

Surgery for Gastric Adenocarcinoma with Hospital Stay: A Prospective Study

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Abstract

Background: With the new changing lifestyles and the control of infectious diseases, cancer is soon emerging to be one of the leading causes of deaths in developing countries like India. Surgical procedure shows improvement in survival period for a patient at stage II and III after correcting the nutritional status of the patients. There is a decline in post-operative complication with patients who underwent surgery. Hence this study was undertaken to study the curative and palliative surgeries in the patients of gastric adenocarcinoma and their hospital stay.

Methodology: This was a prospective study in which 50 of gastric adenocarcinoma patients who were admitted in the surgery department at Datta Meghe Medical College, Shalinitai Meghe Hospital and Research Centre, Nagpur in collaboration with Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi Meghe, Wardha, Maharashtra were studied.

Results: Majority of patients presented with Stage II (88%) while 12% presented with stage III. 82% patients underwent curative surgeries while 18% underwent palliative surgeries. The duration of hospital stays for Gastric Adenocarcinoma surgery for Stage II ranges from 6-8 days (median 7 days) whereas for Stage III it is 7-8 days (median 7.5 day). A total of 50 patients who underwent surgery for histologically proven gastric adenocarcinoma. Out of 50 patients a majority i.e. 88% presented in stage II while 12% presented in stage III.

Conclusion: On the basis of our observations we concluded that the patients presenting earlier in stage II undergo curative surgeries most often and mean hospital stay post-surgery around a week.

Keywords: Curative surgery, gastric adenocarcinoma, palliative surgeries, cancer and infectious diseases.

Introduction

With the new changing lifestyles and the control of infectious diseases, cancer is soon emerging to be one

of the leading causes of deaths in developing countries like India. Solid tumors arising from lung, stomach, colorectum, liver, esophagus, breast, cervix and prostate form the major causes of cancer related deaths in India¹. There are various screening programmes which may detect early stages of cancer and thereby resulting in higher cure rates of the cancers in early stage. Gastric carcinoma is increasing becoming commoner day by day.

The most common site for metastases is the peritoneum, in two thirds of cases synchronous and in

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one third metachronous. In recurrent disease, 50% of the patients with GC have peritoneal metastases (PM) and in patients who undergo resection with curative intent for GC it is 10-20%. However, the true incidence, prognosis, treatment and outcome of patients with PM in G Care not well-known. The most common treatment for advanced GC is palliative chemotherapy, with a median overall survival (MOS) of 8-17 months 12-15. In cases with non-curable GC (distant lymph node metastases, liver metastases, remnant tumor or PM) treated with palliative resection, a MOS of 7-8 months has been observed and in patients not actively treated, it is shorter². This poor outcome of PM from GC underlines the importance of further investigation and the evaluation of a new treatment method that may improve survival rates.

For a locally advanced gastric cancer neoadjuvant chemo-radiation can be given to achieve RO resection. Diagnosis of gastric cancer in early stages gives good curative resection and less mortality & morbidity for patients. In patients morbidity and mortality considerably decreased, for those who were hospitalized at stage II and III. Surgical procedure shows improvement in survival period for a patient at stage II and III after correcting the nutritional status of the patients. There is a decline in post-operative complication with patients who underwent surgery. Curative surgeries like endoscopic or surgical resection can be done in patients in which lesions are superficial or present early while for advanced cancer, last resort is palliative surgery.³ Also the mean duration of stay of patients post-surgery of gastric adenocarcinoma was about 7-8 days which is less than other cancers. Hence this study was conducted to study the curative surgeries and hospital stay of the patients with gastric adenocarcinoma post surgery.

Methodology

Patients admitted in the surgery department in a tertiary hospital were included in the study. This was a prospective descriptive study conducted on a total of 50 patients at the department of general surgery in a tertiary hospital from July 2012 to December 2013. The information obtained included patients date of admission, demographics, clinical history, investigations, and type of surgery, type of anesthesia, duration of surgery, date of discharge and return to work. The patients were further enquired and clinically examined. Patients were further reviewed on subsequent clinical visit.

Inclusion Criteria: The study population

includes 50 patients who underwent surgery for gastric adenocarcinoma (histopathologically proven gastric adenocarcinoma) by endoscopic biopsy at the Department of General Surgery.

Exclusion Criteria:

1. Patients with gastro intestinal stromal tumor or Gastric Lymphoma or Gastric carcinoid's tumors are excluded from the study.
2. Patient only received palliative chemo radiotherapy without going any forms of surgery are excluded from study.
3. Patient who is unfit for surgery excluded from study.

All patients underwent a detailed medical history and clinical examination.

Clinical examination comprises of General examination, systemic examination and Digital rectal examination. Diagnosis of patients based on UGI Endoscopy, biopsy, CT scan, PET scan and assessment for H. Pylori. Staging based on TNM Classification system according to the AJCC Staging. From July 2012 to Dec 2013 data entered prospectively in to a methodology specifically designed for the study.

Statistical analysis: The categorical data were represented by frequency with percentage and chi-square and Fisher exact test were used for analysis. The continuous data represented by mean (SD) for normal data and Median (Range) for abnormal data was analyzed by using Independent t-test and Mann- Whitney U test. SPSS version 16 was used for analysis and P value less than 0.05 were considered as statistically significant.

Results

A total of 50 patients who underwent surgery for histologically proven gastric adenocarcinoma. Out of 50 patients a majority i.e. 88% presented in stage II while 12% presented in stage III. (table 1)

82% of the surgeries done were curative surgeries while only 18% were palliative surgeries.(table 2 and figure 1)

The duration of hospital stay for Gastric Adenocarcinoma surgery for Stage II ranges from 6-8 days (median 7 days) whereas for Stage III it is 7-8 days (median 7.5 day). The p value is <0.16 which is not significant. (table 3)

Table 1 showing stage of tumour:

Stage of tumour	Number of patients	Percentage
I	0	0%
II	44	88%
III	6	12%
IV	0	0%

Table 2 showing the number of curative surgeries done:

Type of surgery	Number	Percentage
Curative surgeries	41	82%
Palliative surgeries	9	18%

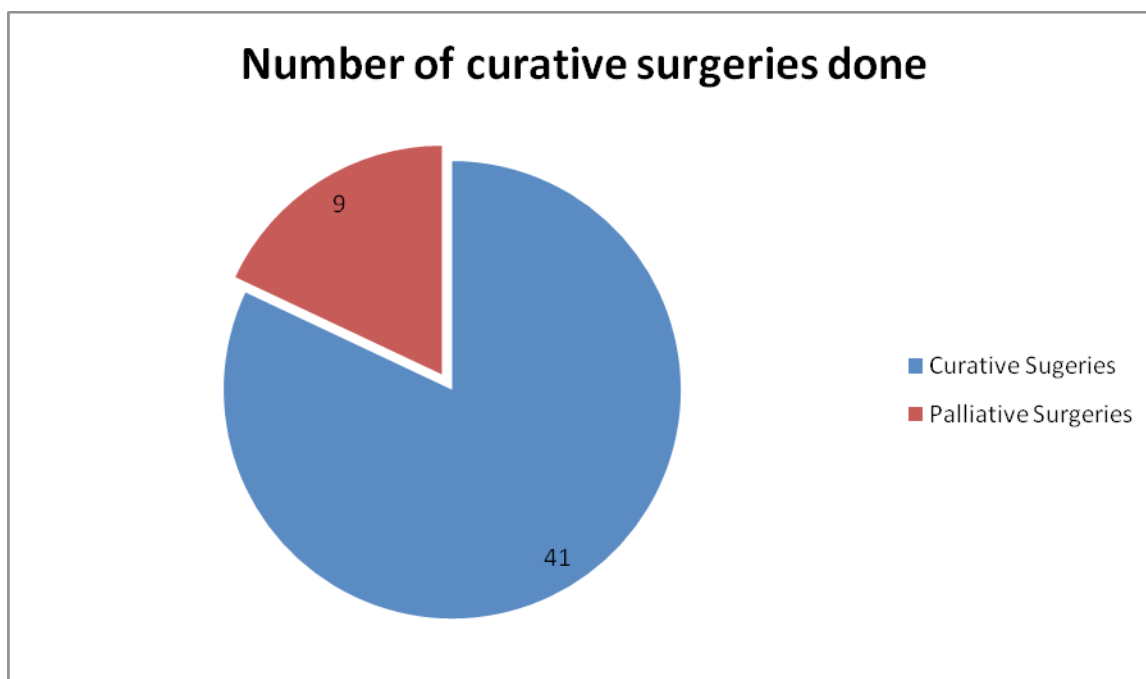


Figure 1 showing number of curative surgeries done:

Table 3 showing duration of hospital stay:

	Variables	Median	Standard Deviation	P. Value
Duration of hospital stay	Stage II	7	1.25	0.16
	Stage III	7.5	0.5	

Discussion

In our study 50 patients underwent surgery out of which 41 had a curative surgeries and 9 had a palliative surgeries. The Indian health system may promote early detection of cancer helpful in decreasing morbidity & mortality of patients to give good survival rate; In this study most of patients came to hospital at stage II & III

undergoes surgery and having good survival rate up to follow up.

Improvement in treatment modality for a gastric cancer patient give good survival rate to the patient; and Decreased in post-operative complication rate for the patients who undergoes surgery In our study population total number of 41 patients undergoes curative resection

it means that Patients undergoing curative surgery shows Histopathological/Microscopic Macroscopic aberrations are showing negative in RO resections; total number of patients undergoes palliative surgery were 9. It means that there histopathology was showing R1 resection which means microscopic residual tumor. Hospital stay is one of the factors used for assessment of outcome of various surgical method. When compare to open literature studies, in our study hospital stay is significantly lower than others studies. Many factors are related to length of hospital stays apart from nature of surgery; In our study patient presented with advanced stage IV gastric adenocarcinoma are referred to medical oncology and radiotherapy department for palliative chemo radiotherapy. In our study patients presented with similar symptoms and signs of gastric cancer most of them showed gastric obstructive symptoms; In my study 88 % of patients found to have gastric cancer in distal part of stomach. Patients undergoing curative surgery– Total gastric showing good tolerance to surgery; H. Pylori are a well-recognized risk factor for gastric cancer, a slightly lower prevalence & infections were observed in this study.

Curative surgeries can be done in early stage in which tumour has not metastasize which comprises of a complete excision of the tumor with margins free of tumor and microscopic tumor cells (R0), combined with adequate lymphadenectomy (the removal of more than 15 lymph nodes).⁴.

Treatment of gastric carcinoma is mostly surgery and chemotherapy. Curative surgery in the form endoscopic resection appears the most effective. Surgical resection implies the removal of the primary tumor and regional lymph nodes with resection margins free of tumor. Gastric carcinoma is not very sensitive to radiotherapy and often needs used of chemotherapy to limit the size of tumour⁵. Laparoscopic staging prior to surgical resection helps to make preoperative treatment decisions and thus has positive outcome ⁶.Surgery is better in cases of endoscopic closure failure ⁷.

We have 41 curative surgeries and only 9 palliative surgeries. Palliative surgeries are needed in advanced disease-causing gastric outlet obstruction as it allows patients to consume liquid diets, preventing dehydration and frequent hospital admissions. Stent migration and occlusion are however possible complications. The Surgery for the treatment of gastric outlet obstruction aims to remove the obstruction. Gastric outlet

obstruction resulting from gastric carcinoma should be resected by distal partial gastrectomy or subtotal gastrectomy with lymphadenectomy. Yonemura Y et al⁸ in their study of 53 patients with gastric or small-bowel obstruction performed endoscopic gastrostomies for decompression and found that decompression was successful in 89% of these cases with low complication rates⁹. Few articles reflected on effective diagnostic tools and evaluation of abdominal malignancies¹⁰⁻¹¹. Number of articles reflected on various aspects of different types of carcinoma prevalent in this region¹²⁻²⁴. Some articles on prevalent, potentially pre-malignant lesions and conditions were reviewed²⁵⁻³⁶.

Conclusion

On the basis of our observations we concluded that the patients presenting earlier in stage II undergo curative surgeries most often and mean hospital stay post-surgery around a week.

Ethical Clearance: Taken from institutional ethics committee.

Source of Funding: Self.

Conflict of Interest: Nil.

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