

Spectrum of upper GI disease in rural Kerala-Upper GI endoscopy assisted clinical study

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Abstract

Introduction: Upper gastrointestinal tract disorders are one of the most commonly encountered problems in clinical practice. The definitive diagnosis of upper gastrointestinal disorders rest on endoscopic evaluation and biopsy if required for planning proper treatment.

Objectives: To determine the spectrum of disease in upper gastrointestinal tract. To establish endoscopy as an effective tool in the proper diagnosis of various upper gastrointestinal tract disorders.

Materials and Methods: A prospective study was conducted among patients who presented with upper gastrointestinal symptoms at Dr. S.M.C.S.I. Medical College, Karakonam, Trivandrum from November 2009 to July 2012.

Results: Out of the 378 cases, 246 cases (65.1%) had normal finding and 132 cases (34.9%) had abnormal findings. Among the 132 abnormal finding 85 cases had oesophageal, 50 cases had gastric and 11 had duodenal pathologies. Among these cases, 14 cases had both oesophageal and gastric diseases.

Conclusion: In our study, the commonest pathology in patients with upper gastrointestinal symptoms was esophageal followed by gastric and duodenal diseases. We therefore conclude that upper GI endoscopic evaluation is a must in all patients who present with upper gastrointestinal tract symptoms.

Keywords: Upper GI endoscopy, dyspepsia, heart burns

1.Introduction

The upper gastrointestinal tract comprises of the oropharynx, hypopharynx, the oesophagus, the stomach and the duodenum. The common symptoms include heartburns, acid brush, dysphagia, belching, dyspepsia, abdominal pain etc. Gastrointestinal disorders, in particular dyspepsia is a common complaint of patients presenting in both hospital and general practise[1]. Dyspepsia may be the early symptom for various diseases like peptic ulcer, cholelithiasis, oesophageal carcinoma, gastric carcinoma denoted as organic dyspepsia but

sometimes no lesions are found known as functional dyspepsia[2][3]. Upper GI endoscopy now assumes a prominent role in the diagnosis and therapy of upper GI diseases. Some indications for upper gastrointestinal endoscopy include dyspepsia, dysphagia, peptic ulcer disease (PUD) and upper gastrointestinal bleeding.[3][4] Current guidelines suggest that all patients with dyspepsia over 45 or 55 years of age or those with symptoms should undergo prompt esophagogastroduodenoscopy (EGD)[5].

2. Material and Methods

This was a prospective study consisted of the clinical and endoscopic data obtained from consecutive patients with upper gastrointestinal symptoms presenting to the outpatient department of General Surgery at Dr. S.M.C.S.I. Medical College, Karakonam over a period of 3 years (2009-2012). All patients underwent thorough physical examination and were subjected to upper GI endoscopy (Pentax). Detailed evaluation of the upper GI tract was done and biopsy was taken in indicated cases. Data obtained was analysed using SPSS.

3. Results

The study population comprised of 378 patients. 246 cases (65.1%) had normal findings and 132 cases (34.9%) had abnormal findings. Of the 132 abnormal cases, 81 (61.4%) were males 51(38.6%) were females (Table 1)

Table 1: Gender distribution among abnormal cases

Gender	n	%
Male	81	61.4
Female	51	38.6
Total	132	100.0

Among the cases with abnormal findings majority (31.8%) were in the age group of 46-55 years. Percentage of cases in the age groups of <26, 26-35, 36-45, 46-55, 56-65 and >65 years were 9.1%, 17.4%, 21.2%, 31.8%, 13.6% and 6.8% respectively as shown in Table 2.

Table 2: Age distribution among abnormal cases

Age groups (years)	n	%
<26	12	9.1
26-35	23	17.4
36-45	28	21.2
46-55	42	31.8
56-65	18	13.6
>65	9	6.8
Total	132	100.0

Considering the distribution of diseases, esophageal involvement was detected in 85 cases. The commonest esophageal pathology was gastro-esophageal reflux disease (GERD) which was present in 48 out of the 378 cases (12.7%) examined. Barret's oesophagus, hiatus hernia, oesophageal varices, leukoplakia, polyp and carcinoma was detected in 1.1%, 4.5%, 3.2%, 0.3%, 0.3% and 0.5% of cases respectively. All these pathologies were common in males except GERD. The pattern of oesophageal

diseases and their gender distribution are shown in **Table 3.**

Table 3: Gender distribution of oesophageal diseases

Disease		Sex		Total
		Male	Female	
GERD	n	22	26	48
	%	5.8%	6.9%	12.7%
Barret's oesophagus	n	3	1	4
	%	0.8%	0.3%	1.1%
Hiatus hernia	n	10	7	17
	%	2.6%	1.9%	4.5%
Oesophageal varices	n	9	3	12
	%	2.4%	0.8%	3.2%
Oesophageal candidiasis	n	1	0	1
	%	0.3%	0.0%	0.3%
Oesophageal polyp	n	1	0	1
	%	0.3%	0.0%	0.3%
Oesophageal carcinoma	n	2	0	2
	%	0.5%	0.0%	0.5%

Of the total 378 cases, 50 (13.22%) had gastric and 11 (2.91%) had duodenal pathologies. Among these cases, 14 had both gastric and duodenal involvement. Gastritis (in 10.3% of cases examined) and duodenitis (in 1.3%) were the commonest diseases in stomach and duodenum respectively. The details of gastric pathologies are shown in **Table 4** and duodenal pathologies in **Table 5.**

Table 4: Gender distribution of gastric diseases

Disease		Sex		Total
		Male	Female	
Gastritis	n	27	12	39
	%	7.1%	3.2%	10.3%
Gastric ulcer	n	4	0	4
	%	1.1%	0.0%	1.1%
Gastric outlet obstruction	n	3	1	4
	%	0.8%	0.3%	1.1%
Gastric carcinoma	n	1	2	3
	%	0.3%	0.5%	0.8%

Table 5: Gender distribution of duodenal diseases

Disease		Sex		Total
		Male	Female	
Duodenal ulcer	n	3	1	4
	%	0.8%	0.3%	1.1%
Duodenitis	n	3	2	5
	%	0.8%	0.5%	1.3%
Peri ampullary carcinoma	n	1	1	2
	%	0.3%	0.3%	0.5%

Considering the age distribution of upper gastro intestinal diseases majority were commonest between 46-55 years. The details are depicted in **Table 6.**

Table 6: Age distribution of upper GI diseases

Disease		Age groups (years)					Total
		0-25	26-35	36-45	46-55	>66	
GERD	N	4	13	11	11	3	48
	%	8.3%	27.1%	22.9%	22.9%	6.3%	100.0%
Barret's oesophagus	N	0	0	0	3	0	4
	%	0.0%	0.0%	0.0%	75.0%	0.0%	100.0%
Hiatus hernia	N	0	5	4	5	1	17
	%	0.0%	29.4%	23.5%	29.4%	5.9%	100.0%
Oesophageal varices	N	1	0	3	5	1	12
	%	8.3%	0.0%	25.0%	41.7%	8.3%	100.0%
Oesophageal leukoplakia	N	0	0	1	0	0	1
	%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Oesophageal polyp	N	0	0	0	1	0	1
	%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Oesophageal carcinoma	N	0	1	0	0	1	2
	%	0.0%	50.0%	0.0%	0.0%	50.0%	100.0%
Gastritis	N	5	6	9	11	3	39
	%	12.8%	15.4%	23.1%	28.2%	7.7%	100.0%
Gastric ulcer	N	0	0	2	2	0	4
	%	0.0%	0.0%	50.0%	50.0%	0.0%	100.0%
Gastric outlet obstruction	N	0	0	0	3	0	4
	%	0.0%	0.0%	0.0%	75.0%	0.0%	100.0%
Gastric carcinoma	N	0	0	0	0	0	3
	%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Duodenal ulcer	N	2	0	1	0	0	4
	%	50.0%	0.0%	25.0%	0.0%	0.0%	100.0%
Duodenitis	n	0	1	2	2	0	5
	%	0.0%	20.0%	40.0%	40.0%	0.0%	100.0%
Peri ampullary carcinoma	n	0	0	0	2	0	2
	%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

4. Discussion

Upper GI symptoms like heartburns, acid brush, dysphagia, belching, dyspepsia, abdominal pain is a common complaint of patients presenting in both hospital and general practice[1]. 25% of the population suffer from the above symptoms but mostly affected patients don't seek medical care[6][7][8]. The present study was done to find out the spectrum of upper GI disorders using upper GI endoscopy in patients who present with upper GI symptoms. In about 50-60% of patients with upper GI symptoms no specific disease could be detected and they could be termed as functional dyspepsia[3]. In our study population which comprised of 378 patients. 246 cases (65.1%) had normal findings. Of the 132 abnormal cases, 81 (61.4%) were males 51(38.6%) were females. Male predominance could be due to risk factors like smoking, alcohol which is common in Indian population. Smoking can accentuate gastro oesophageal reflux symptoms by relaxing the lower oesophageal sphincter. Further, cigarette smoking has been shown to cause harmful effects to the gastric mucosa[9][10].

Among the cases with abnormal findings majority (31.8%) were in the age group of 46-55

years. Oesophageal involvement was detected in 85 cases. The commonest oesophageal pathology was gastro-oesophageal reflux disease (GERD) which was present in 48 out of the 378 cases (12.7%) examined. Barret's oesophagus, hiatus hernia, oesophageal varices, candidiasis, polyp and carcinoma was detected in 1.1%, 4.5%, 3.2%, 0.3%, 0.3% and 0.5% of cases respectively. All these pathologies were common in males except GERD which is common in females. In a study by Kumar *et al* in 2014 at Bihar they have reported the prevalence of GERD as 23.6% and the prevalence of GERD was more common in females which is comparable with our study.[11] In a multicenter prospective question based study by Bhatia *et al* the prevalence of GERD was 7.6%[12]. Of the total 378 cases, 50 (13.22%) had gastric and 11 (2.91%) had duodenal pathologies. Among these cases, 14 had both gastric and duodenal involvement. Gastritis (in 10.3% of cases examined) and duodenitis (in 1.3%) were the commonest diseases in stomach and duodenum respectively. Oesophageal carcinoma was detected in 2 cases (0.5%), gastric cancer in 3 cases (0.8%) and periampullary carcinoma in 2 cases (0.5%).

5. Conclusion

Upper GI symptoms like heartburns, acid brush, dysphagia, belching, dyspepsia, abdominal pain is a common complaint of patients presenting in both hospital and general practice. Only few patients seek medical help. Most of them who go to general practitioners and are treated with antacids or proton pump inhibitors. But it worthwhile to investigate and follow up these patients with upper GI endoscopy because premalignant conditions like Barrets oesophagus, malignant lesions can be easily identified and treated appropriately. Upper GI endoscopy is an important tool in the diagnosis follow up and treatment in upper GI disease

References

- [1] Barnes RJ, Gear MWL, Nicol A *et al*, Study of dyspepsia in a general practise as assessed by endoscopy and radiology. *British Medical Journal* 1974; 4:214-16.
- [2] Colin-Jones DG, Bloom B, Bodermar G *et al*, Management of dyspepsia report of working party. *Lancet* 1988; 331:576-9.
- [3] Brun R. Functional dyspepsia. *Therap Adv Gastroentrol*, 2010; 3(3):145-164.
- [4] Chowdhary G. Endoscopy is required in all patients with dyspepsia against the preposition. *Trop Gastroentrol*.1988; 9(4):214-18.
- [5] Diagnostic indications for upper gastrointestinal endoscopy in oesophageal and gastroduodenal disease in adults: ANAES / Guidelines Department / September 2001.
- [6] Heading RC. Definitions of dyspepsia. *Scand J Gastroenterol* (Suppl). 1991; 182: 1-6.
- [7] Ofman JJ, Etchason J, Fullertons S. *et al*. Management strategies Helicobacter pylori – seropositive patients with dyspepsia; clinical and economic consequences. *Ann internal Med*. 1997; 126 : 280 -91
- [8] Drossman DA, Li Z, Andruzzi E. *et al*. U.S householder survey of functional gastrointestinal disorders. Prevalence, sociodemography and health impact. *Dig Dis Sci*. 1993; 38: 1569 – 80.
- [9] Dodds WJ, Hogan WJ, Helm JI *et al*. Pathogenesis of reflux esophgitis. *Gastroenterology*. 1981. 81 (2): 376 – 394.
- [10] Kazuo E, Leung FW. Effects of smoking and nicotine on the gastric mucosa; a review of clinical and experimental evidence. *Gastro enterology* 1994; 107: 864- 878.
- [11] Kumar S, Shivalli S. Prevalence, Perceptions and Profile of Gastroesophageal Reflux Disease in a Rural Population of North Bihar. *Natl J Community Med* 2014; 5(2):214-218.
- [12] Bhatia SJ, Reddy DN, Ghoshal UC, *et al*. ISG Task Force Report Epidemiology and symptom profile of gastroesophageal reflux in the Indian population: Report of the Indian Society of Gastroen terology Task Force. *Indian J Gastroenterol* 2011; 30.