

Gastric Cancer: A Clinicopathological Analysis of 54 Cases Seen at Asir Central Hospital, Abha, Saudi Arabia

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الهدف: دراسة الطراز السريري الامراضي وكذلك نتيجة المعالجة لحالات سرطان المعدة التي تم علاجها في مستشفى عسير المركزي ومقارنة ذلك بدراسات مماثلة.

التصميم: تحليل إسترجاعي للمفات المرضي خلال أربع سنوات، في الفترة من يونيو ١٩٨٩م إلى يونيو ١٩٩٣م.
المكان: مستشفى عسير المركزي، أبها، المملكة العربية السعودية.

موضوع الدراسة: المرضى المصابون بسرطان المعدة.

النتائج: لقد بينت هذه الدراسة التي شملت أربعة وخمسين مريضاً أن نسبة الذكور الى الاناث ٢:٢ : كما أن معدّل الأعمار من ٢٥-٨٥ سنة ومتوسطها ٦٣ سنة. وكانت الأعراض المرضية الأكثر شيوعاً هي: ألم شرسوفي في ٨١٪ من الحالات، نقص في الوزن في ٧٠٪ منها وتقيؤ في ٦١٪ من الحالات، بينما كان الايلام الشرسوفي (٥٠٪) هو العلامة السريرية الشائعة. واتضح من الدراسة أن الأورام تقع في غار المعدة في ٤١٪ من الحالات وفي فؤاد المعدة وقاعها في ٣٠٪ منها. كما وُجد أن السرطانة الغُدّيّة تمثل ٨٠٪ من الأورام الخبيثة وأن النوع المعوي منها هو الأكثر وجوداً حيث وجد في ٩٣٪ من الحالات. وقد أظهرت هذه الدراسة أن ٩٨٪ من المرضى كانوا في حالة متقدمة من المرض مما جعل التدخل العلاجي لحالاتهم لغرض التلطيف فقط. ولذلك تم إجراء عملية إستئصال معدي جُلّي لثمانية وعشرين مريضاً أي بنسبة ٥١٫٩٪ من الحالات، وعملية إستئصال معدي كُلّي لعشرين مريضاً، أي بنسبة ٣٧٪ من الحالات، وثلاث عمليات فتح للبطن مع عمل مجازة وثلاث أخرى تم فيها فتح للبطن مع أخذ عينة فقط. وكان معدّل الوفيات أثناء وجود المرضى في المستشفى ١٥٪ أي ثمانية مرضى، أربعة منهم من بين أولئك الذين أجريت لهم عمليات إستئصال معدي كُلّي، أي ما نسبته ٢٠٪، وواحد من بين المرضى الذين أجريت لهم عمليات إستئصال معدي جُلّي أي ما نسبته ٣٦٪، أما الثلاثة الباقين فقد أجريت لهم إما عمليات فتح للبطن مع عمل مجازة أو فتح للبطن مع أخذ عينة.

Objective: To study the clinicopathological patterns and outcome of treatment of gastric cancer as seen at Asir Central Hospital and compare them with other studies in other regions.

Design: Retrospective analysis of patients' data, as collected from their files, over a 4-year period (June 1989–June 1993).

Setting: Asir Central Hospital, Abha, Saudi Arabia.

Subjects: Patients with gastric malignancy.

Results: Fifty-four patients were considered for this study. The male:female ratio was 2.2:1, and the age range was 25–85 years (mean = 63 years). The most common symptoms were epigastric pain (81%), weight loss (70%) and vomiting (61%); while epigastric tenderness (50%) was the most common sign. Tumours were located in the antrum in 41% and in the fundocardiac region in 30% of cases. Adenocarcinoma constituted 80% of malignancies, of which, the intestinal type was the commonest lesion (93%). Ninety-eight per cent of patients had advanced disease and, therefore, had palliative treatment. Twenty-eight (51.9%) patients had subtotal gastrectomy, 20 (37%) had total gastrectomy, three (6%) had laparotomy and bypass procedures and three (6%) had only laparotomy and biopsy. The hospital mortality was 15% i.e. eight patients; four (20%) had total gastrectomy, one (3.6%) had subtotal gastrectomy, and the remaining three died after laparotomy and bypass or biopsy operations.

Conclusion: The clinicopathological pattern of gastric cancer in our patients is not significantly different from that of other regions of the Kingdom. Judging from the intra-hospital mortality rate, it seems that subtotal gastrectomy would be the preferred therapeutic option unless the whole stomach is involved with the tumour. *Saudi Medical Journal* 1995; 16(4): 308–311.

Keywords: Gastric cancer. Gastrectomy.

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The stomach is the most common organ involved in malignancy of the gastrointestinal tract (GIT) in Saudi Arabia.^{1,2} It is reported in 0.6% of all upper GIT endoscopies.³ Previous studies have focused on other areas of Saudi Arabia,¹⁻⁶ and although two studies from Asir region have reported the histopathological pattern of cancer in general⁷ and that of gastric cancer,⁸ no study has been conducted in this region to evaluate the clinicopathological pattern of such a problem. We, therefore, decided to perform this study with the objective of reporting our findings and comparing them with other studies.

Patients and Methods

In a 4-year period from June 1989 to June 1993, we reviewed the case notes of all patients admitted at Asir Central Hospital (ACH) with a diagnosis of gastric malignancy. The age, sex, clinical presentation, operation performed, postoperative complications and the histopathological diagnosis were reviewed. The adenocarcinomas were classified according to Lauren's classification.⁹

Cases with inconclusive data or patients referred to ACH after initial operation but without accompanying slides for tissue diagnosis were excluded from this series.

Results

Of a total of 63 patients seen during the 4-year period, nine cases were excluded, for lack of data, and only 54 cases were considered for this study.

The age range was 25-85 years (mean 63, median 67, interquartile range (67%) is 60-79 years). There were 37 males (69%) and 17 females (31%), giving a male:female ratio of 2.2:1. The presenting symptoms and signs are shown in Table 1. The duration of symptoms varied from a period of 3 months to 7 years, but 63% presented within 6 months of the start of their symptoms.

The modality of investigations included upper GIT endoscopy, barium meal studies, ultrasonography and computerized tomography of the abdomen. One patient in this series had an emergency operation for a perforated gastric ulcer which proved to be malignant. Endoscopic biopsy was positive in all the 52 patients (96%) who had this investigation. The commonest site for the tumour was in the gastric antrum (41%)

Table 1
Symptoms and signs at presentation

Symptoms	No.	(%)	Signs	No.	(%)
Pain	44	(81)	Epigastric tenderness	27	(50)
Weight loss	38	(70)	Pallor	16	(30)
Vomiting	33	(61)	Mass	9	(17)
Anorexia	25	(46)	Virchow's node	1	(2)

Table 2
Site of tumours within the stomach

Site	No.	(%)
Antrum	22	(41)
Cardia/fundus	16	(30)
Whole stomach	11	(20)
Body	5	(9)
Total	54	(100)

Table 3
Types of the malignancy seen in 54 patients

Type/stage	No.	(%)
Adenocarcinoma	43	(80)
(a) Intestinal types:	40	(93)
well differentiated	1	(2.5)
moderately differentiated	17	(42.5)
poorly differentiated	22	(55)
(b) Diffuse type	3	(7)
Lymphoma	6	(11)
Leiomyoblastoma	2	(4)
Pseudolymphoma	1	(2)
Carcinoid	1	(2)
Squamous cell carcinoma	1	(2)
Total	54	(100)

followed by the fundocardiac area (30%) (Table 2). Fifty-six per cent (56%) of the patients were blood group O⁺, 35% A⁺, 5.6% B⁺ and 3.7% AB⁺. The distribution of different types of gastric cancer in this series is shown in Table 3.

Total gastrectomy was carried out in 20 patients (37%), distal subtotal gastrectomy in 21 patients (38%), proximal subtotal gastrectomy in seven patients (13%), bypass operation in three patients (6%) and laparotomy and biopsy only in three patients (6%). There was serosal involvement in 72% of the patients, 24% had liver secondaries and 12% had peritoneal dissemination.

The total hospital mortality was eight (15%) patients. Four patients (20%) had total gastrectomy, one (3.6%) had subtotal gastrectomy, and the remaining three patients were those with an already advanced disease who had undergone laparotomy, biopsy and bypass procedures. The cause of death was septicaemia in three patients, aspiration pneumonia in one, and undetermined in the remaining four patients. The follow-up for these patients was very poor due to the fact that most of the patients disappeared after discharge from the hospital.

Discussion

Since we lack a cancer registry, all related studies in the Kingdom, including ours, are hospital-based, so, epidemiological conclusions cannot be drawn from such reports. Cancer of the stomach is the most common malignancy of the GIT and the fifth commonest malignancy seen at Asir Central Hospital.⁷ This is similar to that reported from Riyadh,¹ Dhahran² and Al-Baha.¹⁰

Men were more than twice at risk of developing gastric cancer than females and the most common symptoms were abdominal pain, weight loss and vomiting, a finding similar to that reported from Riyadh.³ However, half of our patients had epigastric tenderness and 17% presented with palpable epigastric mass on clinical examination, which is higher than those reported from Riyadh.³

Our study shows that the intestinal type of gastric adenocarcinoma is the most common; accounting for 93% of all gastric carcinomas compared with only 51% in those reported from Riyadh.³ Diffuse type of adenocarcinoma, however, constituted only 7% in our study compared with 38% in the same study from Riyadh.³ The intestinal type of adenocarcinoma is more frequent in males and older patients; it is prevalent in high-risk countries and may be associated with intestinal metaplasia of the gastric mucosa. It can be graded microscopically into well differentiated, moderately differentiated and poorly differentiated types. In our series, most were poorly differentiated adenocarcinoma. The diffuse type of gastric carcinoma is frequent in younger age groups and common in low-risk area. Both intestinal and diffuse types can co-exist in the same stomach¹¹ and the prognosis for the intestinal type can also be poor if the presentation is late¹² as in this series. Primary gastric lymphoma was encountered in 11% of patients; this could be part of the relatively high lymphoma rate in this region as reported by Khan *et al.*⁷

The gastric antrum was involved in most (41%) of the cases in this study which agrees with other reports.^{12,13} However, the fundocardiac region was involved in 30% of patients in our study and in 36% in those reported from Riyadh by Al-Mofleh.³ This finding might confirm the observation of the relatively rising incidence of proximal gastric cancer.¹³

Early detection of gastric cancer is the mainstay for a good prognosis. Unfortunately most of our patients (98%) had advanced disease at presentation and therefore, the treatment was only palliative. About half of the patients in this series had subtotal gastrectomy and about one-third had total gastrectomy. The operative mortality after total gastrectomy was 20% compared with 3.6% in those who had subtotal gastrectomy. With the probable exception of carcinoma of the cardia and linitis plastica, different studies support the option of subtotal gastrectomy for gastric carcinoma.^{12,14,15} The operative mortality for total gastrectomy is higher in most of the series.^{11,12,15} The 5-year survival rate is not significantly different from that of subtotal gastrectomy^{14,16} although some have recorded a better 5-year

survival rate for total gastrectomy.¹⁷ Also, because of loss of the intrinsic factor in total gastrectomy, nutritional problems are not uncommon, thereby increasing the postoperative morbidity.

In conclusion, the clinicopathological pattern of gastric cancer seen at Asir Central Hospital, which is a tertiary hospital, in the southern part of Saudi Arabia, is not significantly different from that seen in other parts of the Kingdom. We believe that cancer of the stomach should be resected whenever possible even as a palliative procedure to avoid complications such as perforation and bleeding. Since the operative mortality is higher in total gastrectomy compared with subtotal gastrectomy, and since the 5-year survival rate for total gastrectomy is not better than that for subtotal gastrectomy,^{14,16} we think that subtotal gastrectomy should be preferred to total gastrectomy for gastric cancer not involving the whole stomach.

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