

# FREQUENCY OF UPPER GASTROINTESTINAL PATHOLOGIES: LOCAL PERSPECTIVE

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## ABSTRACT

**Objective:** To find out the frequency of upper gastrointestinal pathologies as found on endoscopy in patients presenting to Lady Reading Hospital Peshawar.

**Material and Methods:** This observational study was conducted in Medical A Unit, Post-Graduate Medical Institute, Lady Reading Hospital Peshawar, from 1st September 2002 to 31st August 2006 (4 years period). Records of upper gastrointestinal (GI) endoscopies performed at endoscopy unit of were analyzed. Detailed information of the patients including serial no, name, age, gender, address, indication(s) for endoscopy, endoscopic findings, if biopsy taken, any complication(s) if occurred, were recorded. All patients were HBsAg and anti-HCV negative.

**Results:** During the study period, 1840 upper GI endoscopies were performed. Male to female ratio was 1:8 with majority of patients in the age-group of 31-40 years age-group. Most common indications for upper HI endoscopy were dyspepsia (n=1652, 89.78%) and dysphagia (n=74, 4.03%). Endoscopy was normal in 608 (33.05%) patients. Among the positive endoscopic findings, inflammatory lesions (gastritis, esophagitis etc) were the most common (n=728, 39.56%), followed by peptic ulcer disease (n=148, 8.05%), malignancies (n=128, 6.96%), erosions (n=116, 6.30%) and miscellaneous lesions (n=112, 6.08%).

**Conclusion:** Dyspepsia is the most common indication of upper GI endoscopy. Gastritis, esophagitis, duodenal ulcer and upper GI malignancies are amongst the common abnormal endoscopic findings. Almost one-third of patients have normal endoscopic findings and probably suffering from functional dyspepsia.

**Key Words:** Dyspepsia, Upper GI Endoscopy, Gastritis, Esophagitis, Duodenal Ulcer, Malignancies.

## INTRODUCTION

Upper gastrointestinal (UGI) disorders are very common in general population. These include reflux esophagitis, peptic ulcer disease, and UGI malignancies. Fiberoptic UGI endoscopy is a well-established procedure for diagnosis and management of these disorders.<sup>1</sup> Dyspepsia, dysphagia and upper UGI bleed are important indications of UGI endoscopy.<sup>2</sup> Dyspepsia is defined as persistent or recurrent pain centered in the upper abdominal pain or abdominal discomfort characterized by early satiety, postprandial upper abdominal fullness or bloating.<sup>3,4</sup> Dysphagia is an alarm symptom may be caused by benign conditions like esophageal stricture or malignant conditions like esophageal carcinoma. Upper GI bleeding is usually caused by UGI erosions, peptic ulcer disease and malignancies.

Government Lady Reading Hospital Peshawar is a tertiary care postgraduate hospital and, being largest hospital of the province receives

patients from all over the NWFP as well as Afghanistan and adjacent parts of Punjab province. This study was conducted to find out the frequency of upper gastrointestinal pathologies as found on endoscopy in patients presenting to Lady Reading Hospital Peshawar.

## MATERIAL AND METHODS

Record of UGI endoscopies performed at endoscopy unit of Medical A Unit, Post-Graduate Medical Institute, Lady Reading Hospital Peshawar, from 1<sup>st</sup> September 2002 to 31<sup>st</sup> August 2006 (4 years period) were analyzed. All UGI endoscopies were performed in standard way employing Pentax and Olympus Video Systems<sup>5</sup> by the first two authors. Endoscopic diagnosis was based on widely accepted criteria.<sup>6</sup> Diagnostic biopsy was done when indicated.

Each patient's record included essential information including serial no, name, age, gender, address, indication(s) for endoscopy, endoscopic

### AGE AND GENDER DISTRIBUTION OF PATIENTS UNDERGOING UGI ENDOSCOPY

Age range (years)	Male (n = 1000)	Female (n = 840)	Total (n = 1840)
< 10	3 (0.30%)	1 (0.12%)	4 (0.22%)
11-20	48 (4.80%)	48 (5.71%)	96 (5.22%)
21-30	259 (25.90%)	161 (19.17%)	420 (22.83%)
31-40	274 (27.40%)	206 (24.53%)	480 (26.09%)
41-50	189 (18.90%)	251 (29.89%)	440 (23.91%)
51-60	129 (12.90%)	71 (8.45%)	200 (10.86%)
61-70	57 (5.70%)	63 (7.50%)	120 (6.52%)
>70	41 (4.10%)	39 (4.63%)	80 (4.35%)

Table 1

### ENDOSCOPIC FINDINGS

Endoscopic Findings	Male (n = 1000)	Female (n = 840)	Total (n = 1840)
Normal	308 (30.80%)	300 (35.72%)	608 (33.05%)
Inflammatory lesions	360 (36%)	368 (35.72%)	728 (39.56%)
Peptic ulcer disease	112 (11.2%)	36 (4.28%)	148 (8.05%)
Tumors	80 (8.00%)	48 (5.71%)	128 (6.96%)
Erosions	68 (6.80%)	48 (5.71%)	116 (6.30%)
Miscellaneous	72 (7.20%)	40 (4.76%)	112 (6.08%)

Table 2

findings, if biopsy taken, any complication(s) if occurred. All patients were HBsAg and anti-HCV negative.

### RESULTS

During the time period from 1<sup>st</sup> September 2002 to 31<sup>st</sup> August 2006 (4 years period), 1840 upper GI endoscopies were performed at endoscopy unit of Medical A Unit, Post-Graduate Medical Institute, Lady Reading Hospital Peshawar. Male to female ratio was 1:8 with majority of patients in the age-group of 31-40 years age-group (Table-1). Endoscopy was normal in 608 (33.05%) patients; among the positive endoscopic findings, inflammatory lesions were the most common (39.56%), followed by peptic ulcer disease (8.05%), malignancies (6.96%), erosions (6.30%) and miscellaneous lesions (6.08%) (Table-

2). Among each category, the most common lesion was gastritis (Table-3), duodenal ulcer (Table-4), carcinoma stomach (Table-5), gastric erosions (Table-6), and esophageal varices (Table-7). Most common indications for upper HI endoscopy were Dyspepsia and dysphagia (Table 8).

### DISCUSSION

Dyspepsia was the most common indication of upper GI endoscopy in our series, followed by dysphagia, upper GI bleed and to take duodenal biopsy to exclude celiac disease. This is the largest study reported from our region preceded by Shah NH, et al<sup>7</sup> and Mahmood K, et al<sup>8</sup>. In our series, endoscopy was normal in 33% cases, which is comparable with the other two studies, 36% in Shah NH<sup>7</sup> series and 30% in Mahmood K<sup>8</sup> series, but almost double than

### DISTRIBUTION OF INFLAMMATORY LESIONS

Lesions	Male (n = 360)	Female (n = 368)	Total (n = 728)
Esophagitis	87 (24.17%)	93 (25.27%)	180 (24.73%)
Hiatus Hernia	70 (19.44%)	84 (22.83%)	154 (21.15%)
Gastritis	180 (50.00%)	184 (50.00%)	364 (50.00%)
Esophageo-gastritis	70 (19.44%)	66 (17.91%)	136 (18.68%)
Duodenitis	23 (6.39%)	25 (6.79%)	48 (6.59%)

Table 3

### DISTRIBUTION OF PEPTIC ULCERS

Lesions	Male (n = 112)	Female (n = 36)	Total (n = 148)
Gastric ulcer	15 (13.39%)	13 (4.28%)	28 (18.92%)
Duodenal ulcer	97 (86.61%)	23 (63.89%)	120 (81.08%)

Table 4

### DISTRIBUTION OF MALIGNANCIES

Lesions	Male (n = 80)	Female (n = 48)	Total (n = 128)
Ca esophagus	31 (38.75%)	25 (52.08%)	56 (43.75%)
Ca stomach	49 (61.25%)	23 (47.92%)	72 (56.25%)

Table 5

### DISTRIBUTION OF UGI EROSIONS

Lesions	Male (n = 68)	Female (n = 48)	Total (n = 116)
Gastric erosions	42 (61.76%)	30 (62.50%)	72 (62.07%)
Duodenal erosions	26 (38.24%)	18 (37.50%)	44 (37.93%)

Table 6

### DISTRIBUTION OF MISCELLANEOUS LESIONS

Lesions	Male (n = 72)	Female (n = 40)	Total (n = 112)
Pharyngeal pouch	3 (4.16%)	0	3 (2.67%)
Varices	42 (58.33%)	16 (40.00%)	58 (51.78%)
Esophageal stricture	2 (2.77%)	1 (2.5%)	3 (2.67%)
Esophageal candidiasis	12 (16.66%)	10 (25.00%)	22 (19.64%)
Achalasia	4 (5.56%)	0	4 (3.56%)
Esophageal diverticulum	1 (1.39%)	1 (2.5%)	2 (1.78%)
Mallory-Weiss Tear	4 (5.56%)	8 (4.00%)	12 (10.68%)
Telangiectasia	2 (2.78%)	3 (7.5%)	2 (1.78%)
Dieulafoy lesion	1 (1.39%)	1 (2.5%)	2 (1.78%)
Duodenal polyp	1 (1.39%)	0	1 (0.89%)

Table 7

reported by Khuram M, et al<sup>9</sup> from Rawalpindi (17%) and Zaigham, et al<sup>10</sup> from Karachi (12%). This difference may be due to the facts that upper GI malignancies are more common in this part of the country<sup>7,8</sup> and therefore threshold of suspicion of malignancies in dyspepsia is low here on general, resulting in more workload of endoscopies. For example about 700 endoscopic

procedures per year were reported by Khuram M, et al<sup>9</sup> from Rawalpindi whereas about 1500 upper GI endoscopies are performed in our hospital (combined published<sup>8,10</sup> current study and unpublished data of three units of PGMI, LRH, Peshawar).

Gastritis was the most common pathology

### INDICATIONS OF UPPER GI ENDOSCOPIES

Indications	Males n = 1000		Females n = 840		Total n = 1840	
	Number	%age	Number	%age	Number	%age
Dyspepsia	886	88.6	766	91.19	1652	89.78
Dysphagia	43	4.30	31	3.69	74	4.03
UGI Bleed	46	4.6	24	2.86	70	3.86
Deudenal Biopsy	25	2.5	19	2.26	44	2.39

Table 8

found on endoscopy. As said before, among the positive endoscopic findings, inflammatory lesions were the most common (39.56%) and half of these were gastritis (50%). This is comparable with other studies from the area<sup>7,8,10</sup> and those from Rawalpindi<sup>9</sup>, Karachi<sup>11</sup>. Data regarding *H. pylori* and NSAIDs intake in our patients was incomplete. Anyhow, *H. pylori* was positive in 74% of the available biopsy reports. Peptic ulcer disease (8.05%) and upper GI malignancies (6.96%) were almost comparable in occurrence. Among peptic ulcer disease, duodenal ulcer was 4 times more common than gastric ulcer; finding comparable to other studies<sup>7-15</sup>. Duodenal ulcer was more common in males whereas gastric ulcer was more common in females; findings comparable to other studies.<sup>7,9,12-16</sup>

Upper GI malignancies are more common in this part of our country<sup>7</sup>. Our data further confirm the previous data from the region<sup>7</sup>. Overall prevalence of upper GI malignancies was almost 7%. Carcinoma stomach was marginally common than carcinoma esophagus. Anyhow, carcinoma stomach was more common in males whereas carcinoma esophagus was more common in females. Again these results are comparable with others.<sup>7,8</sup>

The current data includes HBV and HCV negative patients. Therefore major bulk of liver cirrhosis was excluded. This is reflected relatively low rate of gastroesophageal varices as compared to other studies.<sup>7,9</sup>

## CONCLUSION

Dyspepsia is the most common indication of upper GI endoscopy. Gastritis, esophagitis, duodenal ulcer and upper GI malignancies are amongst the common abnormal endoscopic findings. Almost one-third of patients have normal endoscopic findings and probably suffering from functional dyspepsia.

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