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## Clinical profile of patients with gastric carcinoma: A descriptive clinical study

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### Abstract

Gastric carcinomas can be classified according to their localization in the stomach. The antral-pyloric region of the stomach is the most common site of stomach cancer, and carcinomas of the body are located along the greater or lesser curvature. Cancers of the cardia are difficult to distinguish from cancers of the gastroesophageal junction, and are considered to be a separate entity originating from the distal oesophagus. The patients were planned for surgery following the investigations. The stage of the tumour was determined by the investigations. The operative procedures performed were broadly divided into curative and palliative procedures based on the stage. The operative procedure selected for a patient was based on the stage of the tumour, the presenting symptoms, the general condition and nutrition of the patient. Mass abdomen was palpable in 23% of the patients and visible gastric peristalsis in 34% of the patients. Hepatomegaly was present in 5 patients, ascites in 2 patients. 3 patients presented with peritonitis secondary to gastric perforation due to gastric carcinoma. The patients were further evaluated after recovery from the acute phase.

**Keywords:** Gastric carcinoma, gastroesophageal junction, mass abdomen

### Introduction

The age adjusted incidence rates of gastric carcinoma in India varies between 3.0-13.2/1,00,000 population as against a world incidence of 4.1-95.5/1,00,000 population. The incidence of gastric cancer is four times higher in South India than North India and its incidence in Bangalore is 9.5/1,00,000 population in males and 5.1/1,00,000 population in females. It is more common in men than women and its incidence increases with age peaking in the seventh decade. Despite its recent decline in incidence, carcinoma stomach is the 4th most common cancer and 2nd leading cause of cancer related deaths worldwide [1].

Worldwide the incidence of proximal gastric carcinoma is on the increase. In India also a trend towards an increase in the incidence of cardia tumours is seen. This is evident in the data from Mumbai, where the percentage of cardia and fundus tumours increased from 13% in 1941-1968 to 23% in 1987-1993. 95% of the tumours are adenocarcinomas. In India more than 90% of all gastric cancers are diagnosed in an advanced stage, and in those subjected to surgery more than 70% have serosal infiltration [2].

The primary epithelial tumour of the stomach is the adenocarcinoma, and develops from the stomach mucosa, usually maintaining glandular differentiation. Other less common tumours of the stomach are the squamous cell carcinomas, and the adenosquamous carcinomas, combining characteristics of both the adenocarcinoma and the squamous cell carcinoma to approximately equal extent. Undifferentiated carcinoma lacks any differentiated features and does not fit into any of the above categories [3].

Gastric carcinomas can be classified according to their localization in the stomach. The antral-pyloric region of the stomach is the most common site of stomach cancer, and carcinomas of the body are located along the greater or lesser curvature. Cancers of the cardia are difficult to distinguish from cancers of the gastroesophageal junction, and are considered to be a separate entity originating from the distal oesophagus [4, 5].

Dysplasia may present as a flat lesion or exhibit polypoid growth, with depressed, reddish or discoloured mucosa. Endoscopic detection of changes in color and architecture of the mucosa! Surface enables the classification of gastric cancers according to their macroscopic growth pattern [6].

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## Methodology

After admission, data for my study was collected by:

- Direct interview with the patient or patient relatives accompanying the patient and obtaining a detailed history.
- Thorough clinical examination.
- Relevant diagnostic investigations performed over the patient.
- The operative procedure performed and the morbidity and mortality following the procedure.

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Preparation of the patient was done by improving the general condition by supplementary foods like eggs, milk, and protein rich diet. Anemia was corrected by oral/parental iron supplements and by blood transfusion. In case of gastric outlet obstruction, Stomach wash was carried out with normal saline to remove the undigested food materials one day prior to surgery. On the evening before the operative day, Patient's abdomen is prepared from nipple to mid-thigh. Soap water enema given in the evening and in the morning on the day of surgery. The consent for operation is taken from the patient.

The planned operative procedure was carried out under general anaesthesia. During the operation, few of the patients required blood transfusion. Post-operatively all the patients received a course of antibiotics and intravenous fluids comprising of dextrose and normal saline, amount of which was adjusted to the need of the patient according to the hydration status. Ryles tube aspiration is carried out at regular intervals. A fluid intake and output chart was maintained. Depending on the return of the bowel sounds, Ryles tube was removed on 2<sup>nd</sup> post-operative day and oral fluids are started. The patients were counselled to consume about 6 small meals per day once normal diet is started. The skin sutures were normally removed on 10<sup>th</sup>-12<sup>th</sup> day. The patients are discharged following the suture removal.

The follow up is planned one month after the surgery followed by 3 months and 6 months. On the follow up patients are examined thoroughly and the issues were addressed.

## Results

**Table 1:** Age incidence

Age group	Number	Percentage
< 30	2	3.85
30-40	6	11.54
41-50	9	17.31
51-60	21	40.38
61-70	10	19.23
>70	4	7.69

It is observed that the Gastric Carcinoma is found to be highest in the age group of 51 to 60 years with 40.38%. The mean age was 59.6 years. It is predominantly seen in the age between 40-70 years.

**Table 2:** Diet

Diet	Number	Percentage
Mixed	32	61.54
Veg	20	38.46

Patients with Mixed Diet like poultry feeds and fish (smoked/salted) were found at 61.54% and patients with Veg Diet were found to be 38.46%.

**Table 3:** Habits

Habits	Number	Percentage
Smokers	26	50.00
Alcoholics	10	19.23
Smoker + Alcoholic	08	15.38

Fifty (50%) of the patients were Smokers while 19% were Alcoholics.

**Table 4:** Symptoms

Symptoms	Number	Percentage
Pain abdomen	36	69.23
Vomiting	30	57.69
Loss of appetite	35	67.31
Loss of weight	32	61.54
Haemetemesis	05	9.61
Malaena	08	15.38

Pain abdomen, loss of appetite and loss of weight were the predominant symptoms. Vomiting was seen in 57.69% of the patients. Haemetemesis was seen in 5 patients and Malaena in 8 patients.

**Table 5:** Physical signs

Physical signs	Number	Percentage
Mass Abdomen	12	23.08
VGP (Visible Gastric Peristalsis)	18	34.62
Hepatomegaly	5	9.62
Virchow's Node	1	1.92
Ascites	2	3.85
Peritonitis	3	5.77

Mass abdomen was palpable in 23% of the patients and visible gastric peristalsis in 34% of the patients. Hepatomegaly was present in 5 patients, ascites in 2 patients. 3 patients presented with peritonitis secondary to gastric perforation due to gastric carcinoma. The patients were further evaluated after recovery from the acute phase.

**Table 6:** Hemoglobin estimation

g/dl	No. of Patients	%
<9	11	21.15
9-11	27	51.92
>11	14	26.92

The haemoglobin estimation at 9-11 g/dl was found in 51.92% of patients while it was less than 9 g/dl at 21.15% and for greater than 11 g/dl at 26.92%.

**Table 7:** Co-morbidities

Co-Morbidities	No. of Patients	% Age
Diabetes mellitus	11	21.15
Hypertension	15	28.85
Ischaemic heart disease (IHD)	4	7.69
Respiratory disease	6	11.54

Among the co-morbidities, Hypertension was found at 28.85% and Diabetes Mellitus at 21.15%. The Respiratory disease and Ischaemic Heart Disease were found at lesser percentage.

## Discussion

In this study, majority of the patients belonged to age group between 51 and 60 yrs accounting for 40.3% of the patients. 19% of the patients were in the age group 61-70 and 17% of the patients were in the age group 41-50. The mean age group was 59.2 yrs. Chaudhury SMSA *et al.* [7] study concluded a mean age of 52.06 years. Thus Carcinoma Stomach is a disease of the middle age and elderly with most patients being above the age of 50 yrs.

From the above data, it is clear that Carcinoma Stomach is more common in males than in females. The males: females ratio is 1.74:1 in our study. In the study by Parkin DM *et al.* [8], the ratio of males to females was 1.82:1. In the study by Plummer JM *et al.* [9], males constituted 58% and females 42% with a male: female ratio of 1.3:1.

In our study, 61.5% of the patients had mixed diet consuming non-vegetarian food like poultry feed, smoked and salted fish. 20 patients were vegetarians accounting to 38.4%. 50% of the patients were smokers and 19% were alcoholics. According to Chaudhury SMSA *et al.* [7], 57.8% of the patients were on mixed diet and 52.46% of the patients were smokers. Hence, Carcinoma stomach is more common in people consuming mixed diet and salted/smoked food products.

In our study, pain abdomen situated in the epigastrium was present in 69.23% of patients. Vomiting was present in 57.6% of patients. Loss of appetite was present in 67.31% and loss of weight in 61.54% of patients. Haemetemesis was present in 5 patients and malaena in 8 patients. 3 patients presented with peritonitis secondary to Gastric perforation. According to Chaudhury SMSA *et al.* [7], pain abdomen was the most common complaint in 73.77%. Vomiting was present in 72% and Anorexia was present in 70%. The presentation in carcinoma stomach is non-specific and requires a high degree of suspicion [10].

All the patients were examined carefully. The most important findings were palpable abdominal mass, visible gastric peristalsis and anaemia. Mass abdomen is present in 23.07% of patients and visible gastric peristalsis in 34.08% of patients. Hepatomegaly was present in 5 patients and ascites was present in 2 patients. 3 patients presented with peritonitis due to gastric perforation. They were evaluated after recovery from the acute phase. Hence the pathognomonic signs of gastric carcinoma are not seen in majority of the patients. In the study by Chaudhury *et al.* [7] 60.6% of the patients has abdominal mass and 37.7% had visible gastric peristalsis.

In our study, 28.8% of patients suffered from hypertension making it the most common co-morbidity followed by diabetes mellitus accounting for 21% of patients. 7.6% of patients had cardiovascular disease 1.6% had respiratory diseases like bronchial asthma, Chronic Obstructive Pulmonary Disease (COPD). Overall, 69.2% of patients had associated comorbidities.

## Conclusion

Carcinoma Stomach is a common disease of the middle age and elderly with most common age group being 51-60 years. It is more common in the males than in the females. Diet plays an important role in the development of carcinoma stomach. Smoking is a risk factor in the development of carcinoma Stomach. The presentation of Carcinoma stomach is usually nonspecific with pain abdomen, loss of appetite and loss of weight being the most common symptoms. The physical signs of mass abdomen, visible gastric peristalsis though diagnostic, are present in a relatively few number of patients. Hence high index

of suspicion is important in the diagnosis.

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