Gastric Cancer: Surgery Department Experience

Mohamed VI University Hospital, Ibn Tofail Hospital

Marrakech, Morocco

Hamri Asma, Louzi Abdelouahed, Narjis Youssef, Rabbani Khalid, Benelkhaiat Ridouan and Finech Benasser
Department of Surgery, Ibn Tofail Hospital, University of Medicine and Pharmacy, Marrakech 40000, Morocco

Abstract: Gastric cancer is the second most common cause of cancer-related death in the world, and it remains difficult to cure, primarily because most patients present with advanced disease. The gastric cancer is a public health problem in Morocco because the early diagnosis is difficult and most patients are asymptomatic in the early stage. Weight loss and abdominal pain often are late signs of tumor progression. And the majority of our patients consult tardily. Chronic atrophic gastritis, *Helicobacter pylori* infection, smoking, heavy alcohol use, and several dietary factors have been linked to increased risks for gastric cancer. Esophagogastroduodenoscopy is the preferred diagnostic modality for evaluation of patients in whom stomach cancer is suspected. Through a retrospective study of 150 cases between 2009 and 2014, at the surgery department of Ibn Tofail Hospital in Marrakech, we try to raise the difficulties of the diagnosis and treatment of this cancer. It is about 39 women and 111 men. The median age is 51.13 years. The clinical symptomatology is dominated by: the epigastric pains (82%) and the digestive haemorrhage (26%). The positive diagnosis is confirmed by the esophagogastroduodenoscopy with biopsy. The tumor seat often into the pyloric antrum in 46.6% of the cases, into the fundus in 20% of cases. Histologically, the most frequent type is the adenocarcinoma in 90.7% of the cases. Five per cent of patients received a preoperative chemotherapy. The curative surgical treatment is done in 49.2% cases, and the palliative cure in 55% of cases. A therapeutic abstention in 3% of the cases. The auxiliary treatment is indicated after multifield conciliation meeting for stages II and III. The post-operative evaluation is based on clinical and paraclinical exams.

Key words: Gastric cancer, clinical signs, treatment, surveillance.

1. Introduction

Gastric cancer is representing the fourth highest cause of cancer-related death (9% of all cancers) [1]. Although the overall incidence of gastric cancers is declining, in developed countries in recent decades, gastric cancer remains a major public health problem worldwide.

2. Methodology

A retrospective study of all (150) patients with gastric carcinoma between January 2009 and December 2014 was made. From this study, we are trying to show the difficulties of this cancer treatment in our context. Simple descriptive analysis was used to

characterize the patients' demographic parameters, symptomatology, clinical and investigative findings along with treatment and outcome modalities.

3. Results

During these 6 years (2009-2014), 150 patient records with a pathologically confirmed diagnosis of gastric cancer were analyzed. Mean age of all patients was 56.37 yr ranging from 29 to 83 years old. Among 190 remaining records, 74% were males and male to female ratio was 1.57 (Fig. 1).

The main risk factors were: smoking (58%), high salt diet (30%), alcohol consumption (28%), *Helicobacter pylori* infection (12%), precancerous lesions (14.6%).

Duration of symptom before disease discovery was 11 ± 1.5 months. Abdominal pain was present in 82%,

Corresponding author: Finech Benasser, Ph.D., research field: surgical research.

Fig. 1 Distribution by age.

Fig. 2 Histology of tumor.

while 52.6% had a history of weight loss. Physical examination: pale skin (45.21%), cachexia (52.1%). The diagnosis is made from esophagogastroduodenoscopy and histology. Tumor subsite distribution: gastric cancer were located in the lower stomach (antrum and prepyloric 46.6%). A total of our patients 90.7% had adenocarcinoma (undifferentiated carcinoma 43.3%).

The staging consists of physical examination, blood count and differential, liver and renal function tests, endoscopy and CT scan of the thorax, abdomen and pelvis (deep lymphadenopathy 40%, liver metastasis 25%). Multidisciplinary treatment planning is mandatory, comprising surgeons, medical and radiation oncologists, gastroenterologists, radiologists and pathologists.

A total of 138 patients out of 150 (85%) had a surgery. The surgical approach was laparotomy in almost cases (Table 1). Laparoscopy was performed in one case showing a peritoneal carcinomatosis which indicated a therapeutic abstention. Surgery was curative to 68 patients (49.2%) and palliative in 55% of cases (Table 2). A therapeutic abstention was in 3% of cases. Operative mortality was 2.17%.

Table 1 Gastric resection.

Gastric resection	Cases number	%
Jejunostomy	39	28.26
Total gastrectomy	37	26.81
Gastrectomy 4/5	28	20.28
Gastrectomy 2/5	3	2.17
Gastro-jejunal-anastomosis	26	18.84
Therapeutic abstention	4	2.89
Reduction surgery (for bleeding)	1	0.72
Total	138	100

Table 2 Lymphadenectomy type.

Lymphadenectomy	Cases number	%
D1	33	48.6
D1,5	35	15.4
D2	0	0
D3	0	0

Table 3 Staging pTNM.

Satging	TNM	Cases number	%
IA	T1N0M0	7	5.07
IB	T1N1M0	0	0
	T2N0M0	9	6.52
	T1N2M0	0	0
II	T2N1M0	6	4.34
	T3N0M0	19	13.76
	T2N2M0	7	5.07
IIIA	T3N1M0	14	10.14
	T4N0M0	1	0.72
IIB	T3N2M0	5	3.62
IV	All T, All N, M1	70	50.7
Total	138		

Histological study of specimens objectified (Table 3): stage I (11.6 %). stage II (18.1%) and stage III (19.5%). Adjuvant therapy is indicated after multidisciplinary meeting for stages II and III. Postoperative surveillance in our series is based on clinical surveillance, endoscopic and radiological exams. The tumor recurrence in gastric stump was noted in 7 cases. The appearance of liver metastases occurred in 17 cases.

4. Discussion

Cancer of the stomach is one of the most commonly diagnosed malignancies and remains an important cause of mortality worldwide. This type of cancer is not uniformly distributed among populations but shows a marked variation in both incidence and mortality. The

incidence of gastric cancer varies widely by country and population, with higher rates among the lower socioeconomic groups. The epidemiology of gastric cancer is remarkable for both its dramatic decline in incidence over the past century and its continuing presence as the second leading cause of cancer deaths worldwide despite this decline [2]. Early gastric cancer has no specific symptoms. This explains why gastric cancer continues to be diagnosed when it is already advanced [3]. The prognosis is bad, with an overall survival at 5 years of 10% to 15% [4]. The curative treatment of gastric cancer is essentially surgical [5]. Diagnosis is based on the gastroduodenal endoscopy and gastroesophageal biopsy results. It can be improved by the echo-endoscopy, which is more sensitive particularly for early forms. The most frequent localisation of gastric cancer is the pyloric and the antrum-localization [6]. The staging should include at minimum a chest radiograph and abdominopelvic ultrasonography [7]. The laparoscopic staging of gastric tumors is a decisive element in the treatment choice [8]. It is specifically designed for stage III and IV and larger tumors (T3 and T4) [9]. If the cancer localisation is in antro-pyloric, we practice a subtotal gastrectomy and a D2 lymphadenectomy. If the cancer localisation is in the middle or in the higher part of the stomach, we practice a total gastrectomy without splenectomy. Postoperative chemoradiotherapy increases survival against surgery alone. The new therapeutic is perioperative chemotherapy, preoperative chemoradiotherapy and targeted therapies (anti-proliferative, anti-angiogenesis) [10].

5. Conclusion

Gastric cancer in our region showed no clear

epidemiological characteristics, however, we note some negative elements of health condition in our context. Most of our patients present with advanced stages, with an average time of consultation of up to one year. Indeed, 52% of patients with gastric adenocarcinoma had metastases at initial staging. We also note with regret the high rate of lost sight among our patients, mainly for lack of materiel resources, which made it difficult to follow their evolution.

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