Basrah Journal of Surgery

Bas J Surg, March, 9, 2003

CARCINOMA OF THE PANCREAS: A SIX-YEAR EXPERIENCE

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Summary

Pancreatic cancer is the tenth most prevalent malignancy and the fifth most common cause of cancer death in the developed world. It was reported that less than 10% of patients survive for more than 1 year following diagnosis and the 5-year survival rate (0.4%), is the lowest of any cancer. This paper reflects authors experiences in pancreatic cancer and aimed to study pancreatic cancer clinically, determine the operative finding and outcome of surgical interference among our patients. Forty-five patients with pancreatic carcinoma were studied, 26(57.77%) patients were males, and 19(42.22%) patients were females, with males to females ratio of 1.36.Their age range from 27 to 80 years with an average of 58.7312.05 SD. The commonest risk factor was smoking occurred in 19(42.22%) patients, this was followed by diabetes mellitus occurred in 9(20%) patients. Jaundice was the commonest presenting symptom 32(72%) patients. Most cases were very advanced at time of diagnosis and only in one (3%) patient curative Whipple procedure was done. Tumor of the body of pancreas was very much infrequent than the head of pancreas was seen in 6 (13.3%) patients. From the patients that could follow up, non- survived for a one year.

Introduction

Pancreatic cancer is the tenth most prevalent malignancy and the fifth most common cause of cancer death in the developed world[1].

In the United States, it is second to colorectal cancer as a cause of digestive cancer - related death. Approximately 25,000 people die of pancreatic cancer in the United States each year[2]. In Iraq it is constituted 1.4% of all cancer cases and 12.9 % of gastro-intestinal cancer[3].

Although the incidence of pancreatic cancer increased dramatically several decades ago, it has remained fairly stable over the past 15 years (9.1 per 100,000). Although the five-year survival rate has improved only slightly in recent years (from 3 percent in 1970 through 1973 to

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5.4 percent in 1981 through 1987 among whites and from 2 to 4.3 %during the same periods among blacks)[4] .

It was reported that less than 10% of patients survive for more than 1 year following diagnosis and the 5-year survival rate (0.4%) is the lowest of any cancer[1]. Even in experienced hands, the standard curative surgical procedure (Whipple procedure) is associated with a five-year survival of 20 to 30 percent in resactable patients[5]. Epidemiological research has shown that the risk of cancer varies enormously between countries and population subgroup [3].

The aim of this research is to study pancreatic cancer clinically, determine the determine the operative finding and outcome of surgical interference among our patients

Patients and Methods

Forty-five patients with pancreatic carcinoma were studied from January 1995 to February 2001.

History was taken, full physical examination was performed. Investigation requested included, complete blood picture, blood urea, serum creatnin, fasting blood sugar, liver function test and ultrasonic examination of abdomen

Laprotomy was done in 35 patient, while the other 10 patients were either not fit for general anesthesia (5 patients) or refused surgery (5 patients). In all operated on patients, biopsy was taken and submitted to histopathological examination by expert pathologist.

CT scan, MRI of the abdomen was not done because, it was not available at time of the study in our hospitals.

RESULTS

Forty-five with pancreatic carcinoma were studied, 26(57.77%) patients were males, and 19(42.22%) patients were females with males to females ratio of 1.36:1. Their age range from 27 to 80 years with an average of 58.7312.05

Most 20(40%) patients were in the age group 60-70 years, only 5(11.11%) patients were in the age group 70-80.

An interesting observation that 5 patients (11.11%) were under 40 years, one of them was young female at 27 years age, and 8 (17.77%) patients were in the age group of 40 to 50 years (Table I).

Table I. Shows the age and sex of the patients studied

Age	Males		Females	
	No.	%	No.	%
< 40	2	4.44	3	6.66
41-50	3	6.66	5	11.11
51-60	5	11.11	4	8.88
61-70	13	28.88	5	11.11
71-80	3	6.66	2	4.44
Total	26	57.77	19	42.22

The commonest risk factor was smoking occurred in 19(42.22%) patients, this was followed by diabetes mellitus occurred in 9(20%) patients (Table II). Jaundice was the commonest presenting symptom 32(72%) patients, followed by weight loss22 (50%) patients and abdominal pain13 (29%) patients (Table II).

Table II. The clinical features of patients studied.

Risk factors	No	%	Presenting symptoms	No	%	Physical sign	No	%
Smoker	19	42.22	Jaundice	32	71.11	Obstructive jaundice	36	80
Diabetes mellitus	9	20	Abdominal pain	13	28.88	Weight loss	22	48.88
Alcoholic	1	2.2	Vomiting	5	11.11	Abdominal mass	10	22.22

**Patients may have more than one presenting symptom or physical sign.*

This study showed that ultrasonic examination was good tool for the diagnosis and assessment of these patients, it was either able to detect the tumors (21 patients in the head of pancreas and 6 patients in the body), or its effect on billiary tree (dilatation of intra and extrahepatic billiary tree in 36 patients) or evidence of liver metastasis (9 patients). (Table III).

Table III. The ultrasonic findings

U/S findings	No	%
Dilatation of intra and extra hepatic biliary tree	36	80
Mass at the head of pancreas	21	46.6
Mass at the body of pancreas	6	13.33
Liver secondary	6	13.33

**Patients may have more than one finding.*

Most cases were very advanced at time of diagnosis. Out of 45 patients only 35 (79.54) patients were operated on. Only in one (3%) patient, curative Whipple procedure was possible, while in 33 patients only billiary bypass surgery were done and in one patient only biopsy was taken from the tumor (Table IV).

Table IV. The surgical treatment and type of surgery that was done in studied patients.

The surgical treatment	No.	%
Surgery was done	35	77.7
Not fit for general anaesthesia	5	11.11
Refuse surgery	5	11.11

Type of surgery	No.	% from operable patients
Whipple procedure	1	3
By pass procedures	33	94
Biopsy	1	3

Tumor of the body of pancreas was very much infrequent than the head and was detected in 6 (13.3%) patients (Table III).

Adenocarcinoma was the commonest histopathological type observed in 90% of patients. Poorly differentiated carcinoma was seen in 10 % of operated patients. No endocrine tumors was reported in this study

10 patients could not be followed-up, non-of the remainder 35(77.7%) patients survived for one year.

Table V. The site of the tumours and the evidence of liver or local metastasis in the studied patients.

The operative finding*	No	%
Tumour of the head	32	71.11
Tumour of body	3	8.5
Liver secondary	9	20
Evidence of LN or local metastasis	19	42.2

**Patient may have more than one finding*

Discussion

Carcinoma of pancreas occurred more frequent in males than females with males to females ratio of 1.36:1 in this study, this was consistent with other studies [3,6,7].

Most patients 18(40%) were in the age group range of 61-70 and this was ion consistence with Alkafaji et al [3] but in contrast with other study done in western countries[8] in which this maximally occurred above 75 years, this may be explained by short life expectancy of Iraqi people and high incidence of the disease in younger age group [3].

An interesting observation was that 5 (11.11%) patients were under the age of 40, and one of them was a young female at 27 years, this was consistent with Alkafaji et al [3] who reported 7.2 % under 40, and they report carcinoma of pancreas in 26 years old patient

Smoking was the commonest risk factor observed in 43.18% of the patients, this was consistent with other studies [9,10].

Fuchs et al, administer that among current smokers, the relative risk of pancreatic cancer, in a large prospective study, was 2.5. The risk fell by 48 percent by two years after discontinuing smoking, and eventually fell to the level of nonsmokers [9].

Silverman et al and Fuchsia et al have estimated that cessation of smoking could eliminate approximately 25 % of pancreatic cancer deaths in the United State [9, 10].

Diabetes mellitus was the second commonest risk factor occurred in 9(24%) patients, in this it was consistent with other studies [10, 11].

A case-control study found an odd ratio for pancreatic cancer of 1.5 to 1.6 compared to non-diabetics among patients with diabetes for at least 10 years [10]. The risk was similar in type 1 and type 2 diabetics. Other study found that glucose intolerance without overt diabetes was also a significant risk factor, suggesting that factors associated with abnormal glucose metabolism may have a significant role in the etiology of pancreatic cancer [11].

Obstructive Jaundice, was the commonest presenting feature occurred in 72% of patients, this was consistent with other studies [3, 12].

This can be explained by the fact that carcinoma of the head of pancreas was the commonest type of pancreatic cancer in this study [occurred in 32(72%) patients Vs 6(13.3%) patients had cancer of the body of pancreas], these tumors usually presented with obstructive jaundice because they compress the billiary drainage earlier, than that of the body of the pancreas which usually presented with abdominal pain and weight loss and this was in consistent with other studies[12].

Abdominal mass was detected in 22.2% of the patients, this was consistent with other studies [2,3].

The ultrasonic examination was sensitive tool in detecting the tumors or it's complications in this study, this was consistent with other studies [2,13,14].

Maringhini and Karlosn reported sensitivity and specificity of US in diagnosing pancreatic cancer is 75 to 89 and 90 to 99 percent, respectively; however, these numbers are dependent upon the expertise of the ultrasonographers, the presence or absence of bile duct obstruction, and the extent of the tumor [13,14].

CT scan has a better sensitivity than and similar specificity to ultrasonic examination (85 to 90 and 90 to 95 percent, respectively) for the detection of pancreatic cancer [16] It may be particularly useful in-patients who are not jaundiced and in those in whom intestinal gas interferes with ultrasound[14].

Only one (3%) patient was fit for curative Whipple procedure, which suggest that most cases were advanced at time of diagnosis.

Regin et al, administered that only 5% to 15% of patients with pancreatic adenocarcinoma are candidates for a potentially curative resection [16]. This explained why patients with Pancreatic cancer continues to carry a poor overall prognosis, because the majority of patients have advanced disease at the time of presentation[17].

Even with curative procedure in especial units, a 5-year survival rate was reported to be between 10 and 24% [18].

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