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Analysis of upper GI endoscopy findings in patients of dyspepsia at a tertiary care centre in Karnataka: A retrospective study

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Abstract

Background: Increased incidence of persistent dyspepsia has led to more number of patients undergoing upper GI endoscopy which has proved to be a valuable diagnostic tool to reduce the morbidity. It can also help to identify and treat upper GI malignancies at the earliest.

Methods: Endoscopy database records of 200 consecutive patients of dyspepsia referred to the Department of General Surgery at our institute from January 2018 - January 2019 were analysed.

Results: With a positive yield of 95%, there was more prevalence of dyspepsia in males (68%) than females (32%). The prevalence of dyspepsia was high in 31-40 yrs (24%). There was a high incidence of Oesophagitis (40%), Gastritis (34%) and Duodenitis (20%). There was 2.94% incidence of oesophageal and 4.69% stomach malignancies.

Conclusion: Our study demonstrates high prevalence of dyspepsia in males, oesophagitis, gastritis and duodenitis which can be contributed to various factors like diet, climate and patient selection for the study.

Keywords: Retrospective analysis, dyspepsia, upper GI endoscopy, oesophagitis

Introduction

In the fast paced modern world, the lifestyle choices made by the younger generation has led to an overwhelming increase in the gastrointestinal disorders especially dyspepsia.

Dyspepsia is a poorly defined symptom complex of upper gastrointestinal tract. The symptoms usually last for decades with remissions and relapses which comprises of epigastric discomfort, bloating, belching, early satiety, anorexia, nausea, vomiting, heartburn and regurgitation ^[1]. Rome III criteria define dyspepsia as one or more of the following 3 symptoms for 3 months within the initial 6 months of onset of symptoms: 1) postprandial fullness, 2) early satiety and 3) epigastric pain. ^[2] Colonic symptoms like altered bowel habits are not included in the vast realm of dyspeptic symptoms.

The etiology of dyspepsia may be a) organic, b) functional, c) drug induced d) due to extraintestinal systemic diseases ^[3].

- Organic dyspepsia: due to erosive oesophagitis, gastric erosions, acute/ chronic gastritis, gastric/duodenal ulcers, malignancy.
- Functional dyspepsia: based on Rome IV criteria persisting dyspepsia for more than 3 months within the past 6 months without a possible organic cause of symptoms for dyspepsia ^[4]
- Drug induced: like NSAIDs, antibiotics, steroids etc.
- Extraintestinal systemic disorders: Endocrinological disorders like diabetes mellitus, thyroid disorders etc.

A detailed history can identify dyspepsia caused by drugs and systemic disorders. Organic causes of dyspepsia can be identified by upper gastrointestinal endoscopy which can be used as both diagnostic and a therapeutic tool. Upper GI scopy can also be used as a screening test to aid in the early diagnosis of benign and malignant lesions of the GIT which can reduce the morbidity and mortality in the health care setup. The current study was undertaken to study the disease pattern yields at a tertiary care centre in Karnataka which may give a useful insight into evolving trends of GI malignancies. Although a commonly available tool, caution should be excised regarding unnecessary over usage of the upper GI scopy as it increases the burden on the health care costs.

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Material and methods

A retrospective analysis of endoscopy database records was done of 200 consecutive patients who were referred to the Department of General Surgery, Srinivas Institute of Medical Sciences and research centre, Mukka, Mangalore for upper GI Endoscopy for evaluation of dyspepsia from January 2018 to January 2019 after obtaining institutional ethical clearance.

Inclusion criteria:

1. Age more than 15 years
2. Both sexes
3. Persistent symptoms of dyspepsia after 4-8 weeks of proton pump inhibitor therapy.

Exclusion criteria

1. Age less than 15 years
2. Patients with acute GI conditions
3. Patients already diagnosed with Malignancies/ terminal illnesses.

The above data of upper GI endoscopy was tabulated and was subjected to statistical tests.

Results

Table 1: Prevalence of dyspepsia among sexes

Dyspepsia seen in	No.	Percentage %
Males	136	68
Females	64	32
Total	200	

P value: 3.55

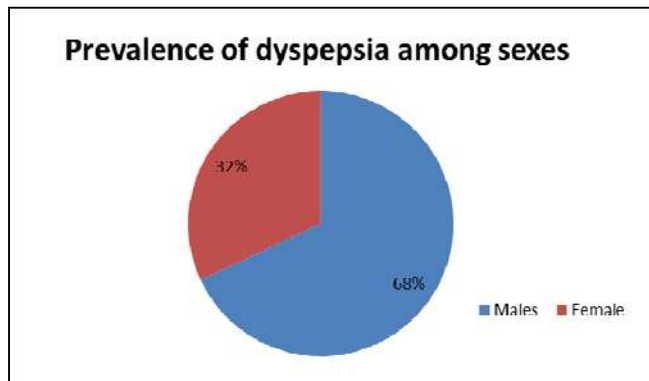


Fig 1: Prevalence of dyspepsia among sexes

In our study dyspepsia was more prevalent in males (68%) than females (32%).

Table 2: Age distribution of Dyspepsia

Age (years)	No.	%
Less than 20	6	3
21-30	35	17.5
31-40	48	24
41-50	45	22.5
51-60	44	22
More than 60	22	11
Total	200	

In our study, dyspepsia was more prevalent in age group of 31-40 years (24%) followed by 41-50 yrs (22.5%) and 51-60 yrs (22%).

Table 3: Disease pattern seen in upper GI endoscopy.

Group	Diagnosis	Male	%	Female	%
Normal	Normal	4	2.94	2	3.13
Malignancy	Oesophageal Ca	4	2.94	0	0
	Og Junction Ca	0	0	0	0
	Antral Ca	0	0	0	0
	Body of Stomach Ca	0	0	3	4.69
	Ca Pylorus	3	2.20	0	0
Duodenal Diseases	Duodenitis	31	22.79	9	14.06
	Duodenal Ulcer	9	6.62	0	0
Oesophageal Diseases	Lax Les-Oesophagitis	4	2.94	3	4.69
	Candidiasis	8	5.88	2	3.13
	Hiatus Hernia	9	6.62	6	9.38
	Varices	5	3.68	0	0
	Barret's Oesophagus	2	1.47	2	3.13
Stomach/Gastric Diseases	Reflux Oesophagitis	47	34.59	33	51.56
	Mallory Weiss Syndrome	3	2.20	0	0
	Pan Gastritis	34	25	22	34.38
	Antral Erosion	2	1.47	4	6.25
	Antral Ulcer	2	1.47	2	3.13
	Gastric Ulcer	4	2.94	2	3.13
	Fundal Gastritis	6	4.41	0	0
	Antral Gastritis	51	37.5	16	24
	Body Gastritis	4	2.94	1	1.56
	Erosive Gastritis	3	2.2	1	1.56
	Total Findings	231		108	
Total Patients		136		64	200

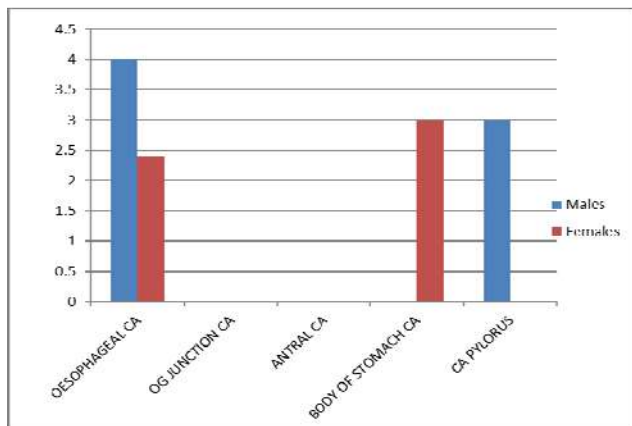


Fig 2: Malignancy patterns identified in Upper GI Endoscopy

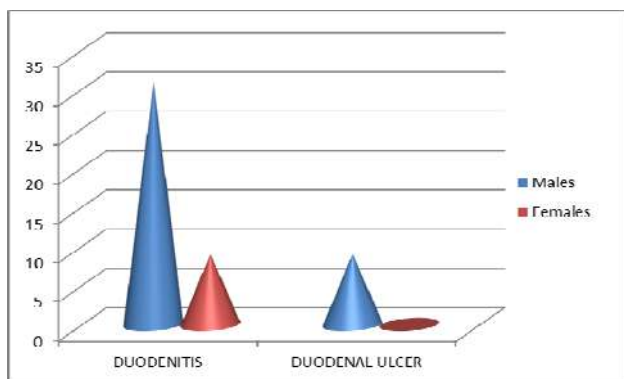


Fig 3: Duodenal diseases among sexes as seen in upper GI endoscopy

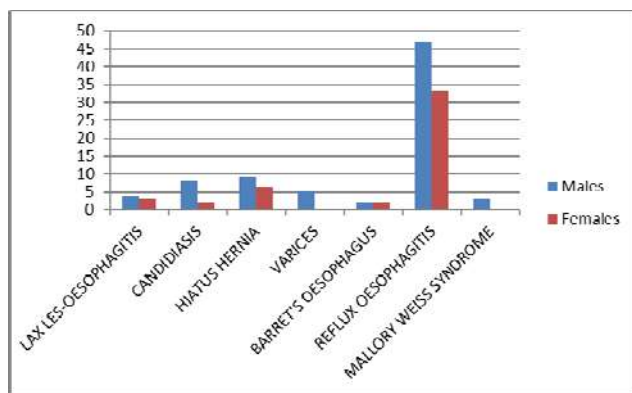


Fig 4: Oesophageal diseases among sexes as seen in upper GI endoscopy

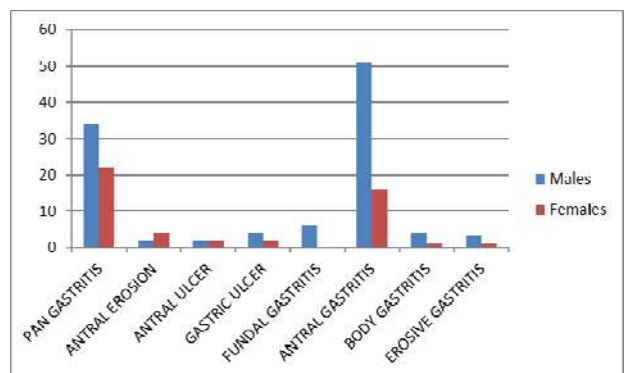


Fig 5: Gastric diseases among sexes as seen in upper GI endoscopy

Discussion

Upper gastrointestinal diseases are leading causes of morbidity and mortality worldwide. They affect patients' quality of life, cause a significant reduction in work productivity and increased economic burden [5] Upper GI endoscopy is a cost effective safe procedure which can gain necessary information about the upper gastrointestinal disorders especially when an organic lesion in the upper GI tract is suspected [6-9].

In the present study, there was a high positive yield of 95% in upper GI endoscopy in par with study done by Padma S *et al.* (94%) [10].

The prevalence of dyspepsia in males (68%), females (32%) of the present study were found similar to other studies.

Table 3: Comparison of prevalence of dyspepsia among sexes with other studies

Study	Males %	Females %
T Babu Anthony <i>et al.</i> [11]	61.4	38.6
Padma S <i>et al.</i> [10]	61.78	38.21
Elhaadi <i>et al.</i> [5]	43.6	56.4
Javali <i>et al.</i> [12]	61.6	28.4
Present study	68	32

In our present study, the prevalence of dyspepsia was high in 31-40 yrs (24%) followed by 41-50 yrs (22.5%). This was found in par with T Babu Anthony *et al.* 31-40 yrs (26.5%) 41-50 yrs (22.7%) and Padma *et al.*

The incidence of malignancy was found similar to the following studies.

Table 4: Comparison of incidence of malignancy with other studies

Study	Oesophageal carcinoma%	Stomach carcinoma%
Javali <i>et al.</i> [12]	4.5	4.6
T Babu Anthony <i>et al.</i> [11]	0.7	2.3
Khan Y <i>et al.</i> [13]	3.7	4.6
Present study	2.94	4.69

The prevalence of oesophagitis was high compared to the other studies whereas gastritis (Pan and Antral) was in par with other studies. The prevalence of Duodenitis was in par with T Babu Anthony *et al.*

Table 5: Comparison of most common Upper GI Lesions with other studies

Study	Reflux oesophagitis%	Gastritis%	Duodenitis %
Javali <i>et al.</i> [12]	6.8	39.3	6.16
T Babu Anthony <i>et al.</i> [11]	16.1	51	22
Padma <i>et al.</i> [10]	8.1	44.1	2.1
Present study	40	34	20

The high incidence of reflux oesophagitis and increasing incidence of gastritis and duodenitis is probably due to dietary factors and hot and humid climate of coastal region where the present study is undertaken.

Conclusion

Dyspepsia is becoming an increasing cause of morbidity in India and across the world. Upper GI endoscopy plays a vital role in establishing diagnosis and aid in suitable treatment of the same.

Our study demonstrates high prevalence of dyspepsia in males compared to females. There is a higher prevalence of oesophagitis, gastritis and duodenitis when compared to the other studies which can be contributed to various factors like diet, climate and patient selection for the study. Upper GI endoscopy also plays a crucial role in diagnosing and treating Upper GI cancers early, thus reducing morbidity and mortality of the same.

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