

# Mode of Presentation of Malignant Neoplasms of the Stomach

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The objective of this prospective study is to see the presentation of malignant gastric neoplasms in our community. The mean age of presentation in female was 40.3 years whereas in males it was 57.7 years, which was less as compared to the values given in international studies. Our study also revealed an increased incidence among the males with male to female ratio of 3:2. Twenty (83%) patients belong to low socioeconomic class, of these sixteen (88.8%) patients were from rural areas and were huqqa smokers. 27 patients presented in outpatient department and three patients presented through emergency department. Pain epigastrium (80%), weight loss (66%), malaena (26%) and anorexia (15%) were the main symptoms, with duration of 4 to 48 month with an average of 24 weeks. Moreover most of the patients in our study belong to B positive group in contrast to the prevalence of group A positive in Britain. Patients usually presents late because their prime preference is to be treated by quacks, hakeems, spiritual leaders etc. Most patients belonged to the younger age group, low socioeconomic status and were of rural origin.

**Key words:** Gastric neoplasm, Gastric Carcinoma.

Gastric neoplasm is a worldwide disease. Its incidence however, varies widely, being particularly high in Japan, Chile, Costa Rica, Columbia and China<sup>1</sup>. In most countries, there has been a study decline in both the incidence and the mortality of gastric cancer during the past five decades. Gastric carcinoma is the predominant malignant gastric neoplasm (95%), lymphoma being much less common (4%) may occur as a primary lesions or as secondary involvement from lymphoma arising from elsewhere. Leiomyosarcoma constitutes only 1% and others are rare entities e.g., squamous cell carcinoma, angiocarcinoma, carcinosarcoma and metastatic carcinoma<sup>1</sup>. Carcinoma of the stomach can be cured by surgery and the patient life span can be prolonged. All the modalities other than surgery i.e., radiotherapy, chemotherapy and thermal therapy are not successful. This study will help to intensify the understanding of the mode of presentation of gastric neoplasia as well as to establish the spectrum of local disease.

## Patients and methods

This study was conducted on 30 patients at North Surgical Ward, Mayo Hospital, Lahore from April 1997 to April 1999. Preliminary diagnosis was established on history and clinical examination, definite diagnosis was made on abdominal ultrasound, upper gastrointestinal double contrast barium studies, endoscopic examination and biopsy, CT scan was carried out in selected cases Routine investigations and general assessment was carried in every patient with full blood count, urine analysis, blood sugar, blood urea, serum creatinine, ECG and x-ray chest. Senior consultants performed surgery and patients were registered for follow up.

## Results

Eighteen patients presented to Outpatient Department, nine patients were referred by gastroenterologist and three presented at Emergency Department. Eighteen (60%) patients were male and 12(40%) were female. Male

patients were between ages of 26-75 years (mean 56.7 years) and female patients between 24-64 years (mean 40.3 years). Age and sex of the patients is mentioned in Table 1 and 2.

Table 1. Age incidence in males and females

Sex	Age range	Mean age
Male	26-75 years	56.7 years
Female	24-61 years	40.3 years

Table 2. Age distribution of patients

Age group	N=
1-10 years	0
11-20 years	0
21-30 years	4
31-40 years	5
41-50 years	12
51-60 years	4
61-70 years	3

Signs and symptoms of patients are presented in Table 3.

Table 3. Symptoms in males and females

Presentation	n=	%age
Pain epigastrium	24	80
Anorexia	15	50
Weight loss	20	66.6
Malaena	8	26.6
Haematemesis	7	23.3
Lump in the epigastium	7	23
Vomiting	6	20
Dysphagia	5	16.6

Blood group distribution is shown in Table 4

Table 4. Blood group in all patients.

Blood group	n=	%age
A +ve	4	13.3
B +ve	14	4.4
O +ve	12	40
AB	0	0

Carcinoma of the antrum and body outnumbered the rest of the sites as shown in Table 5.

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Table 5. Site of lesion on barium study and endoscopy.

Site of lesion	Barium study		Endoscopy	
	n=	%age	n=	%age
Antrum	10	42	12	46
Fundus and cardioesophageal junction	2	83	0	0
Body	12	50	14	54
Total	24	100	26	100

Histopathologically poorly differentiated diffuse variant of gastric carcinoma was the most common variant. Histological types of gastric carcinoma are shown in Table 6.

Table 6. Different types of gastric carcinoma on histopathology

Types of carcinoma	n=	%age
Total cases of gastric carcinoma	30	
<b>Diffuse type</b>	24	80
* Poorly differentiated	17	70.8
* Moderately differentiated	7	29.16
<b>Intestinal type</b>	6	20
* Poorly differentiated	3	50
* Well differentiated	3	50
<b>Others</b>	0	0

### Discussion

Gastric carcinoma is the most frequent neoplasm of the stomach and is more common between the ages of 55-75 years with male to female ratio of 2:1<sup>2</sup>.

In our study the mean age for males and females is less as compared to other studies the likely reason for this is that our population uses more spicily food, animal fat and also the drinking water consumed by them contained nitrosamine compound which are supposed to be one of the etiological factor for gastric malignancy. Amongst the gastric malignancies adenocarcinoma has a major share. In our study 24(80%) patients were having diffuse type whereas 6(20%) patients were proved histopathologically as intestinal type. In our study male to female ratio was 3:2. Blood group is B +ve is the most common in our study as compared to other studies from western countries. This is due to fact that B group is more common in Punjab and O in western countries. In our study of 30 patients blood group O is common in females whereas B is common in males. Britain population with group A is liable to develop gastric cancer<sup>3</sup>.

In our study 16(88.8%) out of 18 patients belonging to rural areas, most were huqa smokers. So some carcinogens in the smoke may be a cause of stomach cancer. A study conducted at Iceland has shown that high quantities of 3,4 benzopyrine in the smoked food as well as the nitrates in the food is responsible for gastric cancer<sup>4</sup> which strengthen our point of view. Pain epigastrium, anorexia, weight loss and haematemesis is a common mode of presentation, in contrary to international studies e.g; Akoh<sup>5</sup> did a study which shows presentation of pain epigastrium in 45%, anorexia 36% and dysphagia in 17% which are far less as compared to our study.

Patients were illiterate and had strong conviction in treatment by hakims and quacks. They usually ignored the mild symptoms e.g., pain epigastrium (taking it as gas

trouble) and other cardinal symptoms of gastric malignancy. Health awareness in western countries is more hence people present earlier. Anorexia and weight loss is the most common symptom of the gastric malignancy<sup>6</sup>. Usually the patient presented when the cancer has involved an adjacent structure or distant metastasis has occurred. Nausea vomiting may occur when distal lesion encroached the pylorus. Dysphagia occurs when there is proximal involvement but pain is uncommon complaint.

Most of the patients were having carcinoma of the body (54%) and antrum (46%) which was initially diagnosed on barium meal and confirmed on endoscopic examination. This is consistent with international studies that show reduced incidence of carcinoma antrum whereas increased incidence of proximal gastric cancer<sup>7</sup>. This may be due to stasis induced injury, common site for ulcer formation, dietary habits, deficiency of anti-oxidants or exposure to N-nitroso compounds. H-pylori infection is related with carcinoma of distal stomach<sup>8</sup>.

### Conclusion

Gastric carcinoma is a dominant malignancy. Most of our patients present in advance stages of disease, this is mainly due to the lack of health education, poverty and poor cooperation on the part of patients. Treatment by hakims, quacks, homeos, certain social stigmas, long term use of home maid remedies and unprejudiced belief in spiritual therapist/leader are the other contributing factors. The incidence is higher among the young age group belonging to rural areas. This may be due to consumption of raw, uncooked vegetables, contaminated with modern pesticidal agents which are believe to be carcinogenic.

We recommend an awareness campaign regarding the aetiological factors for gastric carcinoma. We also recommend endoscopic facilities to be available at district hospital.

### References

1. Stanley W A, Dennis E, Dally JM. Gastric neoplasms malignant tumour: *Principal of Surgery*. Schwartz 1999; 7<sup>th</sup> ed, Vol.1: 1201.
2. Muhammad A, Al-Mofarreh, Afzal M. Pattern of primary gastrointestinal tract malignancy among Saudi nationals: a retrospective study. *Ann Saud Med* 1991; 11: 15-18.
3. Aird I et al. Blood group and gastric cancer. *Br J Surg* 1954; I: 799.
4. Hill MJ et al. Bacterial, nitrosamine and cancer of the stomach. *Br J Cancer* 1973; 28: 256.
5. Akoh JA, Sedgwick DM. Improving results in treatment of gastric cancer: an 11 year audit. *Br J Surg* 1991; 78: 349-51.
6. Hendrich JC. Malignant tumours of stomach. *Surg Clin North Am* 1986; 766(4).
7. Kampschoerg HM, Nabjima T, Von Der Veidi et al. Changing pattern in gastric adenocarcinoma. *Br J Surg* 1989; 76(7): 914-6.
8. R.C.G. Russel, N.S. Williams, C.J.K, Bulstrode. Bailey & Love, *Shot Practice of Sugery*, 23<sup>rd</sup> ed. Stomach and Duodenum. 2000: 918-19