

Endoscopic Findings in Patient with Dyspepsia in Al-Ramadi General Hospital

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Abstract

This study including upper gastro - intestinal endoscopic findings of 1998 patients complaining from dyspepsia, 803 (40%) of them were found to have normal endoscopic findings and 1195 (60%) found to have upper gastro - intestinal abnormalities. Duodenal ulcer represents the highest frequency (24%) of these abnormalities followed by gastritis (13%), duodenitis (7%), gastro duodenitis (4.4%), hiatus hernia & prolapse gastropathy (3.9%), reflux esophagitis (3.1%), gastric tumor (1.7%), gastric ulcer (1.3%), gastric outlet obstruction (1.2%) while tumor of esophagus found to be the lowest value (0.4%).

Of the all examined cases as well as cases with abnormal endoscopy (1195 case), the highest number of referred cases were from the age group 21-30year, and the lowest was from the age group 81-90years. Also, we found that when the age is more than 60years of age, more than 79% of their endoscopic findings were abnormal.

There were no significant sex differences among all studied cases except for tumor of esophagus and hiatus hernia as showed male predominance.

Keywords: Gastritis, endoscope, duodenal ulcer, reflux esophagitis, gastric tumor, gastric ulcer.

INTRODUCTION

Dyspepsia is a widespread gastrointestinal problem that affects people of all ages and social classes¹.

Also, it is constellation of symptoms known as dyspepsia includes upper abdominal pain or discomfort that can be either intermittent or chronic, as well as possible accompanying symptoms including nausea and vomiting. Although these symptoms may be connected to a variety of distinct clinical illnesses (including gastroesophageal reflux disease, stomach cancer, and peptic ulcer disease), frequently no organic explanation is identified (functional dyspepsia)².

In the United States and other Western nations, persistent upper stomach pain or discomfort affects about 25% of people each year. When regular heartburn is taken into account, which is defined as rising retrosternal burning pain or discomfort occurring once a week or more frequently, the prevalence exceeds 40%³.

Functional dyspepsia includes a field of functional gastrointestinal disorders that will impact the gastro-duodenal region. Routine tests can detect functional dyspepsia (FD), a condition characterized by persistent or recurrent symptoms related to the gastroduodenal region in the absence of an organic disease⁴ and at least two thirds of patients have no structural or biochemical explanation for their symptoms.

By the cardinal symptoms, functional dyspepsia is split into two subgroups:

- Epigastric pain syndrome (EPS), which is marked by a searing or severe epigastric discomfort

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How to cite this article: A S Mahdi, S H Tahseen, Endoscopic Findings in Patient with Dyspepsia in Al- Ramadi General Hospital, J PHARM NEGATIVE RESULTS 2022;13: 1128-1135.

Access this article online

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10.47750/pnr.2022.13.04.157

- Postprandial distress syndrome (PDS) – early satiety and a sense of fullness⁵.

Provisional diagnoses made only on the basis of a history and physical examination are frequently incorrect, which results in poor care strategies and/or a delay in determining the exact diagnosis, the diagnostic process frequently reveal abnormalities that will histologically and later endoscopically linked to gastritis. Based on the endoscopic and histological findings, patients who truly have functional dyspepsia are commonly given the diagnostic "gastritis". Since the endoscopic and histological findings of gastritis do not match the patients' symptoms, the word "gastritis" as a clinical diagnosis should be abandoned in favor of functional dyspepsia⁶⁻⁹.

Heartburn and epigastric pain or discomfort are reported by up to 60% of persons with upper gastrointestinal symptoms¹⁰.

The "gold standard" for diagnosing (or ruling out) peptic ulcer disease and other particular organic diseases or upper gastrointestinal (UGI) pathologies is still endoscopic evaluation of the upper GI tract. It is easily carried out procedure of high diagnostic value and therapeutic value too. By providing viewing, photography, documenting the findings, ultrasonography, and biopsy of worrisome lesions, endoscopy plays a significant role in the diagnosis of upper gastrointestinal disorders. When investigating upper gastrointestinal hemorrhage and inflammatory disorders of the upper gastrointestinal tract, such as esophagitis, gastritis, and duodenitis, endoscopy outperforms radiography in terms of diagnostic yield¹¹.

In a study on Chinese people residing in Taiwan¹², of 2,018 respondents, 561 subjects (27.8%) reported dyspeptic symptoms; of those 561 subjects, 80 (14.3%) had structural abnormalities (reflux esophagitis in 15, duodenal ulcer in 33, gastric ulcer in 25, both gastric and duodenal ulcers in 6, and both gastric ulcer and reflux esophagitis in 1) on EGD. Using Rome I criteria, the frequency of FD was 23.8%, while using Rome II criteria, it was 11.8%. Unfortunately, the community studies from Asian nations that are accessible employed differing diagnostic standards for UD. Therefore, it is challenging to determine whether the disparity in dyspepsia prevalence revealed in this research genuinely reflects the variation in frequency of this illness in different nations or is connected to the diagnostic criteria for the condition¹³.

This wide variation of findings puts needs in any country and governate areas in the same country to have an epidemiological idea for the causes of dyspepsia in each area for future plane of health measures.

Aim of the study

The aim of this study is to analyses the upper gastrointestinal endoscopic finding of all patient examined in Al - Ramadi

General Hospital presented with dyspepsia and referred for endoscopy from the period 1 / January / 2002_28 / February / 2004 Year.

Material & Methods

This is a retrospective study done in Al Ramadi General Hospital Gastroenterology Unit. It includes all reports of endoscopical examination for patients complaining from dyspepsia and referred to endoscopy unit over a period of 26 months from 1 " January 2002 to last February 2004.

The endoscopy was done by Gastro - enterologist using PENTAX endoscopy, FG; W 29.

Total report included in this study was 1998 report, 1004 of them male (50.3%) and 994 female (49.7%).

Results

Upper gastro - intestinal endoscopic findings of 1998 patients complaining from dyspepsia were enrolled in this study, 803 (40%) of them were found to have normal endoscopic findings and 1195 (60%) found to have upper gastro - intestinal abnormalities. Duodenal ulcer represents the highest frequency (24%) of these abnormalities followed by gastritis (13%), duodenitis (7%), gastro duodenitis (4.4%), hiatus hernia & prolapse gastropathy (3.9%), reflux esophagitis (3.1%), gastric tumor (1.7%), gastric ulcer (1.3 %), gastric outlet obstruction (1.2%) while tumor of esophagus found to be the lowest value (0.4%). Figure 1

Table (1) showings the results of upper gastro - intestinal endoscopic findings according to the age groups and gender. As duodenal ulcer found to have significant risk at age group 81-90y, 75 % (all of them are male) and age group 11-20y, 73 % (40% male & 33% female) while its lowest incidence found at 71-80y, 13% (male only) and the incidence of other age groups are lied in - between. The maximum percentage of duodenitis found to be at age group 0-10y, 55 % (36 % male & 19 % female), but have no risk at 81-90y and its value among other age groups are vary from 7% -17%.

Gastric ulcer appeared to have highest incidence, 27 % (7% male & 20% female) at age group 71-80y, while other age groups found to have less significant value (2% -14 %).

The highest frequency of gastritis found at 51-60,40 % (23% male & 17% female) followed by 61-70y, 37 % (17% male & 20% female), while no case was observed at 81-90y and its incidence among other age groups are variable (13% -27%). Forty seven percent of patients at age group 71-80y found to have gastro - duodenitis (100 % male), where other age groups have variables, frequency range from 0 % -12%. Tumor of stomach frequency at age groups 61-70y and 71-80y was 22% & 20 % respectively but other age groups not show significant incidence (0% - 9%). The maximum

percentage of gastric-outlet obstruction (33 %) found at 71-80y, where other age groups have no significant value (0 % -6%). The incidence of reflux esophagitis is 14 % at 51-60y followed by 31-40y, 21-30y and 11-20y (9%, 7%, 3% respectively). Tumor of esophagus represented only 5% and 2% incidences at age groups 31-40y and 61-70y respectively, where no cases are detected at other age groups. Finally, the incidence of hiatus hernia and prolapse gastropathy are 14% at 61-70y and 11% at 41-50y, where it's value at other age groups are range from 0 % 9%. Figure 2

There were no significant sex differences among all studied cases including total number, normal and upper gastro-intestinal abnormalities except for tumor of esophagus as male to female ratio was 6:1, as well as, male complaining from hiatus hernia and prolapse gastropathy found to have 2.3 times risk than female. Table 2, Figure 2.

Of the examined cases, the highest number of referred cases were from the age group 21-30Year, 605 (30.3%) of the total involved reports, and the lowest was from the age group 81-90 years, 5 cases from all (0.2%). Table3

Of the cases with abnormal endoscopy (1195 case), the highest number of abnormal findings was also from age group 21-30 years of age, 366 case (30.6% of the whole abnormal cases), and the lowest from age group 81-90 years of age (0.3% of the whole abnormal cases), Table3. We found also that when the age is more than 60 years of age, then more than 79% of endoscopies were abnormal, and the highest percentage of abnormal endoscope in the same age group examined is 71-80y, where 20 cases are examined and 17 endoscopies of them was abnormal (85%).

Discussion

The most accurate estimates of prevalence in the community come from population-based research that use endoscopy before diagnosis because diagnosing functional dyspepsia requires exclusion of an organic explanation for the symptoms¹⁴.

Therefore, if a decision is made to explore a patient with dyspepsia, endoscopy should be the first diagnostic procedure performed^{15,16}. present study is a retrospective type including upper gastro-intestinal endoscopic findings of 1998 patients complaining from dyspepsia, 40% of them were found to be normal and 60% found to have upper gastro-intestinal abnormalities, similar results were reported by previous studies^{17,18}.

Duodenal ulcer is a worldwide disease and in this study is found to have the highest frequency (24%) as compared with other upper gastro-intestinal abnormalities, this consistent with other study that will find ulcer in 35% of total present ¹⁹. furthermore, duodenal ulcer found to have significant risk at age groups 71-80 years and all of them were male, so that this result is compatible with fact said that Age-related

increases in the prevalence of ulcer disease may be explained by the increased use of NSAIDs in the elderly and the aging-related decline in tissue prostaglandin²⁰.

Regarding gender we found that duodenal ulcer has significant risk among male sex, similar result was reported was found^{20,21} and this may be related to important risk factor which represent tobacco smoking as we suspect this habit are present among male sex much more than female especially in certain areas of world including our country.

In the present study gastritis found to be the 2nd common disease among upper gastro-intestinal abnormalities but we suspect it was incidence is more than this value because gastritis may be associated with visible disruption of gastric mucosa or a grossly normal²², appearance mucosa (not detected by endoscopy) so we suggest further studies including endoscopy coupled with biopsies to detect the exact incidence of gastritis.

The frequency of gastric ulcer among our cases found to be very low, this are combatable with other studies, also gastric ulcer appeared to have highest incidence at age group 71- 80 years and this explained by fact, the incidence of ulcer disease increases with age, Additionally, throughout the 19th century, gastric, duodenal, and peptic ulcer disease all markedly increased in prevalence in Western nations, probably as a result of a shift in the epidemiology of *Helicobacter pylori* (*H. pylori*) infections^{20,23}.

Gastric tumor grades 2nd in occurrence of gastro-intestinal tumor in Jordan ²⁴, where it was graded 3rd amongst gastro-intestinal neoplasm in Saudi ^{25,26} whereas the highest rates of incidence of gastric cancer include the Republic of Korea, Mongolia and Japan ²⁷.

In the present study the incidence of gastric tumor was 1.7% and this result are similar to certain 28-31 while its incidence was less than that reported by other study ³². So that these different figures reflect the variety among the same country as well as between countries and indicate the need for local figures for each community. Age distribution of gastric tumor in our study showed that 42% of cases were between 60-80 years of age and this result are in keeping with the assumption and other observations that this disease increases with age ³³.

Reflux esophagitis, which develops as a result of gastro-esophageal reflux, is a persistent condition that frequently recurs³⁴.

In the present study the frequency of reflux esophagitis among upper gastro-intestinal abnormalities was 3.1%, similar such observation was reported in previous study ³⁵ that will find 4% presented reflux esophagitis, but we must consider that the absence of reflux esophagitis at endoscopy does not exclude gastro-esophageal reflux ³⁶.

study observed that peptic ulcer-like symptoms and signs can occur with gastro-duodenitis. In the present study the incidence of gastro-duodenitis was 4.4% and we conclude that further studies will be required to detect whether gastro-

duodenitis is an independent entity of the ulcer disease³⁷.

Esophageal cancer incidence and prevalence have decreased in developed countries due to improved treatment, screening with endoscopy, healthy lifestyle choices, better access to health services, and a decline in infectious diseases over the past two decades, though there are still significant regional variations around the world. In contrast, bad lifestyle choices, smoking, drinking, and a lack of suitable infrastructure for the implementation of comprehensive cancer control programs are likely more to blame in developing and least developed countries for the incidence of cancer and deaths from it^{38,39}.

In the present study the incidence of esophageal tumor was 0.4% and male to female ratio was 6: 1, this ratio is compatible with other results which found that esophageal tumor is particularly effected male whereas females have the lowest incidence ⁴⁰. On the other hand, we must put in mind the result in this study is not reflect the exact incidence of tumor in our country because esophageal tumor has a tendency to be a silent malignancy and the main

manifestation of tumor it is dysphagia rather than dyspepsia⁴¹.

Regarding age, the vast majority of our cases were within the age range from 40-90 years and this consistent with other studies ^{42,43} so these results indicated that the incidence of upper gastro-intestinal abnormalities increases with age.

Generally speaking, there was no sex differences among our cases except in certain situation as we mentioned above, this can be explained by fact that both sexes showed equally risk to develop upper gastro-intestinal abnormalities ⁴⁴ and we conclude that other risk factors rather than sex would be considered for upper gastrointestinal abnormalities.

Esophageal cancer has also been connected to dietary practices, nutritional regimens, and lifestyle factors. A lower risk of esophageal cancer is linked to increased exercise and a larger intake of fruits and vegetables while the consumption of pickled vegetables was related with a high risk of esophageal cancer ⁴⁵.

Table (1): results of gastroscopic findings and the incidence of upper gastro-intestinal abnormalities according to the age groups and gender over a period of 26 months

Age groups (years)	0-10 years		11-20 years		21-30 years		31-40 years		41-50 years		51-60 years		61-70 years		71-80 years		81-90 years		Total
	male	female	male	female	male	female	male	female	male	female	male	female	male	female	male	female	male	female	
Total	33	31	122	265	306	299	248	178	136	126	86	59	54	30	15	5	4	1	1998
Normal	12	18	44	116	108	131	120	82	44	49	30	27	8	10	3	0	1	0	803
Percentage	36	58	36	44	35	44	48	46	32	39	35	46	15	33	20	0	25	0	40
DU* ¹	5	3	49	87	86	68	42	35	30	27	18	7	16	3	2	0	3	0	481
Percentage	15	10	40	33	28	23	17	20	22	21	21	12	30	10	13	0	75	0	24
Duod.* ²	12	6	8	16	15	28	15	13	13	2	4	3	0	5	1	0	0	0	141
Percentage	36	19	7	6	5	9	6	7	10	2	5	5	0	17	7	0	0	0	7
GU* ³	1	0	1	1	5	1	3	2	2	3	0	1	1	2	1	1	0	0	25
Percentage	3	0	1	0.4	2	0.3	1	1	2	2	0	2	2	7	7	20	0	0	1.3
GU* ⁴	2	2	10	34	42	40	19	29	14	18	20	10	9	6	1	1	0	0	257
Percentage	6	7	8	13	14	13	8	16	10	14	23	17	17	20	7	20	0	0	13
G.D.* ⁵	0	2	3	8	19	13	14	3	12	4	3	1	1	1	1	2	0	0	87
Percentage	0	7	3	3	6	4	6	2	9	3	4	2	2	3	7	40	0	0	4
T.S.* ⁶	0	0	0	1	2	1	1	1	3	6	3	1	10	1	3	0	0	1	34
Percentage	0	0	0	0.4	1	0.3	0.4	1	2	5	4	2	19	3	20	0	0	100	2
G.O.O.* ⁷	1	0	1	0	1	1	1	3	5	3	2	1	2	0	2	1	0	0	24
Percentage	3	0	1	0	0.3	0.3	0.4	2	4	2	2	2	4	0	13	20	0	0	1
R.O.* ⁸	0	0	4	0	10	10	10	6	6	6	3	6	0	0	0	0	0	0	61
Percentage	0	0	3	0	3	3	4	3	4	5	4	10	0	0	0	0	0	0	3
T.E.* ⁹	0	0	0	0	0	0	5	0	0	0	0	0	1	1	0	0	0	0	7
Percentage	0	0	0	0	0	0	2	0	0	0	0	0	2	3	0	0	0	0	0.4
Misc.* ¹⁰	0	0	2	2	18	6	18	4	7	8	3	2	6	1	1	0	0	0	78
Percentage	0	0	2	1	6	2	7	2	5	6	4	3	11	3	7	0	0	0	3.9

DU* 1: Duodenal Ulcer, Duod*2 : Duodenitis, GU*3 •Gastric Ulcer, Gas,*4 •Gastritis, G.D.* 5 Gastro-Duodenitis, T.S.* 6 : Tumor of Stomach, G.O.O * 7 : Gastric Outlet Obstruction, R.O * 8 : Reflux Eosophagitis, T.E * 9 • Tumor of Eosophagus,

Misc. * 10 : Miscellaneous (hiatus hernia & prolaps gastropathy)

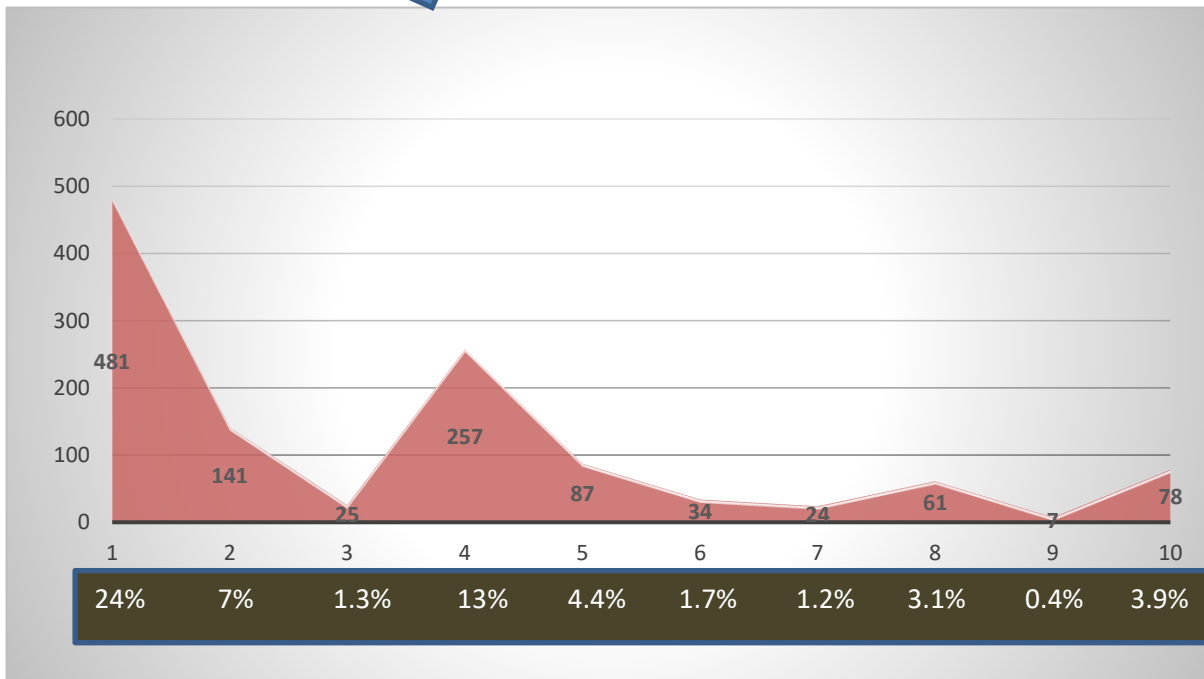
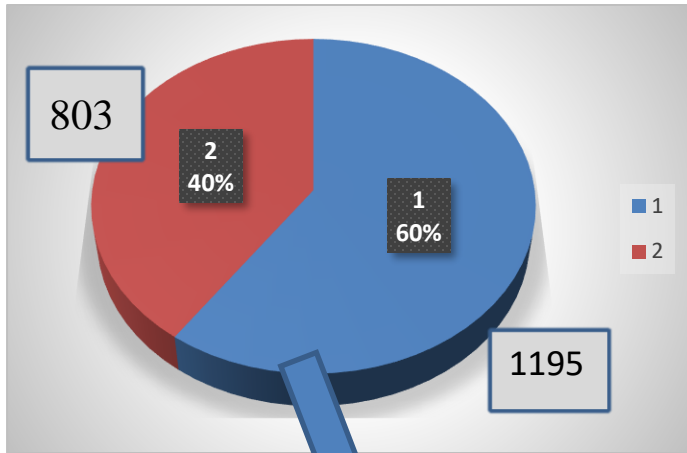
Table (2): male to female ratio of all studied cases (normal and upper gastro-intestinal abnormalities)

Subjects	male	Female	Male:female ratio
Total studies cases	1004	994	1.1:1
Normal	370	433	1:1.2
DU*¹	251	230	1.1:1
Duod.*²	68	73	1:1.1
GU*³	14	11	1.3:1
Gas.*⁴	117	140	1:1.2
G.D.*⁵	53	34	1.6:1
T.S.*⁶	22	12	1.8:1
G.O.O.*⁷	15	9	1.7:1
R.O.*⁸	33	28	1.2:1
T.E*⁹	6	1	6:1
Misc.*¹⁰	55	23	2.3:1
Total GI diseases	634	561	1.2:1

DU*1: Duodenal Ulcer, Duod.*2 : Duodenitis, GU *3: Gastric Ulcer, Gas.*4: Gastritis, G.D.*5 : Gastro-Duodenitis, T.S,*6: Tumor of Stomach, G.O.O*7: Gastric Outlet Obstruction, R.O*8: Reflux Esophagitis, TOE*9: Tumor of Esophagus, Misc.*10: Miscellaneous (hiatus hernia & prolapse gastropathy).

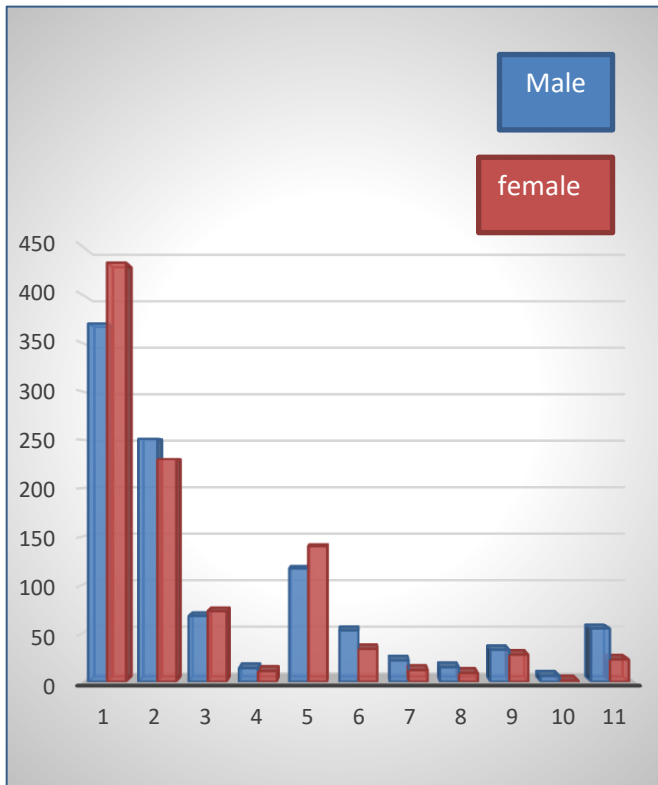
Table (3): The prevalence of gastro-intestinal abnormalities that detected by endoscopy among different age group

Age groups (years)	Total number (All cases)	Percentage from all involved reports	Total number of abnormal Gastrointestinal endoscopy	Percentage Of abnormal endoscopy from the total abnormal cases	Percentage Of abnormal endoscopy from the cases of same age group
0 - 10	64	3.2	34	2.9	53 %
11 - 20	387	19.4	227	19	59 %
21 - 30	605	30.3	366	30.6	60 %
31 - 40	426	21.3	224	18.7	53 %
41 - 50	262	13.1	169	14.2	65 %
51 - 60	145	7.3	88	7.4	61 %
61 - 70	84	4.2	66	5.5	79 %
71 - 80	20	1	17	1.4	85 %
81 _ 90	5	0.2	4	0.3	80 %
Total	1998	100	1195	100	



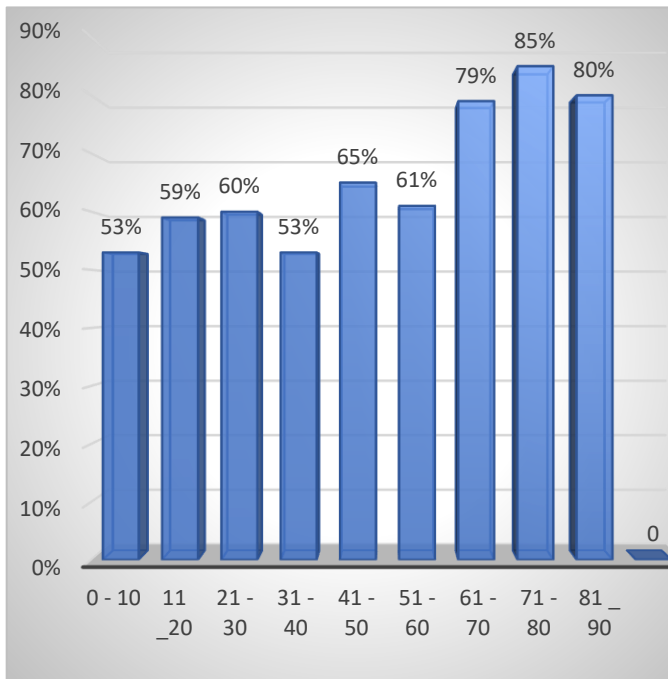
1: duodenal ulcer, 2: duodenitis, 3: gastric ulcer gastritis, 5: gastro-duodenitis 6: tumor of stomach,7: gastric outlet obstruction 8: reflux esophagitis,9: tumor of esophagus,10: miscellaneous

Figure (1): The incidence of upper gastro-intestinal abnormalities that detected by endoscopy as compared with normal.



1: normal, 2: duodenal ulcer, 3: duodenitis, 4: gastric ulcer, 5: gastritis, 6: gastro-duodenitis 7: tumor of stomach, 8: gastric outlet obstruction, 9: reflux esophagitis, 10: tumor of esophagus, 11: miscellaneous

Figure (2): The results of upper gastro-intestinal endoscopic findings according to the gender



1: 0-10 years, 2: 11-20 years, 3: 21-30 years, 4: 31-40 years, 5:41-50 years, 6: 51-60 years ,7: 61-70 years, 8: 71-80 years,

9: 81-90 years

Figure (3): Bar chart showing the percentage of positive upper gastrointestinal endoscopic findings (in general) among different age groups

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