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Original Research Article

Clinico-pathological and demographic profile of patients with carcinoma stomach: a tertiary care experience

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ABSTRACT

Background: Gastric cancer is a common malignancy all over the world, and our valley is not an exception. Under this background, we conducted the present study at our tertiary care hospital to look into the clinico-demographic profile of this disease. Aim was to determine the clinico-pathological and demographic profile of patients with carcinoma stomach attending to our tertiary care hospital.
Methods: This prospective study was conducted in unit-II of department of general surgery in Shri Maharaja Harisingh hospital Srinagar, over a period of 5.5 years from July 2012 to December 2017. All patients with histopathological diagnosis of gastric malignancy were included and analysed.
Results: Male to female ratio was 1.4:1 with mean age of 63.23 years. The most common histopathological type of gastric malignancy was adenocarcinoma (85.84%) followed by lymphoma. The most common location of the gastric cancer was distal third of the stomach. Fifty-seven patients (50.4%) were offered definitive surgery and 21(18.58%) were managed by palliative surgery. Out of 113 patients, 87 patients (76.9%) had present or past history of smoking. The most common presentation in our study was dyspepsia.
Conclusions: Profile of gastric carcinoma in our institution is not in wide variance with that of other studies. A significant proportion of patients presented with an advanced or unresectable disease because of the delay in proper screening. All patients with history of dyspepsia (age >50 years) and anemia should undergo screening upper gastrointestinal (UGI) endoscopy at the earliest, so that we can detect the lesion at the initial stage.

Keywords: Antrum, Carcinoma, Dyspepsia, Gastric, Profile

INTRODUCTION

Gastric cancer remains the third most common cause of malignancy related death in the world.[1,2] Its incidence varies widely and is thought to cause a higher burden in developing countries than in industrialized nations.[2] Gastric cancer is commonly found in elderly.[2] Generally considered to be the disease of elderly, some studies have shown 2-15% incidence of gastric carcinoma among individuals of age 45 years or less.[3-6] Several factors have a positive association with the incidence of gastric cancer such as diets rich in salted, smoked or poorly preserved foods, tobacco, alcohol, *H. pylori* infection and positive family history of gastric cancer.[7] The incidence of distal gastric cancer is higher in developing countries, and is probably related to higher rates of H-pylori infection.[8] The histological classification of Lauren is used to classify the gastric adenocarcinoma.[9]

Gastric cancer is a common malignancy all over the world, and our valley is not an exception. With increasing availability of endoscopy, many cases of carcinoma stomach are being picked up at an early stage. Under this background, we conducted the present study at our tertiary care hospital to look into the clinico-demographic profile of this disease.

METHODS

This study was a prospective study was conducted over a period of 5.5 years in unit-II of the department of surgery, SMHS (Shri Maharaja Harisingh) hospital, an associated hospital of Govt. medical college Srinagar, from July 2012 to December 2017. Patients with histopathological diagnosis of gastric malignancy were included in the study, where as those with benign histopathology were excluded. A total of 113 patients were enrolled in this study. The patients answered the questionnare regarding age, gender, residence, smoking status, alcohol intake and time of onset of symptoms. In addition patients were enquired about any positive family history of gastric cancer. The staging of gastric cancer was done in accordance with TNM suggested by AJCC.[10]

Statistical analysis

The recorded data was compiled and entered in a spread sheet (Microsoft Excel) and then exported to data editor of SPSS Version 20.0 (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as Mean±SD and categorical variables were summarized as frequencies and percentages.

RESULTS

A total of 113 patients with adenocarcinoma stomach, gastric lymphoma, GIST and neuroendocrine tumor were enrolled in the study. The age of the patients ranged from 33 to 83 years. The mean age of the patients in our study was 63.23±7.34 years. Out of these 113 patients, 5 patients were below 50 years of age and 108 patients were above 50 years of age (Figure 1). Out of 113 patients 61 patients (53.98%) were from rural areas and 52 patients (46.01%) were from urban areas. Majority (58.4%) of our patients were males (Table 1).

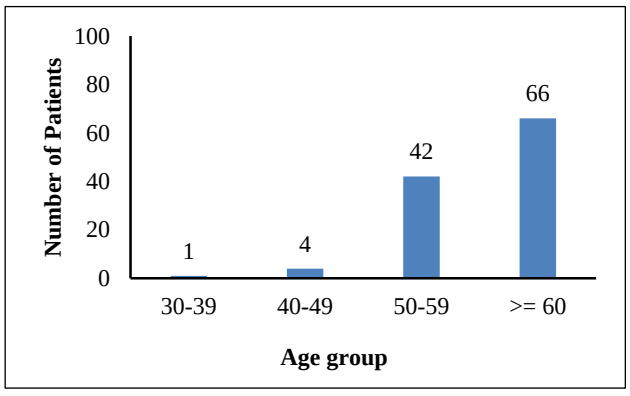

Figure 1: Age distribution.

Table 1: Sex distribution.

Sex	Number of patients
Male	66
Female	47
Total	113

Table 2: Presenting features.

Presenting features	No. of patients
Dyspepsia	46
Anemia	29
Malaena	12
Hematemesis	9
Recurrent vomiting	6
Weight loss	5
Dysphagia	4
Liver metastasis on USG	2
Total	113

The most common presentation (Table 2) in our study was dyspepsia (40.70%) followed by anemia (25.6%), malaena (10.6%), hematemesis (7.96%), recurrent vomiting (5.3%), dysphagia (3.5%), and evaluation of liver metastasis (1.76%).

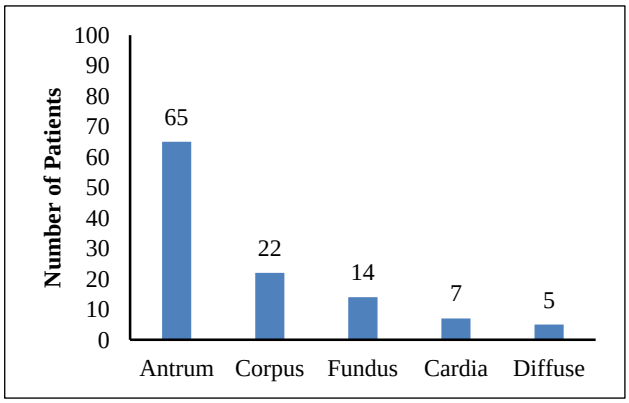

Figure 2: Location of tumors.

The most common location (Figure 2) of tumor on endoscopy (Figure 3 and 4) was antrum (57.52%) followed by corpus (19.46%), fundus (12.38%), cardia (6.19%) and diffuse (4.42%).

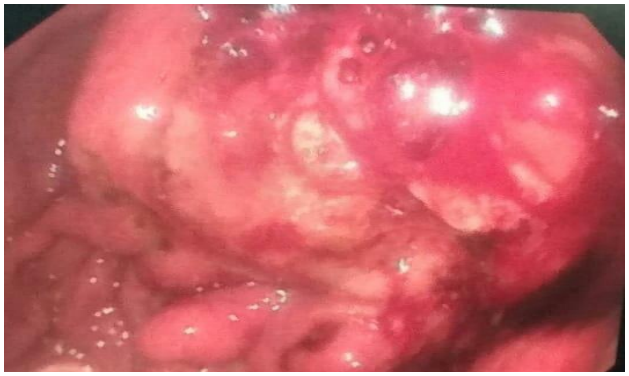

Figure 3: Carcinoma stomach.

The most common histological variant (Table 3) in our study was adenocarcinoma (85.84%) followed by lymphoma (6.2%) and GIST (5.3%).

Figure 2: Carcinoma stomach.

Table 3: Histological type of tumor.

Type of tumour	No. of patients
Adeno-carcinoma	97
Lymphoma	7
GIST	6
Neuroendocrine tumor	3
Total	113

Table 4: Treat modalities.

Nature of treatment	No. of patients
Definitive surgery	57
Palliative surgery	21
No surgery	35
Neoadjuant therapy	17
Adjuant therapy	13
Total	113

Our patients were subjected to different treatment modalities (Table 4) as per the stage of disease. In our study only 57 out of 113 patients (50.44%) were amenable to definitive surgery, rest had higher stage disease at diagnosis.

Out of 113 patients, 81 patients (71.68%) were having present or past history of smoking. Family history of gastric malignancy was present in 10 patients. In our study 19 patients (16.81%) had history of intake of medication for *H. pylori* eradication, and 11 patients (9.73%) had family history of documentation of *H. pylori* infection.

Out of 113 patients 61 patients (53.98%) were from rural areas and 52 patients (46.01%) were from urban areas.

DISCUSSION

The mean age of the patients in our study was 63.23±7.34 years. Majority of our patients were >60 years of age. Majority (58.4%) of patients were males. The occurrence of GC in the age group of 30-40 years is rare. However, its incidence increases with age especially among individuals aged over 60 years.[11]

The mean age reported in our study agrees with data observed in a Moroccan study conducted by Mellouki et al, who stated a mean age of 58±13.4 years.[12] The prevalence of gastric cancer is about twice as high among men than women.[13] The most common histological variant in our study was adenocarcinoma (85.84%) followed by lymphoma (6.2%) and GIST (5.3%). The majority of GC studies reported that adenocarcinoma was the most represented histological type with a frequency exceeding 90%.[14] The most common location of tumor on endoscopy in our study was antrum (57.52%) followed by corpus (19.46%). According to Daouda et al, 79% gastric tumors were located at the antral and cardiac level.[15] The most common presentation in our study is dyspepsia (40.70%) followed by anemia (25.6%), epigastralgia was in the forefront of clinical signs with a rate of 75% in a Malian population and 94% in Togo.[16,17]

Gastric cancer is a significant public health problem although mortality rates and incidence has decreased over last 3 decades.[18] Tobacco smoking is a risk factor for adenocarcinoma of stomach.[19] There appears to be a causal relationship between smoking and gastric cancer.[20] In our study, out of 113 patients, 81 patients (71.68%) were having present or past history of smoking. Several studies have shown that stomach cancer tends to aggregate in families.[21,22] The familial clustering of gastric cancer may be explained by the combination of factors since relatives of gastric cancer patients share not only similar genetic background but also environment (*H. pylori*) and lifestyle.[21] Family history of gastric malignancy was present in 10 patients (8.85%) in our study. Several studies have demonstrated that *H. pylori* infection cluster within families, and it may often be transmitted from parents to their children in early childhood as well as between siblings.[23] The prevalence of *H. pylori* infections among the first degree relatives of gastric cancer is similar to dyspeptic patient from the same economic level; however, the relatives of gastric cancer had higher incidence of precancerous lesions and were colonized with more virulent strains.[24,25] In addition, most GC patients were infected with *H. pylori* and cagA strains, and were significantly associated with GC.[26] In our study 19 patients (16.81%) had history of intake of medication for *H. pylori* eradication, and 11 patients (9.73%) had family history of documentation of *H. pylori* infection. Several studies have reported that the majority of gastric cancer patients were diagnosed at stage III or IV.[6,27] In our study only 57 out of 113 patients were amenable to definitive surgery, rest being of higher stage at diagnosis.

CONCLUSION

Gastric cancer represents the third leading cause of cancer related deaths. Profile of gastric carcinoma in our institution is not in wide variance with that of other studies. Mortality related to gastric cancer can be reduced if we can diagnose gastric cancer at an earlier stage. Screening upper gastrointestinal endoscopy should be

performed in high risk patients (family history, smoking, dyspepsia in patients >50 years of age, unexplained anemia). Patients who are diagnosed with *H. pylori* infection, should receive treatment for *H. pylori* eradication. Patients should be encouraged to adopt healthy lifestyle, and avoid smoking.

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