Experience Of Gastric Cancer In Al- Sadder City in Baghdad

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ABSTRACT:

BACKGROUND:

The aim of the study is to assess the following points among the patients with gastric cancer admitted to the surgical wards in Imam Ali Hospital- Al- Sadder City- Baghdad.

- Sex and age distribution.
- Mode of presentation.
- Results of endoscopic findings and histopathology.
- Risk factors and tumour staging.
- Treatment options.

PATIENTS AND METHODS:

A prospective study was done in Imam Ali Hospital for a period of six years from (January 2009 to December 2014) where fifty cases with biopsy proved gastric cancer had been assessed. The age and sex distribution, mode of presentation, site of the tumour, macrosopical appearances histopathological findings, risk factors and treatment options were analysed.

RESULTS:

The male to Female ratio was 1.4:1, peak age incidence was 60-70 years, non-specific symptoms such as vague epigastric pain, dyspepsia, anorexia, weight loss were the most common symptoms; esophagogastric junction was the commonest site, polypoid type was the commonest endoscopic finding (44%); upper gastrointestinal endoscopy with biopsy was the most accurate method of diagnosing gastric cancer; Adencarcinoma was the most frequent histopathological type (96%); cigarette smoking is the predominant risk factor (64%) [32, 33, 34, 35]; In the majority of those patients the disease was advanced and the curative measures were not possible.

CONCLUSION:

Gastric cancer remains a significant problem in Iraq, it's one of the most popular malignancies (ninth most common in Iraq) [37]. No age group of both sexes can be excluded. Late presentation is a stigmata of the disease and the gloomy prognosis can only be improved by early detection based on a more vigorous diagnostic approach following a high risk index of suspicion in individuals at risk.

KEYWORDS: gastric cancer, upper gastrointestinal endoscopy, adenocarcinoma.

INTRODUCTION :

Over 90% of gastric tumours are malignant and gastric adenocarcinoma referred to as gastric cancer" comprises 95% of all gastric malignancies, while lymphoma constitutes 4%, Leiomyosarcoma 1% and other rare entities such as squamous cell carcinoma, angiosarcoma and metastases from adjacent or distant primary sites constitute the rest. Gastric carcinoma remains a significant surgical problem in several parts of the world despite reports of a declining incidence in UK and USA. Areas with a high incidence include Japan, Chile and parts of South Africa [1,2,3,4,5,6].

In Iraq gastric cancer is the ninth common and the 2nd commonest gastrointestinal malignancy after colorectal carcinoma [16,17,36,37,38]. Carcinoma of the stomach continues to carry a dismal prognosis especially in Western countries where the overall 5-years survival ranges from 5-10%.

Gastric cancer can be divided into early gastric cancer and advanced gastric cancer. Early gastric cancer is defined as cancer limited to mucosa and submucosa with or without lymph node involvement, (TI any N). Advanced gastric cancer involves the muscularis. Its macroscopic appearances have been classified by Bormann

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into four types: Type I- polypoid; Type II- ulcerating; Type III- ulcerating/infiltrating; Type IV- diffuse infiltrating. Types III and IV are commonly incurable [8, 9] (figure-1).

Until recently there were several rival staging systems for gastric cancer, however an international staging system has been agreed upon TNM classification [9].

The disease spreads by three primary routes: locoregional, haematogenous and lymphatic. Locorgional spread is through the serosa into the greater or lesser sac, and into adjacent organs, liver, pancreas, spleen, and transverse colon. Transcoelomic spread can give specific metastases to the pouch of Douglas (Blumer's shelf), the ovaries (KruKenberg's tumour) or umbilicus (Sister Joseph's nodule). Locorgional spread is responsible for 40% of recurrent disease [8].

Haematogenous spread is demonstrated by the presence of metastases in the liver, lung, bone and other organs and is the principal cause of 45% of recurrent disease.

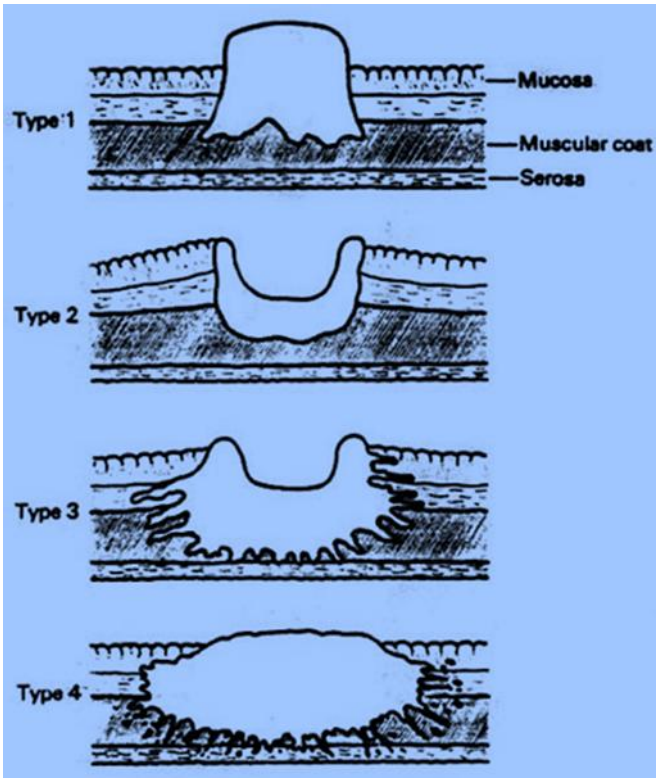


Figure 1: Borman classification of advanced gastric cancer.

Lymphatic spread is an important marker of tumour stage but is probably not an important pathway of tumour spread. Lymphatic spread may sometimes be detected in the left anterior supraclavicular node (Troisier's sign) [10, 11].

PATIENTS AND METHODS:

A prospective study was done in Imam Ali Hospital for a period of six years from January 2009 to December 2014.

Fifty patients with gastric cancer were included in this study.

Patients were admitted to the surgical wards of the hospital, after admission, the following points in the history were recorded: age, sex, patient's complaint and habits such as cigarette smoking and alcohol intake.

All patients were clinically examined and the positive signs were recorded, then the patients were investigated and the diagnosis was settled by upper endoscopy and biopsy. After diagnosis the extent of local disease and the presence of metastases are evaluated by: adbominal ultrasonography, chest X-ray, and liver function tests.

The risk factors for the development of the disease such as gastric polyps, previous gastric surgery for benign conditions, chronic atrophic gastritis, pernicious anaemia and blood group A were also recorded [9].

About 1/3 of the patients presented with complications of the disease i.e gastric outlet obstruction, bleeding and perforation.
All those patients had undergone surgical intervention and the operative findings such as site and extent of the tumour, lymph node involvement, liver and peritoneal metastases were taken into consideration and recorded.

RESULTS:

A total of fifty patients with gastric cancer were included in this study.
Our results are as following:

- Age and sex distribution: is shown in Table (1).
- Peak, mean and median age distribution: is shown in Table (2).
- Mode of presentation: Symptoms and signs of these patients are shown in Table (3).
- Distribution of the Tumor: is shown in Figure (2).
- Regarding the spread of the tumor; in 5(10%) patients there were liver deposits and direct infiltration, Ten (20%) patients had omental deposits, No attempt was made to sample the regional lymph nodes.
- Distribution of the blood groups in our patients is shown in Figure (3).
- Histopathological findings are shown in Figure (4); N.B. in 35(70%) patients the adenocarcinoma were poorly differentiated and in 13(26%) patients were moderately differentiated.
- Distribution of patients according to the staging is shown in Table (4).
- Macroscopic forms of gastric cancer is shown in Figure (5); N.B. Two of polypoid forms were lymphoma.
- Risk factors found in our patients are classified in Table (5).
- Surgical intervention had been carried out in all these patients, but the majority of them had an advanced disease whether due to local spread or metastases and curative measures were not possible. The operations performed are shown in Table (6).

Table 1: Age and sex distribution.

Age	Male No.	Female No.	Total	%
20-29	1	1	2	4
30-39	4	5	9	18
40-49	6	2	8	16
50-59	5	5	10	20
60-69	7	7	14	28
70-80	6	1	7	14
Total	29	21	50	

Table 2: Peak, mean and median age distribution.

Peak	Mean	Median
60-70 years	M: 64.8 years	M: 64 years
	F: 61 years	F: 63 years
	Overall 63.3 years	Overall 63.5 years

Table 3: Symptoms and signs.

Symptoms and signs	Patients No.	%
Epigastric pain	35	70
Flatulent dyspepsia: bloating after meals, distension, fullness, heart burn, eructations:	30	60
Weight loss	27	52
Anorexia	23	46
Anaemia	25	50
Asthenia	20	40
Vomiting and Nausea	15	30
Dysphagia	15	30
Early satiety	10	20
Haematemesis	1	2
Perforation	1	2
Succussion splash	15	30
Abdominal mass	14	28
Visible peristalsis	13	26
Ascitis	6	12
Hepatomegaly	5	10
Jaundice	5	10
Abdominal tenderness	5	10
Troisier's sign+Trousseau's sign	-	-

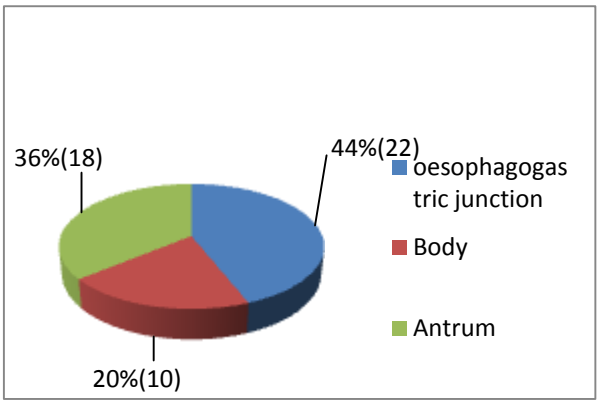
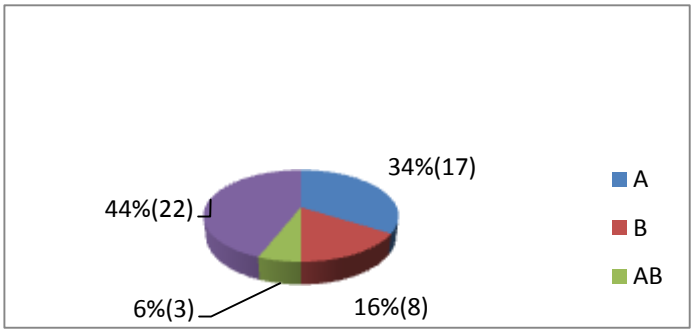


Figure 2: Distribution of gastric carcinoma.



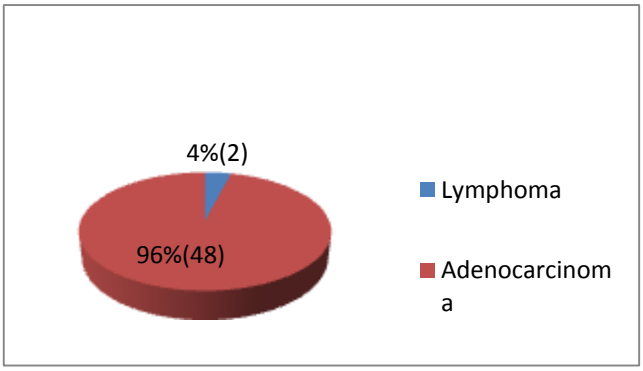


Figure 4: Histopathological finding.

Table 4: Staging of the gastric cancer.

Stage	TNM classification	No. of Patients	%
Stage I	-	-	-
Stage II	$T_2N_1M_0$	8	16
Stage III A	$T_3N_1M_0$	12	54
Stage III B	$T_4N_2M_0$	15	
Stage IV	$T_2N_1M_1$	15	30

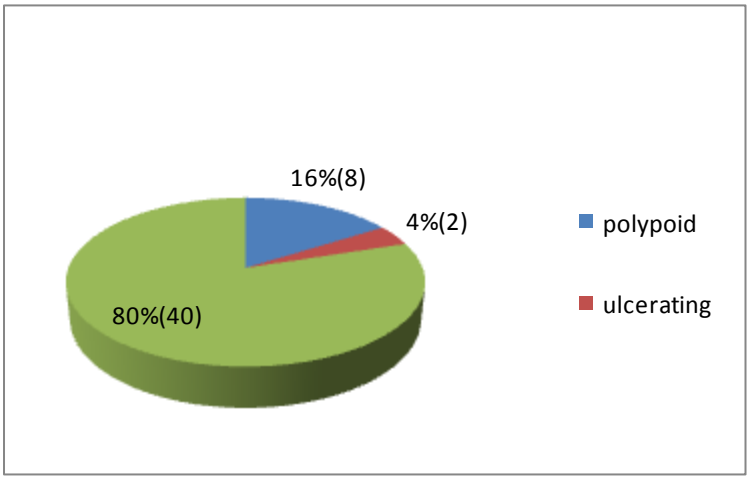


Figure 5: Macroscopic forms of gastric cancer.

Table 5: Risk factors for developing gastric cancer.

Risk factor	Patient No.	%
Cigarette smoking	32	64
Chronic gastritis	10	20
Blood group A	17	34
Pernicious anaemia	1	2
Gastric Polyps	-	-
Previous gastric surgery	-	-

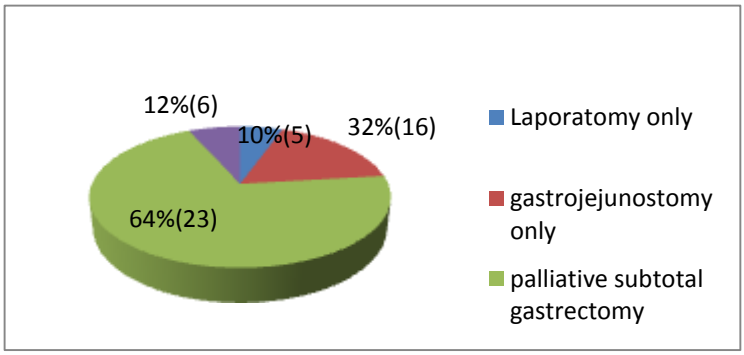


Figure 6: Surgical treatment.

DISCUSSION:

Although gastric cancer is rare before the age of forty years, we found in this study that about one fifth (22%) of patients were below the age of forty.

The disease presents most commonly in the fifth and sixth decades of life [15].

The peak age group was 60-70 years and was similar to a previous study in Iraq [16, 17, 36, 37, 38].

In respect to male: female frequency the male was more commonly affected than female, which was similar to the world wide predominance [1, 2, 3].

Although the worldwide M: F ratio is 2:1, in this series the M:F ratio was 1.4:1 which was similar to a previous study from Iraq [16, 37] (the ratio was 1.3:l).

The presenting features in this series were non specific such as vague epigastria pain, dyspepsia "indigestion", anorexia, weight loss, anaemia. The vagueness of the early symptoms was one of the reasons for late diagnosis. The key to improve the outcome of gastric cancer is early diagnosis. Present guidelines suggest gastroscopy for any new dyspepsia however mild in a patient over 40 years of age. The same advice applies to a patient of any age with persistent dyspepsia of any unusual features [18].

However, the patients presented with symptoms and signs of advanced disease such as early satiety, bloating, distention, epigastric mass, jaundice, and ascitis or with features indicating the site of the tumour such as dysphagia in tumours of the cardia infiltrating the oesophagus in 15(30%) patients, others 15(30%) patients presented with features of pyloric obstruction due to large tumor mass in the distal stomach.

Malignant gastric ulcers were seen in 8(16%) patients. The differentiation between benign and malignant ulcers can be problematical [4, 13, 14, 19, 20].

Although the benign gastric ulcers are most frequently 2cm or less in diameter and most commonly sited at the incisura angularis on lesser curve and have radiological features on barium meal as: the ulcer crater projects beyond the wall of the stomach and the rugal folds radiate inwards the crater and should have clear-cut overhanging edges with no thickening of the adjacent mucosa on endoscopy, despite all these features neither the site, size or radiology proved to be helpful [10, 11, 13, 19, 20].

Since chronic gastric ulcer is rare in Iraq [14, 19, 20, 27] and gastric antisecretory agents will improve the symptoms of gastric cancer, the policy was to follow all biopsy negative ulcers on treatment at four weekly intervals by endoscopy and multiple biopsy to exclude underlying malignancy [10,11, 27].

If there was failure of complete endoscopic healing after 12-15 weeks surgery is adviced [21, 25, 30].

We found that the proximal stomach i.e. oesophagogastric junction was the commonest site, while the antrum was the second. This may be because of the primary cause in our study which is smoking & its effect in esophagus & stomach together but in other worldwide studies the priority is for other causes [6, 8, 9, 14].

The association between gastric cancer and blood group A is probably just a tenuous relationship [6,14, 26].

In several large studies from the Scandinavian countries it was found that there is no correlation between gastric cancer and blood group A [40].

In this study, we found that 17(34%) patients had blood group A and 22(44%) patients had blood group O. So gastric CA mostly correlated with blood group O in our study.

The relationship between atrophic gastritis and gastric carcinoma has been postulated for many years [27, 28, 29].

Correa et al. Have studied subjects in the high incidence region of Colombia for almost 20 years and reported that the high incidence of precursor lesions, chronic atrophic gastritis, intestinal metaplasia, and dysplasia (that are seen as sequential stages in the precancerous process) are strongly related to changes in gastric chemistry and rise linearly with pH, nitrate and nitrite values in the gastric juice [27].

In this study only 10(20%) patients has chronic gastritis, thus whether the cancer developed as a consequence of gastritis or both conditions were present as concomitant conditions we could not say with certainty.

Pernicious anaemia and menetrier's disease have both been associated with gastric cancer. Based on the autopsy series by Zamcheck et al. In 1955, it was concluded that approximately 10% of patients with pernicious anaemia might develop malignancy [28]. Hoffman later questioned the relationship between the two diseases after following 138 patients for 11 years, with no patient developing gastric cancer [29].

In this study only one (2%) patient had pernicious anaemia and he developed gastric cancer 15 years after diagnosis of anaemia so the significance of this risk factor is difficult to be analysed in our study.

Cigarette smoking was found in 32(64%) patients and it is important risk factor in our patients & this is correlated with many worldwide literatures which support our results of the presence of this association [24, 25, 30, 32, 33, 34].

In respect to tumour staging, 15(30%) patients had stage IV disease i.e with distant metastases; 27(54%) patients, stage III and 8(16%) patients stage II. This may reflect the late presentation of our patients. The importance of early recognition of cancer of the stomach cannot be overemphasized, Early detection is dependent on a high index of suspicion on the part of general population as well as the doctor. There has been great debate as to which of the two main diagnostic tools, that is barium meal examination and gastroscopy is superior, upper gastrointestinal flexible endoscopy is the most accurate method of diagnosing gastric cancer currently available. It permits a biopsy procedure

and tissue diagnosis. An upper gastrointestinal barium study (single or air contrast) may be regarded as complementary particularly if the scirrhous variety of tumour is suspected [4, 10, 11, 17, 18, 19]. In this study, the diagnosis of gastric cancer in all patients was made solely by means of upper endoscopy and biopsy.

Treatment of patients with gastric cancer is primarily surgical. Radiation and chemotherapy have little to offer in the way of palliation. Resection offers the only possibility of cure for gastric cancer and also provides the best palliation [30, 31, 36].

Because of late presentation of our patients the most frequent performed operation was palliative subtotal gastrectomy, it was carried out in 23(46%) patients, while radical gastrectomy in the form of Rl resection with removal of lymph nodes along the left gastric artery was carried out in 6(12%) patients only.

The precise role of adjuvant and neoadjuvant chemotherapy and radiothrapy has yet to be strictly defined in the treatment of gastric cancer. Because of the high probability of relapse after gastric resection, there is interest in defining an effective adjuvant regime [31].

In spite of improved diagnostic procedures the majority of our patients had far advanced disease at time of presentation whether due to local or metastatic spread and curative measures were not possible, because our patients were late in seeking medical advice and the general practitioners tend to treat vague symptoms as simple ailments without prior diagnostic confirmation. Similarly, the prognosis of gastric cancer remains unchanged and the 5-year survival hardly exceeds 15% in Western series [31].

CONCLUSION:

1. All patients with upper gastrointestinal complaints should be investigated before medical treatment.
2. Patients over 40 years of age with new dyspepsia however mild and patients of any age with persistent dyspepsia should be checked by upper endoscopy.
3. All biopsy negative gastric ulcers on treatment should be followed by upper endoscopy and biopsy at four weekly intervals and if there was failure of complete endoscopic healing after 12-15 weeks surgery is advised.
4. High risk patients should be checked regularly by upper endoscopy e.g every 6-12 months.

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