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Evaluation of Dyspepsia

Asiso kumar Pradhan[1],Sworupa Nanda Mallick[2], Santosh Kumar Patro[3], Sanjit Kumar Nayak[4], V. Rajesh[5], SapanKumar[6]

[1] Associate Professor,Department of General Surgery,M.K.C.G Medical College & Hospital,Berhampur,Ganjam, Odisha.
[2] Assistant Professor,Department of General Surgery,M.K.C.G Medical College & Hospital,Berhampur,Ganjam, Odisha.
[3]Assistant Professor,Department of General Surgery,Medical College & Hospital,Berhampur,Ganjam, Odisha.
[4]Assistant Professor,Department of General Surgery,Medical College & Hospital,Berhampur,Ganjam, Odisha.
[5]Assistant Professor,Department of General Surgery,Medical College & Hospital,Berhampur,Ganjam, Odisha.
[6]Postgraduate,Department of General Surgery,Medical College & Hospital,Berhampur,Ganjam, Odisha.

Corresponding author:
Dr. Sanjit Kumar Nayak
Assistant Professor,
Department of General Surgery,
Medical College & Hospital,
Berhampur, Ganjam, Odisha.
Email id-nayaksanjit37@gmail.com

ABSTRACT

BACKGROUND

Dyspepsia is one of the most common symptoms we encounter in the outpatient department. The prevalence of dyspepsia is high and it is consuming considerable medical and economical resources. So, the study was undertaken at M.K.C.G. Medical College & Hospital, Berhampur, in the Department of General Surgery between the periods of July 2019 to June 2021, to find out the etiologies and contributingword factors of dyspepsia, so that early intervention can be taken.

MATERIALS AND METHODS

The study titled "Evaluation of Dyspepsia" was undertaken at M.K.C.G. Medical College & Hospital, Berhampur in the department of General surgery over a period of 2 years (July 2019 to June 2021). This study comprised 70 patients with dyspepsia attending Surgical OPD and IPD and it's a type of prospective cohort study.

After informed consent patients were clinically examined and undergone different investigation as per clinical diagnosis like upper GI endoscopy, Ultrasonography, CT scan MRI Scan etc. All the patients had undergone medical and surgical treatment as per the diagnosis. After that they were followed for 12 weeks at 2 weeks intervals, to know whether dyspepsia was relieved or not.

OBSERVATION AND RESULTS

70 patients with dyspepsia were evaluated in this study. Highest prevalence of dyspepsia was found in the young adult age group of 31-40 years (40%) followed by the young age group of 18-30 (26%).Dyspepsia was more common in males (60%), compared to females (40%).Most common

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presenting complaint was epigastric pain.Most common patients with dyspepsia were normal (functional dyspepsia- 50%), followed by peptic ulcer (14%).Malignancy was diagnosed in 8% of patients with dyspepsia.Alarm features were present in 19% (13 out of 70) cases of dyspepsia.Alarm features were present in 83% of cases of malignancy.After 12 weeks of follow-up, 85% (60 out of 70) patients were relieved from symptoms.

CONCLUSION

From the study "Evaluation of Dyspepsia," we conclude thatDyspepsia is male predominance.Most common age group is 31-40 years.Functional dyspepsia is most common in dyspeptic patients.Alarm features are good predictors of underlying diseases but present only in 19% of cases.Most common pathology is peptic ulcer disease followed by biliary diseases and malignancy.Alarm features have a strong association with malignancy.Incidence of malignancy increases with age.H. pylori is most commonly associated with peptic ulcer disease and gastritis. H. pylori incidence increases with age.Patients above 45 years, with the first-time onset of dyspepsia should undergo endoscopic evaluation and other relevant investigations.Patients below 45 years with alarm features, should undergo endoscopic evaluation and other relevant investigations.85% of patients were relieved from symptoms after 12 weeks, with proper evaluation and treatment.Guidelines states that young patients without alarm features should undergo empirical treatment trials, but new modalities are yet to be identified.Dyspepsia is consuming more economical and healthcare resources, hence proper evaluation and proper treatment is warranted.

KEYWORDS

Dyspepsia, peptic ulcer disease, upper GI endoscopy

INTRODUCTION

Dyspepsia is one of the common symptom we encounter in surgical practice. The prevalence of dyspepsia is high, consuming health and economical resources and becoming a burden.

The term Dyspepsia comes from the Greek word "Dys" [bad] & "Pepsis" [digestion] is used for a spectrum of symptoms localized by the patient to the epigastric region. These symptoms include epigastric pain (60 to 70%), bloating after a meal (80%), early satiation (60 to 70%), distension in the epigastric region (80%), nausea (60%), and vomiting (40%). The symptoms of dyspepsia may be acute, e.g., in gastroenteritis, or chronic. In the latter case, underlying organic (e.g., peptic ulcer, gastroesophageal reflux, pancreatic disease, biliary disease) or functional factors may be responsible. On diagnostic work-up, 20 to 30% of patients with dyspepsia are found to have diseases that account for their symptoms. Functional dyspepsia (synonym: irritable stomach syndrome) is present whenever routine investigations, including endoscopy, do not identify any structural or biochemical abnormalities.[(1)]

According to the recently revised Rome IV criteria,[(2)]functional dyspepsia (FD) is defined by:

- Persistent or recurring dyspepsia for more than 3 months within the past 6 months.
- No demonstration of a possible organic cause of the symptoms on endoscopy.
- No sign that the dyspepsia is relieved only by defecation or of an association with stool irregularities.

The current Rome IV criteria[(2)] divide functional dyspepsia into two subgroups according to the cardinal symptoms

- Epigastric pain syndrome (EPS)—predominant epigastric pain or burning.
- Postprandial distress syndrome (PDS)—feeling of fullness and early satiation.

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Dyspepsia is a condition of great clinical significance as large number patients visiting gastroenterology clinics all over world.[3]Prevalence of dyspepsia is about 20-30% worldwide.[4] Although most prevalence studies in community report prevalence of UD, it is still reasonable to accept that majority of dyspeptic patients have FD as organic causes are quite uncommon.[5]A study from India reported prevalence of dyspepsia to be 30.4%.[6]

In another multi-centric study from India, primarily targeted to study epidemiology and clinical profile of irritable bowel syndrome, found frequency of dyspeptic symptoms to be as high as 49% in community.[7]In a study from Chandigarh, India, of 2048 individuals, 155 (7.5%) had dyspepsia (defined as intermittent or persistent pain, nausea or discomfort referable to the upper alimentary tract that has been present for 1 month or more and was unrelated to exertion).[8]As limited data available, it may be concluded that 7.6 to 49% of Indian population report dyspeptic symptoms. however, in none of these studies, currently accepted criteria such as Rome criteria, used to diagnose FD.[9]Hence, wide variation in reported prevalence of dyspepsia might be related to variation in criteria used for the diagnosis or to true difference in prevalence in different parts of the country.

Alarm Features

Patient should be evaluated for alarm features. Patients with alarm feature should undergo endoscopy to exclude gastric or esophageal malignancy.

Alarm features have poor predictive value of malignancy because they are present only in 10-20% of dyspeptic patients. Alarm features[10] include -

- Progressive dysphagia / persistent vomiting
- Unexplained weight loss
- Gastrointestinal bleeding
- Unexplained anemia
- Jaundice
- Lymphadenopathy
- Palpable abdominal mass

Functional dyspepsia decreases the quality of life of patients suffering from it and the productivity of society. Until recently, most patients with Functional dyspepsia were treated with antiulcer drugs and mucoprotective agents under the name of chronic gastritis. However, with society's increasing concern about quality of life, the trend of diagnosing and treating dyspepsia on the basis of its symptoms has strengthened.People with functional dyspepsia have a significantly reduced quality of life when compared to the general population.[11]

In a recent community survey of several European and North American populations, more than 50% of dyspeptics were on medication most of the time and approximately 30% of dyspeptics reported taking days off work or schooling due to their symptoms.[12]Studies from the United States, Great Britain, and other parts of the world have shown the prevalence of dyspepsia to be between 26% and 41%, while only 20%–25% of them seek medical care.[13] The burden of illness with respect to quality of life and economic consequences of dyspepsia is considerable. Recent data from a large cross sectional survey in the UK suggest dyspepsia may be costing society approximately £1 billion ($1.46 billion) annually.[14]

Aims and Objectives

- To find out the etiologies & contributing factors of dyspepsia in patients in Surgical OPD and Surgical indoor of MKCG Medical College & Hospital, Berhampur (southern Odisha)
- Management of the symptoms.
- Follow up of symptoms after treatment.

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METHODS

Inclusion Criteria

Patient of either sex above 18 years, with dyspepsia (with or without alarm symptoms).

Exclusion Criteria

- Patients not willing to take part in the study.
- Pregnant or lactating women.
- Immunocompromised patients.
- Patients on drugs causing dyspepsia that can't be withdrawn.

The present study was undertaken at M.K.C.G. Medical College & Hospital, Berhampur in the department of General Surgery between July 2019 to June 2021, to study the contributing factors of dyspepsia in patients.

The study comprised 70 patients who came to surgery OPD & IPD. After informed consent, they were studied clinically as per proforma over a period of 2 years.

All cases satisfying the inclusion criteria were selected for the study. Informed consent was obtained from them. After thorough clinical history taking, physical examination and routine blood investigation, they were undergone some special investigations like,Patients above 45 years were advised for upper GI endoscopy to rule out upper GI malignancy as it is most common after 45 years of age. Patients below 45 years with mild symptoms were advised to undergo empirical therapy (Tab Pantoprazole 40mg once daily for 4-8 weeks). Patients below 45 years with alarm symptoms were advised for upper GI endoscopy.

Patients with upper abdominal pain, heartburn, nausea, vomiting were subjected to endoscopy + biopsy to rule out upper GI malignancy like stomach cancer and H. Pylori infection.

Patients with vague abdominal pain along the periumbilical region, localizing to the right iliac fossa were advised for the abdominal ultrasound to rule out appendicitis.

Patients with mild fever, right upper quadrant pain, positive Murphy signs are advised for the abdominal ultrasound to rule out cholelithiasis. In patients with the above features with jaundice were subjected to MRI to check for biliary or pancreatic pathology.

Patients with abdominal pain with pain radiating to back were subjected to CT scan to check for pancreas pathology.Patients with chronic cough were advised for digital chest X ray.

Statistical Analysis

The analysis was carried out using statistical package software SPSS version 22.0.

RESULTS

Sex	No of Cases	Percentage
Male	42	60%
female	28	40%
Total	**70**	**100%**

Table 1. Sex distribution of cases

Out of 70 cases, dyspepsia was male predominance with 60% and female 40%.

Age Group(in years)	No. of Cases	Percentage (%)

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18-30	18	26
31-40	28	40
41-50	10	14
51-60	9	13
>60	5	7

Table 2. Age distribution of cases

Out of 70, maximum numbers of cases were seen in young adult people (40% in 31-40 age group) followed by young people (26% in 18-30 age group). Less prevalence was seen in old people.

Age group (in years)	**Sex**		**Total**	**Percentage (%)**
	Male	**Female**		
18-30	11	7	18	26
31-40	16	12	28	40
41-50	6	4	10	14
51-60	6	3	9	13
>60	3	2	5	7
Total	**42**	**28**	**70**	**100**

Table 3 Age and Sex distribution of cases

Diagnosis	**No of Cases**	**Percentage (%)**
Gastritis	7	10
Peptic ulcer	10	14
H. pylori	9	13
Biliary disease	8	11
Pancreatic disorder	4	6
Malignancy	6	8
Functional	35	50

Table 4. Diagnosis with Dyspepsia

Out of 70 patients, 50% patients were normal (functional dyspepsia). Among the organic disease highest incidence was seen in peptic ulcer (14%), followed by h. pylori and gastritis. The incidence of malignancy was 8%.

Diseases	**Male Cases**	**Female Cases**
Gastritis	4	3
Peptic ulcer	6	4
H. pylori	6	3
Biliary disease	3	5
Pancreatic disorder	4	0
Malignancy	5	1
Functional	20	15

Table 5. Diseases and Sex distribution

In this study incidence of gastritis was almost similar in both males and females, whereas peptic ulcer showed male predominance. Biliary diseases like cholelithiasis were more common in females.

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Malignancy (carcinoma stomach) showed male predominance. Pancreatic disorder showed male predominance.

Diseases	Alarm Features (no. of cases)
Gastritis	2
Peptic ulcer	4
Biliary disease	1
Pancreatic disorder	1
Malignancy	5
Total	13

Table 6. Cases with alarm features

Alarm features are indicative of underlying serious disease in patients with dyspepsia. In this study, only 19% (13 out of 70) had alarm features. The highest incidence was seen in malignancy followed by peptic ulcer. About 83% (4 out of 5) of malignancy showed alarm features. Alarm features have a strong association with malignancy.

Age Group	Male	Female
18-30	0	1
31-40	2	2
41-50	1	0
51-60	1	0

Table 7. Gastritis & Age, sex

In this study, the incidence of gastritis was almost the same in both males and females. The most common age group affected was 31-40 years.

Age Group	Male Cases	Female Cases
31-40	3	2
41-50	3	2

Table 8. Peptic ulcer & Age, sex

The most commonly affected age group was 31-50 years. The study showed slight male predominance.

Age Group	Male Cases	Female Cases
31-40	2	1
41-50	3	2
>60	1	0

Table 9. Helicobacter pylori & age, sex

Age Group	Male	Female
41-50	1	2
51-60	2	3

Table 10. Biliary disease & age, sex

Biliary diseases like gallstone were mostly seen in females, in age between 41-60 years.

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11% (8 out of 70) of patients with biliary diseases presented with dyspepsia.

Age Group	Male	Female
18-30	1	0
31-40	2	0
41-50	1	0

Table 11. Pancreatic disease & age, sex

In this study, pancreatic diseases were mostly seen in male patients.

Age Group	Male Cases	Female Cases
51-60	3	0
>60	2	1

Table 12. Malignancy & Age, sex

In this study, the incidence of malignancy was 8% (6 out of 70). Incidence of malignancy was male predominant and was towards the extreme of ages.

Age Group	Male	Female
18-30	10	6
31-40	9	8
>60	1	1

Table 13. Functional dyspepsia & age, sex

In this study, the incidence of functional dyspepsia was 50% (35 out of 70). The most common age group was young adults (18 to 40 years).

DISCUSSION

The majority of patients with dyspepsia were in the 18-60 age group. Thomson ABR et al,[(15)]faintuch et al,[(16)]Azzam et al,[(17)]choomsri et[(18)] had mean years 45.4, 44, 40.3, 41 respectively.The mean age of this study was 38.8. This is almost similar to the above studies.Jung et al[(19)] study had 58.3% male and 41.7% female. Ziauddin et al[(20)] had 61.5% male and 38.5% female.

This study comprised 70 patients with dyspepsia, out of which 42 males, 28 females. i.e., 60% Male, 40% female. This is almost similar to the above studies.Faintuch et al[(16)] study had 2.12% malignancy in patients with dyspepsia. Azzam et al[(17)] had 2.6% malignancy in patients with dyspepsia.

In this study, there were 6 patients out of 70 who had malignancy, which is approx. 8%.In this study the incidence of malignancy is more as compared to previous studies may be due to dietary factors like spicy and smoked food.Alarm features often give clues about the underlying serious diseases in patients with dyspepsia. In this study, 19% (13 out of 70) had alarm features. Out of this 83% (4 out of 5) had alarm features in patients with malignancy.

Various studies have shown that about 50-70% of patients have no underlying etiology (Functional Dyspepsia).[(21)]In this study 50% (35 out of 70) had functional dyspepsia (no underlying etiology).In these patients' common pathology was benign peptic ulcer followed by malignancy. As the age increases incidence of pathology also increases as that of malignancy.

CONCLUSION

From the study "Evaluation of Dyspepsia," we conclude that

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- Dyspepsia is male predominance.
- Most common age group is 31-40 years.
- Functional dyspepsia is most common in dyspeptic patients.
- Alarm features are good predictors of underlying diseases but present only in 19% of cases.
- Most common pathology is peptic ulcer disease followed by biliary diseases and malignancy.
- Alarm features have a strong association with malignancy.
- Incidence of malignancy increases with age.
- H. pylori is most commonly associated with peptic ulcer disease and gastritis. H. pylori incidence increases with age.
- Patients above 45 years, with the first-time onset of dyspepsia should undergo endoscopic evaluation and other relevant investigations.
- Patients below 45 years with alarm features, should undergo endoscopic evaluation and other relevant investigations.
- 85% of patients were relieved from symptoms after 12 weeks, with proper evaluation and treatment.
- Guidelines states that young patients without alarm features should undergo empirical treatment trials, but new modalities are yet to be identified.
- Dyspepsia is consuming more economical and healthcare resources, hence proper evaluation and proper treatment is warranted.

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