Original Research Article

Clinicopathological features and management of gastric cancer in Port Harcourt

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ABSTRACT

Background: Gastric cancer is a relatively common cancer and has been documented as the 5th commonest cancer worldwide and the 3rd leading cause of cancer death. Surgery is the treatment of choice for operable cases while chemotherapy. It has a poor prognosis with a relative overall 5-year survival rate of 18%.
Methods: This is a retrospective study of all patients that presented with gastric cancer to University of Port Harcourt Teaching Hospital between 1st January 2008 to 31st December 2017. Data were extracted and analyzed using the Statistical Package for Social Sciences (SPSS).
Results: There were 14 males and 12 females seen within the study period making a male to female ratio of 1.2:1. Their ages ranged from 35 to 75 years with a mean of 54.7±4.8 years. The peak age incidence is in the 61-70-year age range. Four patients had curative surgery (D2 sub total gastrectomy) while 6 patients (23.1%) had D1 sub total gastrectomy. Post-operative complications occurred in 7 patients (26.9%). And the commonest was surgical site infection, seen in 4 patients (15.4%). Three patients died giving a mortality rate of 11.5%.
Conclusions: Most patients with gastric cancer present with advance disease. The choice of treatment should be based on patient's fitness, survival benefit and after an accurate assessment of extent of disease.

Keywords: Gastric cancer, Management, Port Harcourt

INTRODUCTION

Gastric cancer is a relatively common cancer and has been documented as the 5th commonest cancer worldwide and the 3rd leading cause of cancer death.[1] In 2012, it was estimated to have affected about 951,594 people and caused 723,073 deaths globally.[2] Geographical variation in incidence has been observed with high incidence noted in Asia (Japan and China) and South America and low incidence in Africa and North America.[3] Adenocarcinoma is the commonest histological type and surgery is the treatment of choice for operable cases while chemotherapy and radiotherapy are adjuvant therapies to improve locoregional control and overall survival rate.[4] Gastric cancer has a poor prognosis with the relative overall 5-year survival rate of 18%.[5] The purpose of this study is to describe the clinicopathological features of gastric cancer as seen in University of Port Harcourt Teaching Hospital.

METHODS

This is a retrospective study of all patients that presented with gastric cancer to University of Port Harcourt Teaching Hospital between 1st January 2008 to 31st December 2017. Data extracted from the case notes of patients included sex, age, duration of symptoms before presentation, signs and symptoms, mode of diagnosis, site of lesion, stage of disease, treatment and surgical procedure, post-operative complications and mortality.

Extracted data were entered into a proforma specifically designed for the study and analyzed using Statistical Package for Social Sciences Version 17. Results were

considered statistically significant when p value was <0.05.

RESULTS

There were 14 males and 12 females seen within the study period making a male to female ratio of 1.2:1. Their ages ranged from 35 to 75 years with a mean of 54.7±4.8 years. The peak age incidence is in the 61-70-year age range (Table 1).

Duration of symptoms ranged from 1 to 60 months with a median duration of 7 months.

Abdominal pains (76.9%), vomiting (46.2%) and weight loss (38.5%) were the commonest presenting features. (Table 2).

Table 1: Age distribution of patients.

Age range in years	Number of patients (%)
21-30	0
31-40	4 (15.4)
41-50	2 (7.7)
51-60	8 (30.7)
61-70	10 (38.5)
71-80	2 (7.7)

Table 2: Patients distribution according to signs and symptoms.

Sign or symptom	Number of patient (%)
Melaena	6 (23.1)
Abdominal pain	20 (76.9)
vomiting	12 (60)
Dizziness	2 (7.7)
Weight loss	10 (38.5)
Dyspepsia	2 (7.7)
Early satiety	4 (15.4)
Abdominal swelling	4 (15.4)
Haematochezia	2 (7.7)
Weakness	2 (7.7)
Abdominal mass	4 (15.4)
Palor	2 (7.7)

Seven patients (26.9%) had co morbidities which included hypertension in 4 patients (15.4%), diabetes in 2 patients (7.7%) and human immunodeficiency virus infection in 1 patient (3.8%).

The patients were staged according to the Tumor Node Metastases (TNM) Classification of Gastric Cancer. Most of the patients (53.8%) presented with stage 4 disease and none in stage 1 (Table 3).

In 15 patients (57.7%), the diagnosis of gastric cancer was made at surgery while in 7 (26.9%),

esophagogastroduodenoscopy and in 4 (15.4%), double contrast barium meal.

Four patients had curative surgery (D2 sub total gastrectomy) while 6 patients (23.1%) had D1 sub total gastrectomy (Table 4). All the patients had chemotherapy.

Table 3: Distribution of patients according to stage.

Stage	Number of patients (%)
1	0 (0)
2	4 (15.4)
3	8 (30.4)
4	14 (53.8)

Table 4: Treatment.

Treatment	Number of patients (%)
D2 subtotal gastrectomy	4 (15.4)
D1 subtotal gastrectomy	6 (23.1)
Gastrojejunostomy	8 (30.7)
No surgery	8 (30.7)

The most commonly involved anatomic site of gastric cancer was the pyloric antrum, seen in 18 patients (69.2%), followed by the fundus in 6 patients (23.1%) and body in 2 patients (7.7%).

According to Lauren's classification, intestinal type was the commonest histological variant, and this was seen in 16 patients (61.5%). The diffuse type accounted for 6 cases (23.1%) and the mixed type in 4 patients (15.4%) (Table 5). The mean age for the intestinal type was 55.8±8.4 years, 58.3±9.2 years for diffuse and 52.5±7.6 years for mixed type. There was no significant difference in the mean ages of patients with the different histological types i.e. intestinal versus diffuse (p=0.243), intestinal versus mixed (p=0.46) and diffuse versus mixed (p=0.132).

Table 5: Histological type (Lauren classification).

Histological Type	No. of patients (%)
Intestinal type	16 (61.5)
Diffuse	6 (23.1)
Mixed	4 (15.4)

Type 6: Mortality.

Procedure	No. of patients	Mortality (%)
Gastric resection	10 (38.5)	2 (7.7)
Bypass procedure	8 (30.7)	1 (3.8)

Post-operative complications occurred in 7 patients (26.9%). And the commonest was surgical site infection, seen in 4 patients (15.4%). The others bleeding from the anastomotic site in 2 patients (7.7%) and gastric outlet obstruction in 1 patient (3.8%). Three patients died giving

a mortality rate of 11.5% (Table 6). Of the 8 patients that were not fit for surgery, 5 died while on admission and 3 left the hospital against medical advice.

DISCUSSION

The preponderance of gastric cancer in males in this study conforms with results from different parts of the world.[6,7] The mean age of 57.69±4.8 is similar to results of other studies in Nigeria and the peak age of 51-70 (about 69.2% of the total number of patients) is in agreement with the fact that gastric cancer most commonly affects the middle age and elderly.[1,8]

The duration of symptoms in this study ranged from 1 to 60 months with a median duration of 7 months. Most of these patients were initially being treated for peptic ulcer disease and this was based on clinical assessment only. This probably accounted for the presentation of majority of the patients (84.6%) with advanced disease (stages 3 and 4). This observation is similar to other reports from Nigeria.[8,9]

Recently, due to improvement in diagnostic facilities, the diagnosis of early gastric cancer has increased. In Japan, the diagnosis of early gastric cancer is about 50% of patients with gastric cancer while in Korea, the proportion has increased from 28.6% in 1995 to 47.4% in 2004.[10] None of the patients in this series presented with early gastric cancer. This is probably because of the initial non availability of endoscopic facilities in centre and late presentation of the patients to the hospital.

The antrum was the commonest site of gastric cancer in this study, accounting 69.2% of cases. Other studies have similarly demonstrated the antrum as the commonest site of gastric cancer.[11-13]

The gastric resection rate of 38.5% reported in this study is in keeping with the 13% to 67% reported in various studies.[11,14] Out of those that had gastric resection in this study, D2 lymphadenectomy was done in 4 patients (15.4%). Out of those that had resection in this study, D2 lymphadenectomy was done in 4 patients (15.4%) while D1 lymphadenectomy performed on the rest. This is because most of the patients were high risk and had widespread metastatic disease and survival benefit would be minimal. Prospective randomized studies have demonstrated no 5- or 11-year survival benefit but significantly higher post-operative rate morbidity and mortality rates following D2 compared to D1 lymphadenectomy.[15-17] However, in Japan and other Asian countries, more extended D2 and D3 lymphadenectomies are being performed for locally advanced gastric cancers and are associated with low mortality and improved long-term survival.[18-20]

The intestinal type was the commonest histological variant of gastric cancer and this was found in 61.5% of cases. This is similar to results from other studies.[21,22] Some authors have reported that though the intestinal

variant remains the commonest sub type, there is a relative increase in the incidence of the diffuse variant.[23,24] It has been suggested that this change may be as a result of a decreased rate of severe gastritis or due to changes in environmental carcinogenic factors in some populations.[25,26] However, this observation was not demonstrated in this study where the diffuse variant was found in only 23.1% of patients.

Post-operative complications occurred in 26.9% of the patients in this series and this was similar to other results.[8,27] Surgical site infection eas the commonest post-operative complication followed by bleeding from the anastomotic sites. All the post-operative complications resolved on conservative measures. Post-operative mortality from this study was 11.5%, which is lower than the 23-36% previously reported from Nigeria.[9,14,28,29] The fewer patients in this study may have been responsible for this finding.

Even though, the 5-year survival rate of patients with cancer in Nigeria has improved significantly from 3% reported in 1988 to 14% (28% in those with curative resection) the follow up report of the patients in this retrospective study was not recorded.[8,30,31] This is because of the loss of majority of the patients to follow up.

CONCLUSION

Most patients with gastric cancer present with advance disease. Upper gastrointestinal endoscopy should be done for patients with dyspepsia to assist in early diagnosis. The choice of treatment should be based on patient's fitness, survival benefit and after an accurate assessment of extent of disease. D2 lymphadenectomy should be done in fit patients with early disease while D1 lymphadenectomy reserved for high risk patients and advance disease with respectable tumors.

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