



## Pattern of Gastric Cancer at Tertiary Rural Hospital in Central India – 10 Year Retrospective Study

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### ABSTRACT

Cancer of gastrointestinal tract is one of the most common causes of cancer related deaths in India. The present research carried out at a tertiary rural hospital in Central India was aimed to study the clinical profile of gastric cancers in this region. 147 cases of primary malignant tumors of stomach treated during a 10 year interval between July 1994 to June 2004 were studied retrospectively and data analyzed using standard methods.

The incidence of cancer was highest in 6th and 7th decade with male preponderance. All cases of stomach cancer were in advanced stage underlining the need for early diagnosis and a favorable outcome.

### KEYWORDS

Cancer, Gastric

### Introduction:

Cancer is emerging as a major problem globally both in more developed and in less developed countries (1). The incidence of most digestive cancers in India are moderate or low (2). But cancer of gastrointestinal tract is one of the most common causes of cancer related deaths in India (3). Differences in the regional distribution of cancer and its outcome as documented by a worldwide network of population based cancer registries help to identify causative and risk factors influencing survival.

Attempts were made to study the pattern of gastric cancers presented during ten years from July 1994 to June 2004 at Kasturba hospital attached to Mahatma Gandhi Institute of Medical Sciences, Sewagram, Wardha. The clinicopathological aspects were critically analyzed in the study.

### Aims and Objectives :

- 1) To study the demographic variables in gastric cancers.
- 2) To study the pattern of clinical presentation of gastric cancers.
- 3) To study the extent of disease at presentation in gastric cancer.

### Materials and Methods :

The present study was carried out at Kasturba Hospital attached to MGIMS, Sewagram. A total of 147 cases of primary malignant tumours of stomach seen and treated during 10 year interval between July 1994 to June 2004 were studied retrospectively from the case records. The parameters studied included : Age, Sex, duration of symptoms, nature of symptoms and signs and pathological features.

The tumours were staged according to the extent of the disease i.e. local, locoregional and distant. The information was recorded in a specially designed proforma and data later analyzed using standard statistical methods.

### Observations :

**Table 1 : Age distribution by sex for patients with stomach cancer from year 1994 – 2004**

Age (Years)	No.	Percentage	Male	Female	Ratio (M : F)
10 – 19	0	0	0	0	
20 – 29	5	3.4	3	2	
30 – 39	18	12.2	11	7	
40 – 49	34	23.2	26	8	
50 – 59	35	23.8	22	13	
60 – 69	38	25.2	29	9	
70 – 79	15	10.3	13	2	
80 – 89	2	1.3	1	1	
Total	147	100	105	42	2.5 : 1

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The age range was seen to have spanned from 3<sup>rd</sup> to 9<sup>th</sup> decade. The peak incidence was seen in 6<sup>th</sup> and 7<sup>th</sup> decade. 105 males had cancer of stomach as compared to 42 females resulting in Male : Female ratio of 2.5 : 1.

The mean age of presentation in cancer of stomach was 52.5 years.

**Table 2 : Profile of symptomatology in Stomach Cancer**

Symptoms	No. of Patients	Percentage
Weight loss	120	81.6
Abdomen Pain	110	74.8
Nausea	91	61.9
Vomiting	88	51.8
Anorexia	135	91.8
Mass	44	29.9
Dysphagia	16	10.8
Melaena	32	21.7

The commonest symptom was anorexia (91.8 %), closely followed by weight loss (81.6 %) Abdominal pain, nausea and vomiting were also present in majority of patients 74.8 %, 61.9 % and 59.8 % respectively. 5 patients with stomach cancer had an acute presentation. Of these 2 patients presented with haematemesis, 2 patients with perforation peritonitis and 1 patient with acute obstructive symptoms.

**Table 3 : Profile of objective signs in stomach cancer.**

Signs	No. of Patients	Percentage
Pallor	116	78.9
Palpable mass	44	29.9
Visible peristalsis	12	28.1

Succusion splash	8	20
Troiser's sign	9	6.1
Jaundice	2	1.3
Blumershelf	2	1.3
Ascites	15	10.2

Pallor was found in 78.9 % and was the commonest sign. Ascites (10.2 %) was the commonest sign of distant metastasis.

The mean duration of time interval between onset of symptoms was 6.7 months (range 1-36 months)

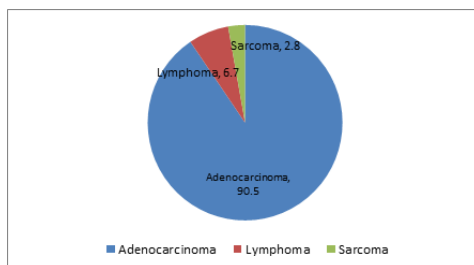
**Table 4 : Distribution of stomach cancer by anatomic site**

Site	No. of Patients	Percentage
Proximal 1/3 rd	13	8.8
Middle 1/3 rd	61	41.8
Distal 1/3 rd	73	49.8

Stomach cancer was commonest in distal third (49.8 %) and least common in proximal third (8.8 %)

**Table 5 : Histological types in stomach cancer**

Type	No. of Patients	Percentage
Adenocarcinoma	76	90.5
Mucin secreting	15	
Signet ring cell	5	
Lymphoma	7	6.7
Sarcoma	3	2.8



Adenocarcinoma was the commonest histological type. 27 % cases of adenocarcinoma had well differentiated histology. The remaining cases were either moderately differentiated (43.8 %) or poorly differentiated (29.2 %)

**Table 6 : Staging of cancer stomach according to extent of the disease.**

Stage	No. of Patients	Percentage
Local	0	0
Locoregional	45	30.7
Distant	102	69.3

Out of total 147 patients with cancer of stomach, 69.7 % patients had distant spread of the disease while 30.7 % had locoregional extent. No patient had a stomach cancer confined to organ only.

**Discussion :**

The incidence rates of gastric cancers in India are moderate or low but there is no room for complacency because most of them are currently diagnosed in a stage well beyond cure. The study of pattern of gastric cancers, a retrospective review of 10 years was carried out at Kasturba Hospital, Sewagram. The hospital caters predominantly to rural population.

The rural urban ratio of patients attending the hospital is 3 : 1.

The information was analysed with regard to age, sex, length of history, presenting symptom and sign and pathological type. The tumors were staged according to the extent of the disease i.e. local, locoregional and distant.

The study indicates a peak age incidence in 6<sup>th</sup> and 7<sup>th</sup> decade. MOA Malik et al (4) reported similar peak age incidence while K.

L. Luna Devi (5) reported peak age incidence in 5<sup>th</sup> and 6<sup>th</sup> decade. The mean age of cancer of stomach was found to be 52.5 years. J. Beuten et. al (6) reported mean age at presentation as 65 years. While Laurence SB (7) reported it to the 62 years.

The male female ratio of malignant tumor of stomach in the present study was 2.5 : 1. Diehl et al (8) observed it as 2.1 : 1 and H. Goldsmith (9) in his review also reported the same. In the present study it was found that the distal 3<sup>rd</sup> was the commonest site involved (59.8 %) followed by 31.4 % in middle third. The proximal 3<sup>rd</sup> was involved in 8.8 % cases only. In an epidemiological survey conducted by Tata Memorial Hospital (10) it was reported that prox. third was involved in 23.5 %. while distal 3<sup>rd</sup> and middle 3<sup>rd</sup> were involved in 43.8 % and 18.7 % respectively.

Dinshaw A (11) and B. R. Prabhakar et al (12) reported 95 % incidence of adeno concinoma of stomach. In the present study 90.5 % patients with cancer of stomach had adenocarcinoma.

The clinical features of Ca stomach were analysed in the present study.

**Table 7 : Symptomatology profile of Ca stomach.**

Presenting symptom	H. Goldsmith (9) 1970	H. Wanebo (13) 1993	Diehl et al (8) 1983	Present Study (2004)
1) Weight loss	52.1	61.6	88	81.6
2) Abdominal Pain	48.1	51.6	90	74.8
3) Anouxia	21.1	32	-	91.8
4) Nausea	3.7	34.3	-	61.9
5) Malaena	-	20.2	3	21.7
6) Mass	33.3	-	10	29.9
7) Vomiting	20.7	-	7	59.8

**Conclusion :**

The peak age incidence of cancer of stomach was in 6<sup>th</sup> and 7<sup>th</sup> decade with males outnumbering females 2.5 : 1. Loss of appetite was the commonest symptom with pallor being the commonest sign. The distal 3<sup>rd</sup> of stomach was the commonest site and histologically adenocarcinoma was the most common. All case of stomach cancer were in advanced stage. Early diagnosis is essential for a favourable outcome of treatment. Health education of patients along with efforts by medical fraternity is the need of the hour.

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