

:

**CARCINOMA OF THE
PANCREAS:
SIX YEARS EXPERIENCE
BY**

DR.A R AL HUMRANI, CABM

\ \ \

DR. H A AL CHALABI, FRCP.

\ \ \

DR ABDULLA AL FADHIL CABS

\ \ \

DR. H S AL KHAYAT, FRCS

\

DR.Z AL FADAGH CABS.

\ \ \

%10

%0.4

(%57.77)26 ,

80 27

% 42.22 19

12.05 ± 58.73

(%20)9

(%42.22)19

%72

()

ABSTRACT:

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 reflect 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 58.73 ± 12.05 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.

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 States² each year.

In Iraq it is constituted 1.4% of all cancer cases and 12.9 % of gastrointestinal 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 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 resectable patients⁵

Epidemiological research has shown that the risk of cancer varies enormously between countries and population subgroup.³

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

PATIENTS AND METHODES:

Forty-five with pancreatic carcinoma, 26(57.77%) patients were males, and 19(42.22%) patients were females, their age range from 27 to 80 years with an average of 58.73 ± 12.05 SD, were studied from period of 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 (5pts) or refused surgery (5pts).

In all operated on pts Biopsy was taken and submitted to histopathological examination by expert pathologist.

CT scan, MRI 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

Their age range from 27 to 80 years with an average of 58.73 ± 12.05

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

An interesting observation that 5 (11.11%) pts were under age 40, one of them was young female at 27 years age, and 8 (17.77%) pts were in the age group of 40 to 50 years (Table 1)

The commonest risk factor was smoking occurred in 19(42.22%) patients, this was followed by diabetes mellitus occurred in 9(20%) patients (Table 2)

Jaundice was the commonest presenting symptom 32(72%) patients, this followed by weight loss 22 (50%) patients and abdominal pain 13 (29%) patients (Table 2)

This study showed that ultrasonic examination was good tool for the diagnosis and assessment of these pts, it was either able to detect the tumors (21 pts in the head of pancreas and 6 pts in the body), its effect on biliary tree (dilatation of intra and extrahepatic biliary tree in 36 Pts) or evidence of liver metastasis (9 pts). (Table 3)

Most cases were very advanced at time of diagnosis. Out of 45pts only 35 (79.54) pts was operable. Only in one (3%) pt, curative Whipple procedure was possible, while in 33 pts only biliary bypass surgery was done and in one pt only biopsy was taken from the tumor .(Table 4)

Tumor of the body of pancreas was very much infrequent than the head and was detected in 6 (13.3%) pts (Table 3)

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

DISCUSSION:

Carcinoma of pancreas occurred more frequent in males than females with males to females ratio of 1.36 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 al³ but in contrast with other study done in western countries⁸ in which this maximally occurred above 75years this may explained by short life expectancy of Iraqi people and high incidence of the disease in younger age group³

An interesting observation that 5 (11.11%) pts were under age 40, and one of them was young female at 27 years, this was consistent with alkafaji et al³ who reported 7.2 % under 40 they report carcinoma of pancreas in 26 years old patient

Smoking was the commonest risk factors observed in 43.18%pts, 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 nonsmokers⁹

Silvermam et al and Fuchsia et al have estimated that cessation of smoking could eliminate approximately 25 percent of pancreatic cancer deaths in the United State^{9,10}

Diabetes mellitus was the second commonest risk factor occurred in 9(24%) pts in this was consistent with other studies^{10,11}

A case-control study found an odds ratio for pancreatic cancer of 1.5 to 1.6 compared to nondiabetics among patients with diabetes for at least 10 years¹⁰. 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 cancer¹¹

Obstructive Jaundice, was the commonest presenting feature occurred in 72% of pt, 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 32(72%) pt Vs 6(13.3%) pt had ca 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 lost and this was in consistent with other studies.¹²

Abdominal mass was detected in 22.2%, 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, A, and Karlosn BM reported sensitivy 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 cancer¹⁶ 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%) pt was fit for curative Whipple procedure, which suggest most cases were advanced at time of diagnosis.

Regin WF et al administered that only 5% to 15% of patients with pancreatic adenocarcinoma are candidates for a potentially curative resection¹⁶. This explained why pts 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

References:

- 1- Haycox-A; Lombard-M; Neoptolemos-J et al
Review article: current practice and future perspectives in detection and diagnosis of pancreatic cancer
Aliment-Pharmacol-Ther. 1998 Oct; 12(10): 937-48
- 2-Michael L Steer, Clinical manifestations and diagnosis of exocrine pancreatic Cancer UpToDate Aug 2000 (781): 237-4788
- 3-Mohamad alkhafaji,nazar KA ,mazin AS et al
Carcinoma of the pancreas:an analysis of 222 cases.iraqi Medical j 1988 vol 37(2):75-78

- 4-Gloeckler Ries LA, Hankey BF, Miller BA, et al. Cancer statistics review 1973-88. Bethesda, Md.: Department of Health and Human Services, 1991. (NIH publication no. 91-278)
- 5-Cameron, JL, Pitt, HA, Yeo, CJ, et al. One hundred and forty-five consecutive pancreaticoduodenectomies without mortality. *Ann Surg* .1993; 217:430
- 6-Freedman, S, and Waxman, I. Biology of pancreatic cancer. In Rustgi, AK *Gastrointestinal Cancers: Biology, Diagnosis, and Therapy*, (Ed), Lippincott-Raven, Philadelphia 1995. p.315.
- 7-Brentnall, TA, Bronner, MP, Byrd, DR, et al. Early diagnosis and treatment of pancreatic dysplasia in patients with a family history of pancreatic cancer. *Ann Intern Med* 1999; 131:247
- 8-Maruchi W, Brain D, Ludwig I et al. Cancer of pancreas in Olmsted County, Minnesota 1935-1974. *Mayo Clinic Proc* 1979 ;54:245-249))
- 9-Fuchs, CS, Colditz, GA, Stampfer, MJ, et al. A prospective study of cigarette smoking and the risk of pancreatic cancer. *Arch Intern Med* 1996; 156:2255
- 10-Silverman, DT, Schiffman, M, Everhart, J, et al. Diabetes mellitus, other medical conditions and familial history of cancer as risk factors for pancreatic cancer. *Br J Cancer* 1999; 80:1830
- 11-Gapstur, SM, Gann, PH, Lowe, W, et al. Abnormal glucose metabolism and pancreatic cancer mortality [In Process Citation]. *JAMA* 2000; 283:2552
- 12-Bakkevold, KE, Arnesjo, B, and Kambestad, B. Carcinoma of the pancreas and papilla of Vater: Presenting symptoms, signs and diagnosis related to stage and tumor site. *Scand J Gastroenterol* 1992; 27:317
- 13-Maringhini, A, Ciambra, M, Raimondo, M, et al.. Clinical presentation and ultrasonography in the diagnosis of pancreatic cancer. *Pancreas* 1993; 8:146
- 14-Karlson, BM, Ekbom, A, Lindgren, PG, et al. Abdominal US for diagnosis of pancreatic tumor: Prospective cohort analysis. *Radiology* .1999; 213:107
- 15-Pasanen, PA, Eskelinen, M, Partanen, K, et al. A prospective study of the value of imaging, serum markers, and their combination in the diagnosis of pancreatic carcinoma in symptomatic patients. *Anticancer Res* 1992; 12:2309
- 16-Regine-WF; John-WJ; Mohiuddin-M. Adjuvant therapy for pancreatic cancer: current status *Front-Biosci*. 1998 Nov 15; 3: E186-92

17-Merchant-NB; and Conlon-K Laparoscopic evaluation in pancreatic cancer. *Semin-Surg-Oncol.* 1998 Oct-Nov; 15(3): 155-65

18-Haycox-A; Lombard-M; and Neoptolemos-J; Review article:current treatment and optimal patient management in pancreatic cancer *Aliment-Pharmacol-Ther.* 1998 Oct; 12(10): 949-64

Table 1 shows the age and sex of the patients studied

| AGE RANGES | MALES | | FEMALES | |
|--------------|-----------|-------|-----------|-------|
| | No of pts | % | No of pts | % |
| Less than 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 |

Table 2 the clinical features of patients studied

| RISK FACTORS | NO | % | PRESENTIN G SYMPTOM | PRESENTIN G SYMPTOM | | PHYSICAL SIGN | PHYSICAL SIGN | |
|-------------------|----|-------|---------------------|---------------------|-------|----------------------|---------------|-------|
| | | | | NO | % | | 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 |

*_pt may had more than one presenting symptom or physical sign

Table3 the ultrasonic findings *

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

*pt may have more than one finding

Table 4 the operative finding and type of operative procedure

| The surgical treatment | No. of pts | % | Type of surgery | No | % from operable pts |
|--------------------------------|------------|-------|--------------------|----|---------------------|
| Surgery was done | 35 | 77.7 | Full resection | 1 | 3 |
| Not fit for general anesthesia | 5 | 11.11 | By pass procedures | 33 | 94 |
| Refuse surgery | 5 | 11.11 | Biopsy only | 1 | 3 |

Table 5 the site of the tumors and the evidence of liver or local metastasis in the studied patients

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

*pt may have more

than one finding