

RESEARCH COMMUNICATION

Gastric Carcinoma: 5 Year Experience of a Single Institute

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Abstract

Purpose: Gastric cancer (GC) is the most common cause of cancer death registered in cancer institute. Background clinical information is important for cancer prevention and therefore we here present characteristics and outcome of GC patients, more than half coming from northern parts of Iran.

Materials and Methods: we retrospectively studied records patients with pathologic diagnosis of GC referred to the Medical Oncology Department of the Cancer Institute from 1998 to 2003.

Results: Four hundred and thirteen patients were registered with GC with the average age of 58 and a male to female ratio of 3/1. Tumor stage based on AJCC was stage 2(12.5%),stage 3(22%),stage 4(63%) and 2% unknown. Most common site of involvement was cardia (43%). Median survival time of all patients (with or without treatment) was 10 months overall. Gastrectomy was performed for 214 patients(39% with positive surgical margins), and 175 of the gastrectomised patients received chemotherapy. Median survival with surgery only was 7 months but 20 months with both surgery and chemotherapy. Only 21 patients received neoadjuvant chemotherapy. Median survival of patients who had response to preoperative chemotherapy was 30 months. By multivariate analysis lower extent of disease ($p=0.0024$), free surgical margin ($p=0.0017$), and chemotherapy ($p=0.001$) were associated with better prognosis.

Conclusions: Only curative resection with free margins was associated with a survival benefit in this study. More than 80% of patients were diagnosed in locally advanced or metastatic stage of disease and even with neoadjuvant chemotherapy and salvage surgery the outcome was poor. Clearly more efforts need to be given to early detection of lesions to allow a better cure rate.

Key Words: Gastric adenocarcinoma - site of origin - clinical characteristics

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Introduction

Gastric cancer remains a significant problem for global health as it is the second most common cause of tumor-related death world-wide. In western countries the 5-year-survival for all patients with gastric cancer is about 10%. Even among patients surgically treated for cure, few investigators have reported 5-year-survival greater than 20%. In Iran the prevalence of gastric cancer is extremely high and in Tehran, the capital city, it is the most common cause of cancer death in men and the third in women. To compare presentation and outcome of Iranian patients with those from Western and Asian Pacific nations, we here reviewed 413 patients.

Patients and Methods

After institutional ethics approval, all patients with histologic confirmation of invasive gastric adenocarcinoma treated between March 1998 to September 2003 in Medical Oncology Department of the Cancer Institute were identified and medical reports were assessed. Abstracted data

parameters included age at diagnosis, sex, place of birth, histopathology, location (cardia, body, antrum), duration of time from first histologic diagnosis to relapse (relapse free survival:RFS) and from diagnosis to death or last follow up (overall survival: OS).

Curative surgery was recorded as partial or total gastrectomy without gross residue. Response to chemotherapy in neoadjuvant and palliative settings was defined as complete if all clinical and radiographic evidence of disease disappeared, partial if there was more than 50% decrease of tumor load, stable if less than 25% progression or less than 50% recovery was seen and progressive if there was more than 25% increase in tumor dimension or new lesions were discovered.

Associations between categorical factors were studied by X² test. The rate of development of the clinical end points were estimated using the Kaplan-Meier product-limit method. The effect of each prognostic factor on the OS was examined using the log-rank test. Independent prognostic factors were studied using Cox proportional hazards regression. Statistical analysis was performed using SPSS version 10. P-value less than 0.05 was considered significant.

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Table 1. Location and Differentiation of Tumors

Location	Num	Percent	Stage	Num	Percent
Cardia	160	38/7%	II	51	12/3%
Body	91	22%	III	92	22/3%
Antrum	116	28%	IV	261	63/2%
Wide spread	46	11/1%	Missing	9	2/2%
Differentiation	Num	Percent	Signet	Num	Percent
Well	64	15/5%	Yes	87	21/1%
Moderate	94	22/8%	No	326	78/9%
Poor	183	44/3%			
Missing	72	17/4%			
Total	413	100%	Total	413	100%

Results

Four hundred and thirteen patients with gastric adenocarcinoma were identified. Mortality was 66% with a mean follow up of 24 months. Mean age was 58 (21-86) and the male to female ratio was 3/1. A total of 175(42%) of the patients were Azarbaijanian (Figure 1). The pathologic characteristics of tumors are listed in Table 1.

Seventy five patients treated only with supportive care while either chemotherapy or surgery were both used in 175 patients: 115 received chemotherapy without surgery, 37 cases had surgery without chemotherapy (11 missing), and 290 patients with chemotherapy (66 in neoadjuvant 124 in adjuvant and 100 in palliative setting). Some 46 patients (11/1%) were treated with radiation therapy (almost all in adjuvant but 6 in palliative setting). Surgical margins were positive in 83 pathologic reports. Mean survival of patients who received both chemotherapy & surgery was 24 months. The overall 5 year survival rate was only 12% and was best with combined surgery and chemotherapy.

Discussion

Survival outcome of gastric carcinoma differs considerably between Western and Asian-Pacific series. Overall 5 year-survival rates in the United States and Canada are 10 to 15% as compared with 45 to 50% in Japan. Our

**Figure 1. Patient Birth Places**

survival rates are like the former and at diagnosis our patients had high stage disease, more proximally located tumors, more signet ring histology, more distant metastasis and poorer performance status than Japanese patients.

Only curative resection with free margins was associated with a survival benefit in this study. Although we had increased survival with chemotherapy, it is important to recognize that none of the chemotherapy regimens results in cure of advanced gastric adenocarcinoma.

Limitations of this retrospective study should be recognized and it should be born in mind that these are results of one referral center not the entire gastric cancer population. However, it is clear that the 5 year survival is poor, pointing the need for more emphasis on cancer prevention and in particular screening for early tumours.

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