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## Upper gastrointestinal endoscopy findings in patient presenting with dyspepsia

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### ABSTRACT

**Introductions:** The objective of this study was to evaluate the upper gastrointestinal endoscopy findings in patients presenting with dyspepsia.

**Methods:** This retrospective observational study was conducted in Department of Internal Medicine, Patan Hospital from April 2013 to March 2014. Adult patients who underwent upper gastrointestinal endoscopy for dyspepsia were included in the study.

**Results:** There were 2141 endoscopies (out of total 3195) performed for dyspepsia, male 996 (46.52 %), female 1145 (53.48%), mean age 39.37 years (SD  $\pm$  18.16). A single endoscopic diagnosis was made in 1991 (93%) and in rest, combinations of lesions were seen. Gastritis 892 (41.66%), oesophagitis 215 (10.04%), duodenal ulcer 100 (4.67%), gastro-duodenitis 85 (3.97%), hiatus hernia 82 (3.82%), gastric ulcer 46 (2.14%) and no lesions in 594 (27.74%) were seen.

**Conclusions:** Gastritis followed by oesophagitis was seen in half of the dyspeptic, while a quarter had functional dyspepsia with normal findings.

**Keywords:** duodenal ulcer, gastric ulcer, gastritis, hiatus hernia, oesophagitis, upper gastrointestinal (UGI) endoscopy

## INTRODUCTIONS

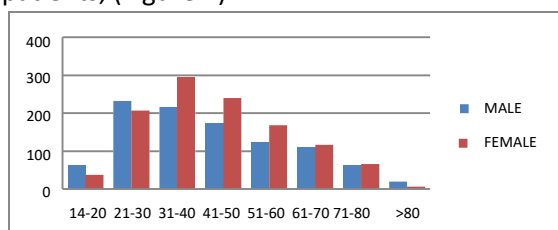
Dyspepsia occurs in approximately 25% of the population each year.<sup>1,2</sup> It is responsible for substantial health care costs and considerable time lost from work.<sup>3</sup> Multiple diagnostic tests are available for evaluating dyspepsia. Endoscopy is recommended as the first investigation in the work up of a patient with dyspeptic symptoms.<sup>4</sup> This study was done to evaluate findings in upper gastrointestinal tract (UGI) endoscopy in patients presenting with dyspepsia.

## METHODS

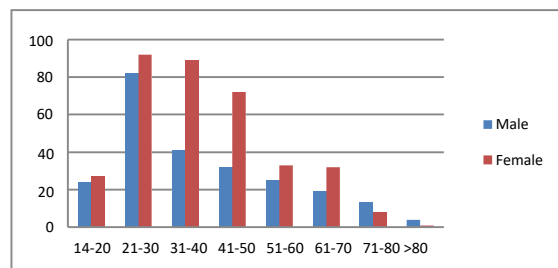
This was a cross sectional study conducted at Patan Hospital, Patan Academy of Health Sciences, Lalitpur, Nepal. The endoscopy records from April 2013 to March 2014 were included. Endoscopies were performed by faculties trained in UGI endoscope. Fujinon video endoscope was used. Record of adult patient, of age 14 to 90 years, with dyspepsia were included. The patients coming for endoscopy was either referred from inpatient or outpatient department (OPD). Descriptive analysis included variables, age, sex, indications and findings of UGI endoscopy.

## RESULTS

A total of 3,195 endoscopies were performed. Among them, 2,141 (67%) patients had dyspepsia and were analyzed. Mean age was 39.37 years (SD  $\pm$  18.16), male were 996 (46.52%) and female were 1145 (53.48%), (Figure 1). In 1991 (93%) there was single pathologic finding and in 150 (7%) multiple pathologies in varying combinations, (Table 1). Endoscopy was normal in 27.74% (594) of patients, (Figure 2).



**Figure 1. Age distribution of dyspepsia patient who had upper gastro intestinal, UGI endoscopy (n=2141)**



**Figure 2. Age distribution of dyspepsia patients with normal UGI endoscopy findings (functional)**

**Table 1. UGI endoscopy findings in dyspeptic patients (n=2141)**

Findings in endoscopy	n	%
Gastritis	892	41.6
Oesophagitis	215	10.04
Duodenal Ulcer	100	4.67
Gastroduodenitis	85	3.9%
Hiatus hernia	82	3.82
Gastric Ulcer	46	2.14
Duodenitis	51	2.38
Gastropathy	45	2.1
Gastric Oesophageal Varices	17	0.7
Oesophageal Varices	15	0.7
Short Segment Barret's	10	0.46
Duodenal polyp	2	0.09
Duodenal diverticula	2	0.09
Hemorrhagic gastropathy	2	0.09
Bilous Gastropathy	2	0.09
Mallory Weiss Tear	1	0.04
Oesophageal Polyp	1	0.04
Gastric Polyp	1	0.04
Barret's Oesophagus	1	0.04
Oesophageal Stricture	1	0.04
Anastomotic Ulcer	1	0.04
Normal findings	594	27.74

## DISCUSSIONS

Dyspepsia was the most common indication for UGI endoscopy, (67% of the cases in this study). The prescription for dyspepsia now account for over 10% of primary care, numbering 471 million in 1999 in England and Wales. This is similar to a large retrospective study from Pakistan where 52.4% and 42.6% cases underwent endoscopy for dyspepsia.<sup>6,7</sup> Similar findings has been reported from India with 59% of patients undergoing endoscopy for dyspepsia.<sup>8</sup>

Endoscopic lesion was seen in 72.2%, while in 27.7% no gastroluminal pathology could be identified. These patients probably suffered from functional dyspepsia. A result from mid-western Nepal reported 49.15% normal UGI endoscopy.<sup>9</sup> However, the study from Nepal Medical College reported normal findings in only 17.87% of patients who underwent the procedure for dyspepsia.<sup>10</sup> We didn't have exact data of what percentage of patients were taking acid suppressing drugs before the procedure. In our study, the use of over the counter drugs for dyspepsia and empiric therapy with acid suppressants could explain the higher number of cases with normal endoscopy. In this study, normal endoscopy was reported more commonly in females (16.53%) as compared to males (11.2%) showing that prevalence rate of functional dyspepsia is higher in females, which is also reported in other studies.<sup>11</sup>

Abnormal endoscopy was more common in patients above 40 years of age as compared to younger patients in our study. This supports the notion that endoscopy should promptly be done in patient above 45 with dyspepsia. Gastritis was the commonest pathology reported (41.66%) in patients who presented with dyspepsia. It was equally common in male and female patients. A study from Nepal Medical College reported gastritis to be the commonest (47.65%) endoscopy finding among dyspeptic patients.<sup>9</sup> We based our diagnosis of gastritis on gross endoscopic appearance of gastric mucosa without histopathology or biopsy. The other common endoscopic findings included oesophagitis (10.04%), duodenal ulcer (4.67%), gastroduodenitis (3.97%), hiatus hernia (3.82%) and gastric ulcer (2.14%).

Peptic ulcer disease comprised of 6.81% in our patients who underwent endoscopy for dyspepsia. Duodenal ulcer was more common than the gastric ulcer. The overall frequency of duodenal ulcer in the study population was 4.67% and that of gastric ulcer 2.14%. This is not consistent with a study done in Bir Hospital, Kathmandu, where 10.1% of peptic ulcer disease was reported in patients with

dyspepsia who underwent endoscopy in which 5.9% patients had gastric ulcer and 4.2% duodenal ulcer.<sup>17</sup> This inconsistency in results could be due to small number of patients (302) in their study. Gastric and oesophageal malignancy constituted a small but significant percentage of patients with dyspepsia i.e. 1.72%, which is similar to results reported by a study done in Pakistan.<sup>6</sup> The incidence of upper gastrointestinal malignancy is rising both locally and internationally.<sup>12,13,18,19</sup> Thus, UGI endoscopy is a valuable diagnostic modality in screening malignancy, especially in elderly patients with alarm symptoms. Some patients with dyspepsia had short segment Barrett's, duodenal polyp, duodenal diverticula, gastric polyp and oesophageal varices as incidental findings, which may not be related to their symptomatology.

Helicobacter pylori status and history of drug intake was not available in our patients. Biopsy confirmation of the gastroduodenal inflammation was done only in small number of cases. These are certain limitations of the study, which could be rectified in future analysis of prospective studies and develop local guidelines for the management of dyspepsia.

## CONCLUSIONS

Three quarters of UGI endoscopy was performed for dyspepsia. Gastritis followed by oesophagitis was seen in half of the dyspeptic patients, while a quarter had functional dyspepsia with normal findings.

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