



AN OBSERVATION ON MANAGEMENT OF GASTRIC CANCER AT RAJENDRA INSTITUTE OF MEDICAL SCIENCES (RIMS), RANCHI. AN EVOLUTION WITH TIME.

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ABSTRACT:

Background: Worldwide gastric cancer ranks as fourth most common malignancy and second leading cause of cancer related deaths. It constitutes to be a highly lethal disease with an overall survival of 23% for all stages.

Objectives: This was a prospective observational study which was carried out Rajendra Institute of Medical Sciences, Ranchi, Jharkhand on 80 patients having gastric cancer and a thorough analysis was made on incidence, age sex distribution and different treatment and diagnostic modalities.

Material and Methods: The study comprises observations on 80 patients of gastric cancer admitted in the Department of Surgery of this institution. The cases formed the material of the study. The provisional diagnosis was based on detailed clinical history, thorough physical examinations, routine laboratory investigations and radiological investigations like Barium meal X-ray of stomach and duodenum, esophagogastroduodenoscopy and CT scan of abdomen whenever possible. Most of the patients were treated pre-operatively by gastric lavage, fluids and electrolytes replacement and correction of anaemia followed by elective surgery. The post-operative period was watched carefully and patients were asked to report for follow up.

Results: A total of 80 patients were studied. Maximum number of cases belonged to age group 41-60 years (64%) with 68% being male and belonging to low socio economic status with mainly non vegetarian food style and having addiction for alcohol, smoking or both. Most common symptom associated was vomiting (82.5%) followed by pain. Most commonly antrum was affected and adenocarcinoma was the most frequent histopathological picture encountered.

Conclusion: The study has revealed a brief dynamics of patients being managed for gastric carcinoma. Gastric cancer is more common in distal stomach in this part of our country and adenocarcinoma is the commonest histological type encountered, radical resection is by far the best modality available with a potential to offer cure to those, in whom disease is detected in earlier stages.

Keywords: Gastric cancer, esophagogastroduodenoscopy, gastric ulcer, adenocarcinoma, radical resection.

Aims and Objectives:

To carry out a prospective observational study upon incidence, diagnosis and treatment of gastric cancer at RIMS, Ranchi with following objectives of: Making an observation on incidence of gastric cancer and its relation with different parameters

like age, sex and other risk factors. Analysing different diagnostic and treatment modalities with comparison in between them.

Keeping above objectives in mind the study was carried out at RIMS in state of Jharkhand from May 2014 to April 2016 (two years).

Introduction:

Gastric cancer is the fourth leading cancer in the world and the second most common cause of death due to malignancy accounting for 736,000 deaths [1]. Currently gastric cancer is more common in Asia than in United States of America (USA) or Europe [1]. Recent data that the incidence rates are the highest in the north-eastern region. [2]

Materials and methods:

The study comprises observations on 80 patients of gastric cancer admitted in the Department of Surgery of this institution. The cases formed the material of the study. The provisional diagnosis was based on detailed clinical history, thorough physical examinations, routine laboratory investigations and radiological investigations like Barium meal X-ray of stomach and duodenum, esophagogastroduodenoscopy and CT scan of abdomen whenever possible. Most of the patients were treated pre-operatively by gastric lavage, fluids and electrolytes replacement and correction of anaemia followed by elective surgery. The post-operative period was watched carefully and patients were asked to report for follow up.

Observation:

Of 80 patients maximum number cases belonged to age group 41-60 years (64%) while the incidence felt sharply below 40 years. [Table 1] Sex wise incidence showed male preponderance (68%) and a majority of patients (88%) belonged to Hindu community. The major sector of the study group (80%) belonged to low socio economic status.

Table1: Age wise distribution of Gastric Cancer.

Age	No. of Patients	%
0-10	0	0
11-20	0	0
21-30	3	3.75
31-40	7	8.75
41-50	18	22.5
51-60	33	41.25
61-70	13	16.25
71-80	6	7.5
Total	80	

Considering other risk factors, 76% patients were non vegetarian in their food habits while 74% had addiction to either alcohol, tobacco or both. [Table 2]

Table 2: Incidence in relation to personal habits

Habit	No. of Patients	%
Smoking	30/80	37.5
Tobacco chewing	36/80	45
Alcohol	20/80	25
More than one from above	24/80	30
None	21/80	26.25

The study revealed that 67% cases presented with vomiting closely followed by anorexia, weight loss, epigastric mass, dyspepsia and pain abdomen. Ascites and jaundice were the mode of presentation in minimum cases and distant metastases only in 8% cases. [Table 3]

Maximum number of cases (54%) presented within 6-8 months from the onset of symptom(s) followed by 36% cases within 9-11 months.

Table 3: Presenting features of patients.

Feature	No. of Patients (% of total)
Vomiting	66 (82.5)
Pain	60 (75)
Weight loss	54 (67.5)
Dyspepsia	52 (65)
Anorexia	58 (72.5)
Epigastric mass	40 (50)
Hematemesis/ Malena	36 (45)
Dysphagia	14 (17.5)
Ascites/ Jaundice	12 (1.5)
Distant metastases	8 (1)

20 patients who underwent barium meal 17 were diagnosed on barium x-rays with findings like filling defect and failure of passage of contrast to duodenum with dilatation of stomach. In ulcerative growth shape of ulcer is irregular, presence of Carman meniscus sign, ulceration with converging folds. The folds were often thickened, irregular or nodular in shape. Negative

results are seen in cases of Linitis plastica, early gastric carcinoma and gastric lymphoma. However, stomach size is small in Linitis plastica. A majority of cases were diagnosed by gastroduodenoscopy with negative result of 4.8%

only. Biopsies were also obtained by endoscopy. The macroscopic pictures were polypoidal growth with or without ulceration, ulcerative and diffuse. [Table-4]

Table 4: Analysis on Barium Meal and Esophagogastroduodenoscopy.

Investigations	No. of Patients underwent	Positive	Negative
Barium Meal	20	17 (85)	3 (15)
Endoscopy	62	59 (95.2)	3 (4.8)

Antrum was the most frequent site affected followed by proximal stomach. [Table-5]

Table 5: Site wise distribution of Gastric Cancer based on Investigations and Surgery.

Site	No of Cases	%
Cardia	21	0
Body	18	0
Antrum	37	3.75
Diffuse	4	8.75

Table 6 gives a clear comparison on histopathological analysis of tissue pre and post operatively in which the most common type was adenocarcinoma followed by GIST.

Table 6: Histopathological Picture.

HPE reports	Endoscopic Biopsy	Post-operative
Adenocarcinoma	54	73
Stromal(GIST)	3	4
Squamous Cell Carcinoma	0	1
Lymphoma	2	2
Carcinoid	0	0
Total	59	80

In our study more than 50% of patients were treated by palliative gastrojejunostomy. Only 10 underwent radical gastrectomy (the stomach removed en bloc, including the tissue of the entire greater omentum and adjacent lymph nodes), 24 patients were treated by subtotal gastrectomy with preservation of proximal stomach. The immediate post op death that is within 15 days of surgery was in 10% (8) cases. [Table-7]

Table 7: Treatment modalities and outcome

Surgery	No. of patients who underwent surgery	Post-operative period (15 Days)	
		Alive	Dead
Radical Total Gastrectomy	10	8	2
Subtotal Gastrectomy	24	21	3
Gastrojejunostomy	43	41	2
Feeding Jejunostomy	3	2	1

Of the group (34 patients) which underwent resection we were able to follow 20 cases while in the latter group only 16 patients turned up for follow up. [Table-8] Although less number of patients were treated by resection of growth, still the mortality was low in comparison to the group in which palliative surgery was done.

Table 8: Analysis on follow up

Treatment	No. of patients	6 months follow up		
		<i>No. of cases followed</i>	<i>Dead</i>	<i>Lost to follow up</i>
Resection	34	20	4	10
Palliation	46	16	10	20

Discussion:

Age incidence of gastric cancer, in this study, ranged between 3rd to 7th decades of life with maximum incidence between 51-60 years of age. The incidence was more in males with male to female ratio of 2.12:1 with incidence much less in tribal (30%). Maximum cases belonged to low socio economic group (78%). Addiction to smoking, tobacco chewing and alcohol was recorded in 37.5%, 45%, and 25% respectively while 30% of patients were addicted to more than one habit. The maximum number of patients (82.5%) reported with vomiting as their first complaint followed by pain and weight loss. Upper GI endoscopy provided a very sensitive aid to the study in locating site and taking biopsy from the lesion.

During laparotomy around 90% patients had positive lymph nodes. The mortality was low in lymph node negative patients [5].

Conclusion:

Epidemiology of gastric cancer is in itself a wide research issue. The study has revealed a brief dynamics of patients being managed for gastric carcinoma. RIMS stands to be a centre of excellence in Eastern India catering health services to its adjoining states of West Bengal, Bihar, and Chhattisgarh thus forming a wide platform to carry out an observational study on incidence diagnosis and management of gastric carcinoma. Gastric cancer is more common in distal stomach in this part of our country and adenocarcinoma is the commonest histological type encountered, radical resection is by far the best modality available with a potential to offer cure to those, in whom disease is detected in earlier stages [3, 4].

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