

Gastric Carcinoma – A Review of 114 Cases

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Summary

A CLINICAL REVIEW OF 114 patients with gastric carcinoma shows that the disease is common in the Chinese and rare in the Malays. Most of the patients were diagnosed only when late manifestations of the disease were evident. Early diagnosis would only be possible if barium meal and gastroscopy are performed promptly on patients with epigastric discomfort before physical signs appear. A gastric resection rate of 58% was achieved in this series of late cases. Resection was performed whenever possible, and favoured even if it was only a palliative procedure.

Carcinoma of the stomach though reported to be infrequent in most parts of Asia and Africa (Doll, 1967) is a common cause of death in Malaysia. Despite its frequency, the epidemiology, pathology, clinical presentation, diagnosis, treatment and prognosis of gastric carcinoma in this country have yet to be documented. It is hoped that a clinical review of our experience at the University Hospital, Kuala Lumpur, would contribute some useful data on this dismal disease.

Material

During the five year period from January 1967 to December 1972, 114 patients with histologically proven carcinoma of the stomach were treated at the Department of Surgery. Patients without a histological diagnosis were excluded. Gastric Carcinoma in Malaysia is mainly a disease of the Chinese (Table I). 78% of the patients were Chinese, significantly in excess of their hospital utilisation, 55%, ($P < 0.05$). On the other hand, there was only a single case of gastric cancer in the Malays

Table I

Sex-Race Distribution and in relation to Hospital Utilization

Sex	Race			
	Chinese	Indian	Malay	Others
Male	56	15	0	1
Female	33	8	1	0
Total	89	23	1	1
Percentage	78.0	20.2	0.9	0.9
Hospital Admission (1969/1970) Percentage	55	26	15	4

though this racial group formed 15% of the hospital admissions. The male to female ratio was 1.7:1. Age at diagnosis ranged from 31 years to 74 years old, the peak incidence occurring in the seventh decade of life (44 cases, 38.6%). The mean age was 56.3 years (see Fig. 1).

Clinical Presentation

The duration of symptoms varied from two weeks to three years with a mean of eight months. Epigastric pain was a complaint in 94 cases, 83%. The next commonest symptom was weight loss, present in 87 cases, 77%, followed by anorexia, 77 cases, 68%. Obstructive symptoms were common; 55 cases, 48%, had vomiting and 26 cases, 23%, had dysphagia. Gross bleeding resulting in haematemesis or malaena occurred in 23 cases, 20%. Two patients

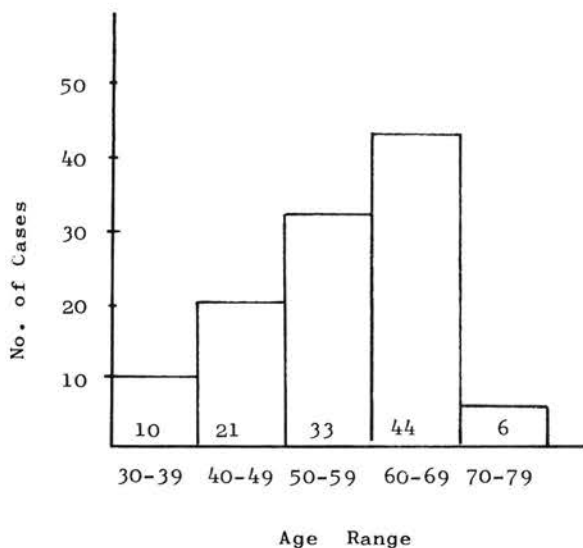


Figure 1

Carcinoma Stomach - Age Distribution in 114 Cases

had emergency laparotomy for perforation of gastric carcinoma.

In more than half the patients, there were physical signs of advanced disease; 59 cases or 52% were described as cachexic while 58 cases, 51% had an epigastric mass. 16 patients, 14% presented with a succussion splash. Other evidence of advanced disease were the presence of Virchow nodes in 14 cases, 12%, jaundice in 4 cases and a mass in the recto-vesical pouch on rectal examination in two patients. Anaemia was the rule. There was no predilection to blood group A (see Table II) as suggested by Aird et al (1953).

Table II
Blood Group in 114 Patients with Gastric Cancer

Blood Group	Present Series	University Hospital Blood donor (1968 - 72)
A	27.4	26.4
B	28.8	25.8
AB	8.2	5.9
O	35.6	41.9

Diagnosis

Barium meal was the main investigation confirming diagnosis. It was performed on 107 patients with a diagnostic accuracy of 88%. Endoscopic

examination were performed on 42 cases and positive histopathology obtained in 30 cases.

Treatment and Results

Operative Findings :-

The site distribution of the tumours, agreed well with what has usually been reported. 60 cases, 52.6%, were located in the pyloric antrum; 19 cases, 16.7% in the lesser curvature; 12 cases, 10.5%, in the body and greater curvature; 19 cases, 16.7% in the cardia and fundus. In 4 cases, 3.5%, there was diffuse infiltration of the entire stomach.

80 cases, 72.4% had lymph node metastasis and 25 cases, 22.4% had liver metastasis. Invasion of adjacent organs or abdominal wall was noted in 73 cases, 64.2%. 26 patients, 23.9% had peritoneal dissemination.

Histopathology :-

The tumours were adenocarcinoma, well differentiated in 56 cases, 49.1%, moderately differentiated in 6 cases, 5.3%, and poorly differentiated in 34 cases, 29.8%. Colloid adenocarcinoma occurred in 15 cases, 13.2%, while the sclerosing variety were described in 3 cases, 2.6%.

Operative Procedures :-

Five patients who had their diagnosis established by neck gland or gastroscopic biopsy were considered inoperable and not subjected to further operative procedure.

Laparotomy was performed on 109 cases, (95.9%) and of these 66 cases, 58% were resectable. Subtotal gastrectomy (including oesophago-partial gastrectomy) were performed on 54 patients while 12 patients had total gastrectomy. By-pass procedures were performed on 25 cases (gastroenterostomy 24, and oesophago-jejunostomy 1) and gastrotomy in 8.

Results of Treatment :-

Fifteen patients died in hospital, the operative mortality being 13.8%. The main underlying causes of mortality were pulmonary complications, anastomotic leak and haemorrhage. The patients in this study were operated two to seven years ago and survival rate is difficult to define as many patients were lost to follow-up. We know however that at least 28 patients survived the first year, 15 the second year, eight the third year, five the fourth year and two have survived five years.

Discussion

Gastric carcinoma in Malaysia is predominantly a disease of the Chinese, indicated in this series by a

significantly higher frequency, 78%, than their hospital utilisation, 55%. In contrast gastric carcinoma is strikingly rare in the Malays there being only one case in this series; the Malays form 15% of the hospital admission and 55% of the population of the country. Similar racial differences in the frequency of gastric carcinoma have also been noted in Singapore (Fung et al, 1972, Ong et al, 1973). According to Shanmugaratnam (1973), the incidence of gastric carcinoma is higher in the Chinese in comparison to most western series.

Racial differences in the incidence of gastric carcinoma are well known though it is still speculative whether heredity or environmental factors play the more important role. It might be significant that the Chinese, more than the other racial groups, are exposed to certain environmental factors thought to predispose to gastric carcinoma, such as urbanisation (Haenszel, 1958) ingestion of liquor, hot food and drink (Ivy, 1955) and of food cooked in super-heated fat and oils (Peacock, 1947).

As with so many other series, most of the patients presented with late manifestations of disease and were consequently beyond curative surgery. It cannot be over-emphasized that early diagnosis will only be possible if investigations with barium meal aided by gastroscopy be promptly performed on patients with epigastric discomfort or pain before an epigastric mass or other late signs of advanced disease appear. With detection of early (mucosal) gastric cancer by mass screening with gastroscope, five year survival rates of 90% have been achieved in Japan.

Our treatment policy has been that of surgical excision whenever possible. Even in this series where late manifestation is the rule, a resection rate of 58% was achieved. Curative treatment was performed by wide surgical excision of the primary tumour with radical enbloc removal of the regional lymphatic drainage. A subtotal gastric resection (if necessary with the lower end of the oesophagus) was regarded as sufficient in most cases and total

gastrectomy was reserved for instances of extensive gastric involvement, in which a surgical margin of 5 cm. could not otherwise be achieved. Frozen section histopathology of the surgical margins is essential to ensure complete resection.

For many of the patients the treatment can only be palliative. Even in these patients we have been impressed by the superior results after a successful resection so that it is our policy to resect whenever possible. The general well-being of the patient is far better following palliative resection as pain and haemorrhage cannot be relieved by a by-pass procedure. Carcinoma involving the cardia needs special mention as there is often a temptation to treat these unfortunate patients with a gastrotomy tube. Oesophago-gastrectomy (though often a palliative procedure) on the other hand relieves the distressing symptom of dysphagia and gives the patient a reasonably comfortable life of perhaps one or two years.

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