

PROFILE OF CLINICALLY SIGNIFICANT ENDOSCOPIC FINDINGS ON UPPER GASTROINTESTINAL ENDOSCOPY IN PATIENTS OF DYSPEPSIA IN SUB HIMALAYAN REGION- A HOSPITAL BASED STUDYSandhu J.¹, Bhawani R.*², Sharma R.³, Rana BS.⁴ and Chauhan V.⁵¹Senior Resident, Internal Medicine, Shri Lal Bahadur Shastri Government Medical College, Mandi, Himachal Pradesh, India, 175008.²Professor and Head of Department Internal Medicine, Shri Lal Bahadur Shastri Government Medical College, Mandi, Himachal Pradesh, India.³Professor Internal Medicine, Dr Rajendra Prasad Government Medical College, Tanda, Himachal Pradesh, India.⁴Assistant Professor Hepatology, Dr Rajendra Prasad Government Medical College, Tanda, Himachal Pradesh, India.⁵Assistant Professor Internal Medicine, Indira Gandhi Medical College Shimla, Himachal Pradesh, India.**Corresponding Author: Dr. Bhawani R.**

Professor and Head of Department Internal Medicine, Shri Lal Bahadur Shastri Government Medical College, Mandi, Himachal Pradesh, India.

Article Received on 12/01/2018

Article Revised on 02/02/2018

Article Accepted on 23/02/2018

ABSTRACT**Objective:** To Study Clinically Significant Endoscopic Findings in Patients Of Dyspepsia using ROME- 3 Criteria.**Research Design And Methods:** 381 Out patients fulfilling ROME-3 criteria for Dyspepsia were included in this study for one year using standardized questionnaire and were subjected to Upper Gastro Intestinal Endoscopy (UGIE) as per ASGE recommendations for dyspepsia. **Results:** Out of 381 patients, dyspepsia was more common in males 206 (54%), 205 (54%) patients had dyspepsia with alarm features, 135 (35.43%) patients had Clinically Significant Endoscopic Findings on UGIE. 96 (26.25%) patients had Clinically Significant Endoscopic Findings in the stomach. Malignancy was present in 13 patients (Male:Female, 11:2, p=0.0495). **Conclusion:** Dyspepsia is a common clinical symptom in patients attending out patient department of Medicine or Gastroenterology clinic. Patients with alarm symptoms and of age more than 55 years should be evaluated for structural lesions in gastrointestinal tract by UGIE.**KEYWORDS:** CSEF, UGIE, Dyspepsia, Alarm features, ASGE.**INTRODUCTION**

Dyspepsia refers to chronic or recurrent pain or discomfort centered in the upper abdomen.^[1] The ROME III criteria has defined dyspepsia as 1 or more of the symptoms – Post prandial Fullness, Early Satiation, Epigastric Pain or Burning.^[2]

Current ACG, AGA and ROME III guidelines state that is non reflux predominant pain or discomfort in the upper abdomen. Thus symptoms below the umbilicus or in the chest are inconsistent with a diagnosis of dyspepsia. Dyspepsia is very common with surveys reporting a point prevalence of 25 to 40 %. Of these, one quarter seek treatment, making dyspepsia the presenting complaint of 4% of primary-care visits and 20% of outpatient gastroenterology.^[3]

Endoscopy is the standard for the diagnosis of structural disease in patients with dyspepsia. Advantage of early endoscopy is the possibility of establishing a specific diagnosis, such as peptic ulcer disease, erosive esophagitis or malignancy particularly in patients with alarm features. American Society for Gastrointestinal

Endoscopy (ASGE) recommendations for UGIE in dyspepsia.^[4]

- 1) Patients of dyspepsia who are older than 50 years of age and/or those with alarm features should undergo endoscopic evaluation.
- 2) Patients of dyspepsia who are younger than 50 years of age without alarm features may undergo an initial test and treat approach for H.Pylori.
- 3) Patients who are younger than 50 years of age and are H.Pylori negative can be offered an initial endoscopy or a short trial of PPI acid suppression.
- 4) Patients with dyspepsia who do not respond to empiric PPI therapy or have recurrent symptoms after an adequate trial should undergo endoscopy.^[4]

Alarm symptoms in dyspepsia necessitating evaluation are: Age more than 55 years, gastrointestinal bleeding, anemia, palpable abdominal mass, progressive dysphagia, early satiation, anorexia, odynophagia, persistent vomiting, previous documented peptic ulcer, previous gastric surgery for malignancy, unexplained weight loss (more than 10% of body weight) and lymphadenopathy.^[5]

No such study has been carried out in Sub Himalayan region till date. Hence this study was planned to study the clinically significant endoscopic findings of dyspepsia in this region.

Inclusion Criteria: All patients of dyspepsia with or without alarm symptoms and presenting in outpatient clinic at Dr Rajendra Prasad Government Medical College Tanda, Himachal Pradesh, India, between (April 2013 and June 2014) were enrolled for the study using ROME III criteria and were subjected to UGIE. Prior informed and written consent was taken from the patients.

Exclusion Criteria: Patients previously diagnosed and treated for Gastric Ulcer, Duodenal Ulcer and Complicated Peptic Ulcer, Chronic Kidney Disease, Chronic Liver Disease, Chronic Obstructive Pulmonary Disease, Coronary Artery Disease, Gall Bladder Disease, Pancreatic Disease were excluded, patients who met clinical criteria of GERD as per ROME III criteria and patients not fit for endoscopy due to co-morbidities were excluded.

Analysis: The progress of the study and data collection was reviewed every two months. At the end of the study period, data was analysed using relevant software.

Ethical and financial disclosures: The study was done after taking permission from institutional ethical Committee. The patients were charged standard user charges.

OBSERVATIONS AND RESULTS

381 (79.96%) (n=509) patients met the inclusion criteria. Majority of the patients 206 (54%) were males. Maximum 179 (46.98%) patients were in age group 36 to 55 years. 218 patients (53.56%) were symptomatic for less than 6 months. Pain epigastrium was the predominant dyspeptic symptom in 301 (79%) patients. 205 (53.81%) patients had dyspepsia with alarm features.

Upper Gastrointestinal (UGIE) Findings: 135 (35.43%) patients had CSEF. 96 (25.20%) patients had CSEF in the stomach (antral gastritis=25, ulcers=19). 18 (4.73%) patients had CSEF in the Esophagus. 44 (11.55%) patients had CSEF in the Duodenum (ulcer n=21) Table-2.

Histopathology: 13 patients had malignancy. 7 patients had malignancy in the Esophagus (Squamous Cell Carcinoma= 5, Adenocarcinoma= 2). 5 patients had malignancy in the Stomach (Adenocarcinoma= 4, Squamous Cell Carcinoma= 1). Adenocarcinoma of duodenum was found in 1 patient (Table:3).

13 (3.41%) patients had malignancy male:female ratio (11:2), p value 0.0495, 95% CI 1.0667 to 22.3214. 12 (3.15%) patients had malignancy and symptom duration less than 6 months. 1 (0.26%) patient had malignancy in the subgroup with symptom duration more than 6 months.

Table No. 1: Baseline characteristics of patients of dyspepsia

Variable	Group	Total
Age	Less than 55 years	274 (72%)
	More than 55 years	107 (28%)
Sex	Males	206 (54%)
	Females	175 (46%)
Symptom	Post prandial fullness	107 (28%)
	Early satiation	89 (23%)
	Epigastric pain	301 (79%)
	Epigastric burning	276 (72%)
Alarm features	Dyspepsia with alarm features	205 (54%)
	Dyspepsia without alarm features	176 (46%)
Smoking	Dyspepsia in smokers	100 (26%)
	Dyspepsia in non smokers	281 (74%)
Alcohol	Dyspepsia in alcohol	101 (26%)
	Dyspepsia in non alcohol	281 (26%)
Drug intake	Dyspepsia with drug intake	78 (20%)
	Dyspepsia without drug intake	303 (80%)
Co-morbidity	Dyspepsia with co-morbidity	78 (20%)
	Dyspepsia without co-morbidity	303 (80%)
Previous treatment for dyspepsia	Never treated	64 (18%)
	Previously treated	317 (82%)

Table 2: CSEF in different parts of upper gastrointestinal tract

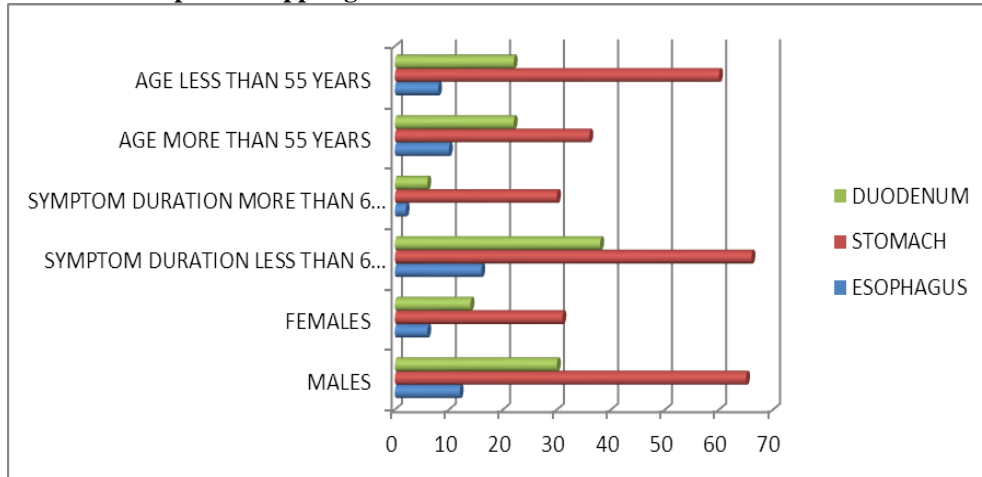
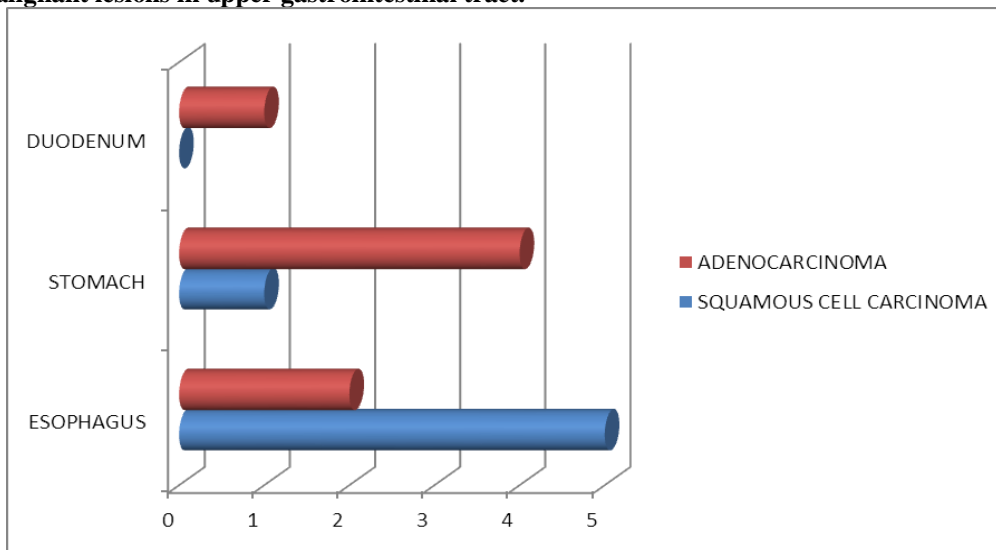


Table 3: Malignant lesions in upper gastrointestinal tract.



CSEF in age group more than 55 years: 10 patients had CSEF in the Esophagus (growth=4, ulcers=3). 36 patients had CSEF in Stomach (antral gastritis=10,

ulcers=8). 22 patients had CSEF in Duodenum (ulcers=10) (Table-4).

Table 4: Gender wise / symptom duration less than 6 month with dyspepsia and more than 6 month with dyspepsia/ age more than 55 years and less than 55 year wise distribution of CSEF.

Sr. no.	CSEF	Males (206)	Females (175)	Symptom duration less than 6 months (n=274)	Symptom duration more than 6 months (n=107)	Age more than 55 years. (n=121)	Age less than 55 years (n=260)
1.	Esophagus	12	6	16	2	10	8
2.	Stomach	65	31	66	30	36	60
3.	Duodenum	30	14	38	6	22	22
4.	Grand total	107	51	120	38	66	92
5.	Peptic ulcer disease	29	11	6	34	18	22
6.	Malignancy	12	1	12	1	11	2

CSEF in age group less than 55 years: 8 patients had CSEF in the Esophagus (ulcers=3). {60 patients had CSEF in the Stomach (antral gastritis=15, ulcers=11). 22

patients had CSEF in the Duodenum (ulcers=11) Table-4.

Age more than 55 and age less than 55 years with dyspepsia had malignancy in ratio of 11:2, $p=0.00009$ OR 12.9, 95% CI 2.8126-59.16. 7 (n=100) smokers and 6 (n=281) nonsmoker with dyspepsia had malignancy ($p=0.0295$). Malignancy was predominant in the patients of dyspepsia with alarm features (12:1, $p=0.108$ 95% CI 1.4004 - 84.5437). 40 (10.49%) patients had peptic ulcer disease Male:Female ratio 29:11; $p= 0.0516$. 34 (8.92%) patients had peptic ulcer disease with symptom duration less than 6 months and 6 (1.57%) patients had peptic ulcer disease with symptom duration more than 6 months. 14 smokers and 26 non smokers had peptic ulcer disease $p= 0.1834$. 40 patients (10.49%) had peptic ulcer disease. 18 (4.72%) patients had peptic ulcer disease in the age group more than 55 years and 22 (5.77%) patients had peptic ulcer disease in age group less than 55 years.

DISCUSSION

135 (35.43%) patients with dyspepsia had Clinically Significant Endoscopic Findings(CSEF) in this study. 96 (n=135) (71.11%) patients had CSEF in the stomach. In a similar study^[6] of uninvestigated dyspepsia 26.8% of patients were found to have Clinically Significant Endoscopic Findings. In Loiano-Monghidoro study^[7] Clinically Significant Endoscopic Findings were present in 27.4% of dyspeptic patients. David Lieberman *et al*^[8] found the prevalence of Clinically Significant Endoscopic Findings to be 27%. In Cadet-PE^[9] study in Canada Clinically Significant Endoscopic Findings were observed in 58% of the patients.

40 patients (10.49%) had peptic ulcer disease in this study. American Society of Gastro Enterology guidelines^[2] states prevalence of peptic ulcer disease to be between 5 to 15% in association with dyspepsia. In Kalixanda study^[10] peptic ulcer disease in the general population was found to be 4.1%. Peptic ulcer disease was male predominant with male to female ratio 29:11 ($p=0.0134$) and was statistically significant. In a study done by David Liebermann *et al*^[8] found that male gender was strongly associated with peptic ulcer disease. 18 (n=121) patients had peptic ulcer disease in the subgroup with age more than 55 years and 22 (n=260) had dyspepsia and peptic ulcer disease in subgroup of age less than 55 years ($p=0.2269$). In a study from northern India at PGI, Chandigarh by Virender Singh *et al*^[11] the peptic ulcer disease was more common in elderly.

13 patients(3.41%) had malignancy in our study and findings are consistent with other studies. American Society of Gastro Enterology^[2] has reported prevalence of malignancy in patients with dyspepsia at 1% to 3%. In a study from Iran^[12] the prevalence of upper gastrointestinal malignancy was 3.1%. Malignancy was male predominant and statistically significant with male to female ratio of 11:2 ($p= 0.0495$). Numerous studies have shown male preponderance of upper gastrointestinal malignancies.^[12,13&14] Malignancy was

more in age group of more than 55 years with ratio of 11: 2 ($p= 0.0009$). In a study on dyspepsia in a primary care setting by A. Kenneth Musana *et al*^[5] 8.8% of (n= 3293) patients had upper gastrointestinal malignancy and age less than 55 years. The study further concluded that malignancy was uncommon below 55 years of age. Prathvi Shetty *et al*^[14] further found the cancer incidence peaked in 5th decade. American Gastroenterological Association Medical Position Statement on Evaluation of Dyspepsia^[15] states that the upper gastrointestinal malignancy becomes more common after 55 years. Smoking and peptic ulcer disease were weakly correlated in our study with p value 0.1834. In a study by Paul Moayyedi *et al*^[6] in Leeds UK the relation of smoking to dyspepsia was weak. 7 patients (n=100) in subgroup of smokers and 6 (n=281) non smokers had malignancy $p=0.0295$. In a study conducted in Iran^[16] there was very significant correlation between smoking and Upper Gastrointestinal malignancy, which was more in heavy smokers. 5 (n=101) patients who were taking alcohol and 8 (n=280) non alcoholic patients developed malignancy ($p=0.3422$). In a study done by P. Shetty *et al*^[4] there was no significant association between alcohol intake and Upper Gastro Intestinal malignancy. 12 patients (n=206) of dyspepsia with alarm features and 1 patient (n=175) of dyspepsia without alarm features had malignancy ($p= 0.0108$). A. Kenneth Musana *et al*^[5] and J Christie *et al*^[17] found that most of the patients presenting with malignancy had alarm features.

CONCLUSION

Dyspepsia is a common presenting symptoms in patients attending out-patients department with point prevalence of 25-40% with male predominance. Age more than 55 years is more predictive of CSEF. Upper gastrointestinal malignancy is strongly associated in male patients of dyspepsia of more than 55 years of age with alarm symptoms.

REFERENCES

1. American Gastroenterological Association Medical Position Statement, Evaluation Of Dyspepsia Gastroenterology, 25; 129: 1753-55.
2. Ikenberry SO, Harrison ME, Lichtenstein D, Dominitz JA, Anderson MA, Jagannath SB, Banerjee S *et al.* Summary NGC-6221, The Role Of Endoscopy in Dyspepsia. Gastrointest Endosc, 2007; 66: 1071-5.
3. Spiegel B M R, Farid M, Van Oijen M G H, Laine L, Howden C, Esrailian W & E. Adherence to best practice guidelines in dyspepsia. Aliment Pharmacol Ther, 2009; 29: 871-81.
4. The role of endoscopy in dyspepsia, www.giejournal.org, 2007; 66(6): 1071-5
5. Kenneth M A, Steven H Y, and Lang K A, Managing Dyspepsia in a primary care setting CM&R, 2006; 4: 337-42.
6. Mahadeva S, Goh KL. Clinically significant endoscopy findings in a multi-ethnic population with

- uninvestigated dyspepsia *Dig Dis Sci*, 2012 Dec; 57: 3205-12.
7. Zagari RM, Law GR, Fuccio L, Pozzato P, Forman D, Bazzoli F. Dyspeptic symptoms and endoscopic findings in the community: The Loiano-Monghidoro study, *Am J Gastroenterol*, 2010; 105: 565-71.
 8. Lieberman D, Fennerty MB, Morris CD, Holub J, Eisen G, Sonnenberg A. Endoscopic evaluation of patients with dyspepsia: results from the national endoscopic data repository. *Gastroenterology*, 2004; 127: 1067-75.
 9. Thomson A B R, Barkun A N, Armstrong D, Chiba N, White R J, Daniels et al. The prevalence of clinically significant endoscopic findings in primary care patients with uninvestigated dyspepsia: the Canadian adult dyspepsia empiric treatment- Prompt Endoscopy (CADET-PE) study. *Aliment Pharmacol Ther*, 2003; 17: 1481-91.
 10. Pertti Aro, Tom Storskrubb, Jukka Ronkainen, Elisabeth Bolling-Sternevald, Lars Engstrand, Michael Vieth et al Peptic Ulcer Disease in a General Adult Population The Kalixanda Study: A Random Population-based Study *Am J Epidemiol*, 2006; 163: 1025–1034.
 11. Singh V, Trikha B, Nain CK, Singh K, Vaiphei K. Epidemiology of helicobacter pylori and peptic ulcer in India. *J Gastroenterol Hepatol*, 2002; 17: 659-6.
 12. Khademi H, Radmard A-R, Malekzadeh F, Kamangar F, Moghaddam S N, Johansson M et al. Diagnostic accuracy of age and alarm symptoms for upper GI malignancy in patients with Dyspepsia in a GI Clinic: *PLoS ONE*, 2012; 7(6): e39173.
 13. N Sundar, V Muraleedharan, J Pandit, J T Green, R Crimmins, G L Swift. Does endoscopy diagnose early gastrointestinal cancer in patients with uncomplicated dyspepsia. *Postgrad Med J*, 2006; 82: 52–54.
 14. Shetty P, Muktar L, Devaraju S, Vittal R. Incidence of gastric carcinoma in patients presenting with dyspepsia in tertiary care hospital. *Saudi Surg, J*, 2014; 2: 52-5.
 15. American Gastroenterological Association Medical Position Statement: Evaluation of Dyspepsia *GASTROENTEROLOGY*, 2005; 129: 1753–1755.
 16. Moayyedi P, Forman D, Brauholtz D, Feltbower R, Crocombe W, Liptrott M, Axon A. The proportion of upper gastrointestinal symptoms in the community associated with *Helicobacter pylori*, lifestyle factors, and nonsteroidal anti-inflammatory drugs. Leeds HELP Study Group; *Am J Gastroenterol*, 2000 Jun; 95(6): 1448-55.
 17. J Christie, N A Shepherd, B W Codling, R M Valori Gastric cancer below the age of 55: implications for screening patients with uncomplicated dyspepsia *Gut*, 1997; 41: 513–517.