



A Clinicopathological Study of Gastric Carcinoma in a Rural Teaching Hospital

Authors

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Abstract

Background: Gastric carcinoma is common worldwide. It is one of the most common encountered problems in clinical practice with a high degree of morbidity and mortality. The diagnosis of gastric carcinoma depends on clinical, radiological, biochemical and pathological parameters. Endoscopic biopsy is widely regarded as the most useful diagnostic test and should be correlated histologically for a confirmatory diagnosis and for proper treatment.

Objective: To assess the clinico-pathological aspect of gastric carcinoma in a rural tertiary care hospital.

Methods: A total of 22 cases diagnosed as malignancy of stomach in Department of Pathology Rajah Muthiah Medical College were taken for the study.

Results: Out of 22 cases, most common age group at which malignancy of stomach was diagnosed was around 51- 60 years. Maximum number of cases was found in males. The most common histological type was found to be Intestinal type of Gastric Adenocarcinoma.

Keywords: Gastric carcinoma, Age incidence, Histological type.

Introduction

Gastric adenocarcinoma is common worldwide and also in India. According to GLOBOCAN 2018, gastric cancer is the 5th most common cancer worldwide and is 3rd most common cause of cancer related deaths.⁽¹⁾ The incidence of gastric cancer varies in different parts of the world and among various ethnic groups. It remains the fifth most common cancer among males and seventh most common cancer among females in India.⁽²⁾

Approximately 90% of gastric cancers are adenocarcinomas, and rest 10% are lymphoma, leiomyosarcoma etc. Diagnosis of gastric malignancy is based on clinical, biochemical, radiological and pathological parameters.^(3,4,5) Endoscopic biopsy examination followed by histopathological assessment is the current gold standard procedure for diagnosing patients with symptoms of upper gastrointestinal tract.⁽⁶⁾ Thus, the role of upper gastrointestinal mucosal biopsies for the histopathological identification of the

earlier stages of various gastrointestinal tumours, helps in proper management.⁽⁷⁾

The present study was undertaken to evaluate the clinical presentation, risk factors and the pathological features of gastric carcinoma patients diagnosed and managed at our tertiary care hospital.

Materials and Method

The present study is a prospective study done for a period of 2 years from August 2019 to September 2021 conducted in Department of Pathology Rajah Muthiah Medical College, Chidambaram. All cases diagnosed as benign cases of gastric lesions

was excluded from the study. A total of 22 cases diagnosed as gastric malignancy in Department of Pathology Rajah Muthiah Medical College were taken for the study.

Results

In this study, a total of 22 cases were taken. Out of these 22 cases, majority of the cases were males 13 (59.1%) and 9 cases were females (40.9%). Maximum number of malignancy were encountered in the age group of 51-60 years, 11 cases (50%). The youngest age of malignancy diagnosed was at 43 years and oldest age was 80 years old.

Table 1: Age Incidence

S. No	Age in years	No of cases (n=22)	Percentage
1	41 – 50	3	13.6%
2	51 – 60	11	50%
3	61 – 70	5	22.8%
4	71 – 80	3	13.6%

The Peak age incidence for gastric cancer was found in 51-60 years (50%).

Table 2: Correlation between Sex of Patients with Gastric Malignancy

S. No	Sex	Number	Percentage
1	No of Males	13	59.1%
2	No of females	9	40.9%

Out of 22 cases, 13 cases were *males* (59.1%), 9 were *females* (40.9%). The male: female ratio was 1.5:1.

Table 3: Sites of Endoscopic Biopsies

S. No	Regions	No of cases	Percentage
1	Antrum/Prepyloric	14	63.7%
2	Body	6	27.3%
3	Cardiac	1	4.5%
4	Fundus	1	4.5%

Table 3 shows that, out of 22 cases studied, commonest site of presentation of the gastric malignancies was the *Antrum/Prepyloric* (63.7%), followed by the *body* (27.3%).

Table 4: Symptoms of the Patient

S. No	Symptoms	No of affected	Percentage
1	Abdominal pain	10	45.4%
2	Vomiting	6	27.3%
3	Weight loss	3	13.7%
4	Hematemesis	2	9.1%
5	Malena	1	4.5%

Table 4 shows the most common presentation was *abdominal pain* which is seen in maximum number of cases (45.4%) followed by *vomiting* (27.3%).

Table 5: Histopathological Diagnosis

S. No	Histological Diagnosis	No of cases	Percentage
1	Poorly Differentiated adenocarcinoma	14	63.6%
2	Moderately differentiated adenocarcinoma	8	36.4%

Table 5 shows that most of the cases were diagnosed as *Poorly differentiated adenocarcinoma* (63.6%) followed by *Moderately differentiated adenocarcinoma* (36.4%).

The most common histopathological type of the gastric adenocarcinoma was *intestinal type* (77.3%) followed by *diffuse type* (22.7%).

Discussion

In our present two years study, we analyse certain data regarding to the basic clinical and

pathological profile such as age, sex ratio, sites of biopsies, symptoms and histopathological diagnosis.

Age Incidence

In our study the common age group was 50 – 60 years, which is at par with other studies.

Table 6: Age Incidence

S. No	Studies	Percentage
1	Our Present study	50%
2	Debashis Chakarbarthy et al. ⁽⁵⁾	36.5%

Arun Kumar Barad et al⁽⁸⁾ reported the commonest age of incidence was 60 years above (45.37%), followed by 51-60-year age group (31.4%).

Socioeconomic Status of Gastric Malignancy in Different Studies:

A total of 19 cases were from low socioeconomic status. In some other studies, socioeconomic status shows same trends.

Table 7: Socioeconomic Status of Gastric Malignancy in Different Studies

S. No	Studies	Percentage
1	Our Present study	86.3%
2	Leenadevi et al. ⁽⁹⁾	85.5%
3	Swaroop et al. ⁽¹⁰⁾	90%

Sex Incidence

In the present study out of total 22 cases 13 were male and 9 were female. There is a *male preponderance* of gastric adenocarcinoma through the world. We have found *male:female ratio of 1.5:1*, which is at par with other studies.

Table 8 - Male : Female ratio in different other studies

S. No	Studies	Percentage
1	Our Present study	1.5:1
2	P R Howley et al. ⁽¹¹⁾	2.2:1
3	Lundh G et al. ⁽¹²⁾	1.8:1

Symptoms

The common presenting symptoms of gastric carcinoma was abdominal pain. A comparative analysis is given under table below.

Table 9: Symptoms

S. No	Studies	Percentage
1	Our Present study	45.4%
2	Arun Kumar Barad et al. ⁽⁸⁾	61.4%
3	Hajiani Eskandar et al. ⁽¹³⁾	50%

Site of Presentation

The commonest site of presentation of gastric malignancy is *pylorus and antrum* followed by body, fundus and cardiac end were least involved. A comparative analysis is given in table 10.

Table 10: Site of presentation of Gastric malignancies in different studies

S. No	Studies	Percentage
1	Our Present study	67.3%
2	Debashis Chakarbarthy et al ⁽⁵⁾	65.3%
3	Pwj Houghton et al ⁽¹⁴⁾	48.6%

Lauren's Classification of Gastric Adenocarcinoma in Different Studies

In our study, Lauren's *intestinal type* of adenocarcinoma was 77.3% and *diffuse type* was 22.7% which are almost similar to other studies given in table 11.

Table 11: Lauren's Classification of Gastric Adenocarcinoma in different studies

S. No	Studies	Intestinal type	Diffuse type
1	Our study	77.3%	22.7%
2	Debashis Chakarbarthy et al ⁽⁵⁾	64.3%	35.7%
3	Jose et al ⁽¹⁵⁾	86%	14%

Conclusion

In conclusion, Gastric carcinoma was more common in *51-60 years*, mostly among *lower socioeconomic groups*. The most common histological type of gastric carcinoma was *Intestinal type of gastric adenocarcinoma*. Environmental and dietary factors contribute to the development of gastric cancers.

Effective screening measures and early diagnosis should be done to reduce the morbidity and mortality of the disease. Endoscopy is widely regarded as the most useful diagnostic test and a definitive diagnosis of gastric disorders rests on the histopathological confirmation and is the basis for planning proper management.

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