaemia, splenomegaly, chronic abdominal pain ect. Most common cause for hematemesis in our study was Oesophageal varices i.e. 37. Portal gastropathy was seen in 27 patients. Gastric Antral Vascular Ectasia (GAVE) was seen in 5 patients Gastric and/or duodenal ulcers were found in 25 patients. The most frequent cause for dysphagia was oesophagitis. In endoscopic findings, gastritis was the most common. Maximum number of patients was having antral gastritis. Twenty-five patients with peptic ulceration underwent Rapid Urease Test (RUT) for the diagnosis of H. pylori infection and 16 out of them showed positive results.
Keywords: Elderly, Oesophago-gastro-duodenoscopy, Gastritis, Rapid urease test, H. pylori infection.

INTRODUCTION

Worldwide acceptance of Geriatrics as a separate branch has led to special attention to the problems of elderly. Now almost all the diseases can be divided by their profile in young, middle aged and elderly. We have focused our attention to elderly coming to our tertiary care hospital, either OPD or IPD with upper gastro-intestinal complaints.

We have considered patients of age 60 and above for the collection of data. Although ligament of Treitz marks the boundary between upper and lower gastro- intestinal tracts we have evaluated the patients with endoscopy up to 2nd part of duodenum which is the furthermost part accessible to usual endoscopes. When the diagnosis was not clear after OGD scopy or warranted further evaluation, they were advised and subjected to advanced studies like push enteroscopy, capsule endoscopy, colonoscopy and CT scan of abdomen.

As the age progresses, myriads of patho-physiological changes occur in all the systems of body, including the gastro- intestinal tract. The most common changes are loosening of the lower gastro- oesophageal valvular mechanism. This leads to development of various types of hiatus hernia causing symptoms of GERD of different severities. Aging also leads to reduced motility, stasis of food, reduced stomach acid content, malignant growths leading to various other symptoms.

Its very likely for elderly patients to have addictions, most frequent being tobacco and alcohol. These addictions over a sufficiently long period can be associated with GERD, Carcinomas of upper GI tract, gastritis and chronic liver disease producing portal hypertension.

With the significant co-morbidities like ischaemic heart disease, Diabetes mellitus, hypertension, peripheral vascular disease; elderlies are started on multiple anti-platelets, anti-coagulants, antihypertensives, anti-diabetic, hypolipidemic agents etc. This polypharmacy is often responsible for gastro-intestinal side effects like gastritis, ulcerations, nausea, vomiting, hematemesis, pill oesophagitis etc.

Fifth and sixth decades are also very likely periods for presentations of HBsAg and HCV related hepatic and gastro- intestinal complications like portal hypertension, portal gastropathy and varices. In this study we have studied the gastrointestinal complaints in elderly and their correlation with the endoscopic findings.

MATERIALS AND METHODS

It is a retrospective observational study where patients of age 60 and above, having complaints regarding upper gastro- oesophageal functioning as well as other systemic problems where OGD scopy is indicated for diagnosis and management, were included. Patients were recruited from both outpatients as well as inpatient departments.

Inclusion criteria

1) All the patients with age 60 & above with history and examination suggestive of upper gastro- intestinal disorder and needed evaluation with OGD scopy.

Exclusion criteria

1) Patients below 60 years of age with gastro- intestinal problems. 2) Patients with history and examination suggestive of lower gastro- intestinal tract disorder.

Sampling method

This study included the patients over the span of 9 months. All the patients admitted in wards as well as attending the general medicine and gastroenterology OPD, who satisfied the above criteria were included in the study after due consent. Historical points like addictions, co-morbidities, previous medical and surgical treatments, current medications, onset, duration and progress of presenting complaints were noted. Patients were examined systemically for any other system involvement.

Each patient was subjected to blood investigations like complete blood counts and blood indices, liver and renal function tests whenever indicated and viral markers (HBsAg, anti- HCV, HIV ELISA). Ultrasound examination of abdomen and contrast enhanced CT scans were also obtained whenever deemed necessary by patients' symptoms and general condition. Colonoscopy was advised for some patients who were having indications for same.

Patients admitted to wards with urgent indications underwent endoscopic evaluation in 12 to 24 hours of admission. Patients attending OPD were evaluated endoscopically within 24 to 48 hours. Patients were advised overnight fasting for endoscopy. Local anaesthetic spray of Lignocaine was used for procedure. Whenever indicated due biopsies were taken. Endoscopic variceal ligation and glue, sclerotherapy was used for varices whenever necessary.

Data interpretation was done by comparing our results with results of similar studies conducted in past. Data analysis was done by an independent and neutral bio-statistician.

RESULTS

Table 1 indicates the age & sex wise distribution of patients participating in the study. As shown in table most of the patients were from 60 to 80 years of age. It is also obvious from the table that almost 67% patients were males while 33% females. This may be due to higher number of addictions and probably also the co-morbidities found in males as compared to females.

Table-1: Age & sex distribution

Age group (years)	Males	Females	Total
60- 69	85	45	130
70- 79	44	16	60
80- 89	5	3	08
Total	134	64	198

Table 2 indicates the number of patients with co-morbidities in our study. The most frequent co-morbidities being diabetes mellitus, hypertension, malignancies, chronic kidney disease. Forty-five patients were males and 31 were females who had co-morbidities.

Table-2: Comorbidity and addictions data

Comorbidity/ Addiction	No. of patients
Diabetes Mellitus/Hypertension/IHD	36
Chronic kidney disease	10
Non-Gastrointestinal malignancies	1
Alcoholism and/or smoking	71

The next, table 3 shows the data about symptomatology of the patients. It depicts the most common presenting symptoms in our patients.

Table-3: Symptomatology

Symptom	No. of patients	% (approx.)
Hematemesis & Melena	44	22
GERD related symptoms	96	49
Malabsorption related symptoms	10	5
Anaemia	25	13
Dysphagia	19	9
Others	4	2

The most common symptoms were of dyspepsia, which are epigastric pain, nausea, vomiting, and fullness of abdomen after meals, found in 49% patients. These patients also underwent Rapid Urease testing for H. Pylori infection. Upper gastro-intestinal blood loss i.e. hematemesis and melena were the next most common complaints. Dysphagia was a presenting complaint in 19 patients out of which 3 patients had malignant growths, 2 had strictures, 1 had oesophageal web and others had oesophagitis or hiatus hernia. Patients were also investigated for complaints like chronic diarrhoea, weight loss, vitamin and mineral deficiencies which suggested probable malabsorption syndrome. Twenty-five patients with anaemia were also investigated to rule out foci of blood loss and to look for fundal mucosal atrophy. Other indication was metastases with unknown primaries, screening in connective tissue disorders etc.

Table no. 4 is indicative of various endoscopic findings and their frequencies those were observed in our patients. Only the most frequent findings are shown in the table in descending order of frequency. The table no. 4 shows the findings in pharynx and oesophagus while table number 5 shows stomach and duodenum related findings. We divided findings in this fashion for the purpose of analysis.

Oesophagitis and hiatus hernia were found in total of 34 patients out of which 24 were males and 10 were females. In the male group 12 patients i.e. 50% were having tobacco and alcohol addiction.

Table-4: Oesophageal Endoscopic findings

Endoscopic finding in Oesophagus	No. of patients
Oesophageal varices	37
Oesophagitis + Hiatus hernia	34
Candidiasis	8
Mallory Weiss tear	6
Neoplastic growths	3

Table 5 here shows the stomach and duodenal findings on endoscopy. The most common finding was gastritis. The involvement of the antrum was very high i.e. 62 patients as compared to pangastritis, fundic gastritis and atrophy in only 9 patients. Gastropathy and Duodenopathy secondary to portal hypertension were seen in 27 and 9 patients respectively. The finding of ulcers was almost equal in stomach and duodenum

Table-5: Stomach and Duodenal Endoscopic findings

Endoscopic findings in stomach and Duodenum	No. of patients
Gastritis	71
Portal gastropathy	27
Duodenal ulcers	13 (All RUT positive)
Stomach ulcers	12 (3 RUT positive)
Portal Duodenopathy	9
Gastric antral vascular ectasia (GAVE)	5
Duodenitis	5

Table number 5 also shows the data of H. pylori testing in the patients showing gastric and duodenal ulceration. Total of 25 patients had gastric and duodenal ulceration out of which 16 patients showed positive Rapid urease test. All duodenal ulceration patients were positive for RUT.

Figure 1 represents the important parameter of addictions in the subjects included in this study. Total

number of patients who had either alcohol of tobacco addiction was 76. And 56 out of them were males and only 20 were females. The incidence of alcohol and smoking was almost equal among our subjects and addictions of both the substances together were also present in significant number of patients. This figure shows a statistically significant association (p Value < 0.05) between the patients having gastritis and addiction or addictions found in patients.

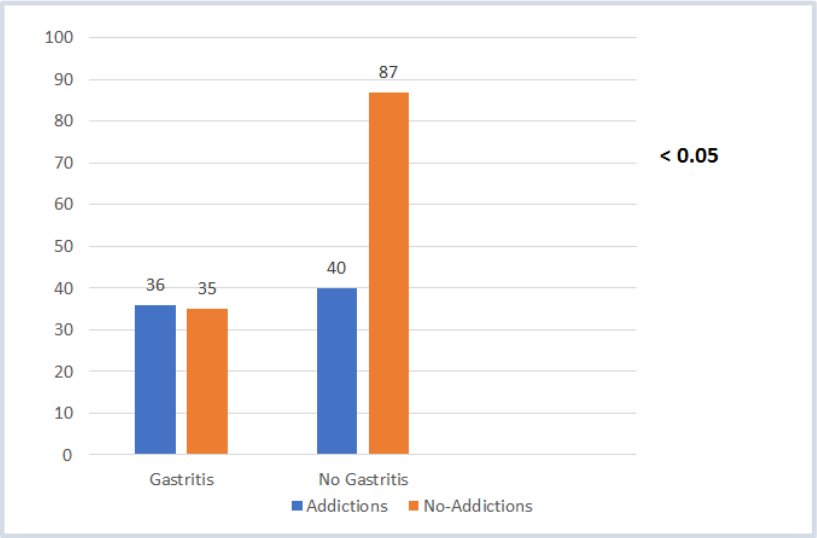

Fig-1: Relationship of Addictions with gastritis

DISCUSSION

Geriatrics has rapidly grown and accepted worldwide as a special branch with special needs. Endoscopic evaluation is one of those needs, where thought needs to be given to its benefits and treatment potential as well as its safety and feasibility in these patients [1, 2]. Generally, Oesophago-gastro-duodenoscopy is considered safe in elderly with complication rates like younger age group [3].

Our study tries to document and analyse the endoscopic data of patients of age 60 years and above, collected in a tertiary care hospital over the period of 9 months. Study included total of 198 patients with males predominating with number of 134 and females 64. Most of our patients were from age group of 60-80 years i.e. 190 patients. Only 8 patients were between 80 to 90 year of age.

We had 47 patients who had comorbidities, most common being Diabetes mellitus, hypertension and ischaemic heart disease. Patients also had chronic kidney disease, malignancies or sepsis (Table 3). Hypertensive and diabetic patients are very commonly started on antiplatelets like aspirin, clopidogrel. Aspirin being a NSAID, which has a very high potential to cause gastric erosions, ulcerations even at a very low dose of 75 mg [4]. Elderly patients are also likely to use other NSAIDs for painful conditions like osteoarthritis, radiculopathy etc.

Out of the 198 patients 76 patients had a history of chronic alcohol or tobacco use. As shown in the diagram 56 patients were males and only 20 were females. This may be attributed to the Indian cultural practices where men are mostly involved in addictions than women. Whereas in non- addicted patients the number of females and males is almost equal. Alcohol is very well known to cause chronic gastritis, oesophagitis and in many cases Mallory-Weiss tears due to recurrent vomiting [5]. Gary C. Vitale et al in their study in 1987 about the effects of alcohol on gastro-oesophageal reflux found that alcohol taking group had a significant acid exposure to their lower oesophagus as compared to control groups [6]. We got a statistically significant correlation between addictions and presence of gastritis.

In symptomatology of the patients, most common symptoms were that suggestive of dyspepsia, GERD and peptic ulcer disease which are retrosternal burning, nausea, vomiting after food, abdominal fullness and epigastric pain [7]. Ninety-six patients had these symptoms i.e. 48%. The second most common indication in our patient population was haematemesis and melena. Forty-four patients had these symptoms. Other indications were anaemia, malabsorption syndromes, screening for connective tissue disorders, metastases from unknown primary etc. Buri L. *et al* have done one of the largest studies on elderly patients undergoing endoscopy. They included 3147 patients and have found the incidence of non-alarm symptoms like epigastric pain 40%, other non-alarm epigastric symptoms 20% [8]. OGD scopy is very helpful in patients who are presenting with anaemia to rule out upper gastrointestinal blood loss as well as mucosal abnormalities leading to malabsorption [9].

Most common oesophageal findings were varices, found in 37 (18%) patients. Seventeen percent patients (17%) had oesophagitis, hiatus hernia or combination of both. Malignant growth was found in 10 (5%) of patients. Candidiasis was present in 4% patients. The finding of Mallory Weiss lesions was found in 6 (3%) of patients. Being a tertiary care centre, it is possible that only the cases with serious symptoms like hematemesis are referred to this hospital while simple GERD symptoms are treated with over the counter drugs.

Gastritis was major stomach related finding in our study and was found in 71 patients (36%). Hussein Ageely from Saudi Arabia, who did endoscopic study in elderly, found that the most common finding in their study was gastritis [10]. Figure 1 indicates that around 52% patients out of 71 patients suffering from gastritis had history of addictions. Effects of acute alcohol ingestion are often visible endoscopically in the form of submucosal haemorrhages without significant inflammation [15]. The next common finding was portal gastropathy, seen in 27 patients (13%). Peptic ulcers were found in 25 patients (12%). Other findings were GAVE, duodenitis and portal duodenopathy in small number of patients.

All the peptic ulcer patients underwent Rapid urease testing (RUT) and 16 patients out of them were found to be having positive RUT (64%). Nine patients were negative for RUT (36%). Rapid urease testing is one of the standard investigative procedures used for diagnosis of H. pylori infection. The sensitivity and specificity of this test is 90 to 95% and 95% to 100% respectively [11,12]. But the accuracy can be negatively affected if blood is present in the stomach [13]. Current or recent use of antibiotics, antisecretory drugs like PPIs and even Bismuth containing compound affects the RUT results [14]. Therefore H. pylori tests may be falsely negative if patient is on above mentioned drugs.

CONCLUSIONS

1. Oesophago-gastro-duodenoscopy is a very important and effective investigation for the diagnosis and treatment in elderly patients suffering from upper gastrointestinal problems like gastritis, GERD, portal hypertension and suspected malignancies.

2. There is a significant association between addictions and gastritis in elderly patients.

3. Rapid urease test is easy, faster and sensitive test for detection of H. pylori infection in elderly, but their results need to be interpreted in the light of various drugs already being taken by elderly patients.

4. Portal hypertension and varices are very common causes of haematemesis in elderly.

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