



Surgical Treatment Modalities, Mortality and Morbidity in Pancreatic Cancer Patients in Misurata Cancer Center

Authors

Ramadan Elamyial¹, Mussa Al Ragig², Naji Zubia³

^{1,2}MD Consultant Surgeon, Misurata Cancer Center, Misurata, Libya

³Specialist Surgeon, Misurata Cancer Center, Misurata, Libya

Corresponding Author

Ramadan Elamyial

MD Consultant Surgeon, Misurata Cancer Center, Misurata, Libya

Email: ramadanelamyial@gmail.com

Abstract

Introduction: the pancreas is a glandular organ of dual composition with both exocrine and endocrine components. Tumors of exocrine pancreases are rare with more than 95% being malignant.

Methods & Materials: this is a retrospective clinico-histopathological study of 89 cases registered in our center from July 2005 to Jan 2015. The details of patients were retrieved from patients' files. Information retrieved included socio-demographic data, clinical presentation, anatomical site, gross appearance, tumor stage, histopathological type and grade, surgical treatment modality and presence of metastasis.

Results: during the study period, a total of 89 malignancies were registered. Of these, 48 (53.9%) were histopathologically confirmed pancreatic cancer. The diagnosis in the remaining 41 patients was based on clinical and radiological basis. Male to female ratio of 1.6:1. The age ranged from 35 to 90 years with a median age of 63 years. Fifty seven patients (64%) presented with abdominal pain, 41 patients (46%) were jaundiced. The head was the most frequent site for pancreatic tumor in 48 (54%) cases followed by tail, body. Adenocarcinoma was the most common histopathological tumor in 43(90%) patients. Thirty (33.7%) patients were presented in locally advanced stages and 54(60.6 %) patients had metastasis.

Conclusion: Our study was limited by being a retrospective, a relatively small number of patients and representing the experience of a single cancer center so, larger scale prospective studies are recommended to study the clinicodemographic character of this disease in the country.

Keywords: Pancreatic Cancer, clinical, demographic, retrospective.

Introduction

Pancreatic carcinoma is a relatively rare neoplasm and is one of the most lethal cancers ^[1]. Because of the high fatality, incidence rates are very close to mortality rates. Worldwide, over 270,000 new cases diagnosed annually. It is the 8th leading cause of cancer-related deaths being responsible

for over 230,000 deaths every year ^[2]. Over 85% of cancer pancreas cases are adenocarcinomas of the exocrine origin. Remaining tumor types such as neuroendocrine and cystic neoplasms constitute around 10% but have better prognosis. Over 75% of pancreatic carcinomas occur in the head and neck of the pancreas, while 15-20% develops in

the body of the pancreas, and 5-10% arises in the tail ^[3]. Surgery remains the only potential curative option. Early cancer pancreas patients who are candidates for curative surgical resection represent only 15-20% of cases with a 5-year survival of 15-20%. Meanwhile, the collective median survival for all cases of cancer pancreas is around 4-6 months. The relative 1-year survival is 24% and the overall 5-year survival is 6.7% ^[4]. Prognosis, therefore, remains poor.

Methods and Materials

This is a retrospective clinico-histopathological study of 89 cases registered in our Center from July 2005 to Jan 2015. The details of patients were retrieved from patients' files. Information retrieved included, tumor stage, histopathological type and grade, and treatment modalities details..

Results

1. During the study period, a total of 89 malignancies were registered. Of these, 48 (53.9%) were histopathologically confirmed pancreatic cancer. The number of males was 55 (62%) and the number of females was 34 (38%) with a male to female ratio of 1.6:1. The age ranged from 35 to 90 years with a median age of 63 years. Table (1).

Table 1 Demographic data of 89 patients with pancreatic cancer

Gender	
Male	55 (62%)
Female	34 (38%)
Mean age (SD), range 63	

2. Regarding extent of disease, only 5 (5.6%) patients were identified as being in early stages, 30 (33.7%) patients were presented in locally advanced stages and 54(60.6%) patients had metastasis. Table (2).

Table2 show extent of the disease

Extent of disease	No (%)
Early stage	5 (5.6%)
Locally advanced	30(33.7%)
Metastasis	54(60.7%)

3. Surgical intervention with curative intent was done in 14 patients. Whipple surgery was performed in 9 patients, distal pancreatectomy in 4 patients and total pancreatectomy in one patient. Table (3).

Table 3 show different surgical treatment modalities

Definitive surgical treatment modalities	n (%)
Whipple operation	9
Distal pancreatectomy	4
Total pancreatectomy	1
Total	14(16%)

4. Eighteen patients who were deemed inoperable and had obstructive duodenal and/or biliary symptoms were offered palliative surgical bypass Table (4).

Table 4 show different palliative surgical modalities

Palliative surgical modalities	n (%)
Bypass surgery	18
Endoscopic Retrograde Cholangio-Pancreatography (ERCP)	17
PTC	3
Total	46 (52%)

5. Three patients (21%) underwent curative surgical resection were complicated with pancreatic stump leakage; Six patients (43%) suffered from delayed gastric emptying, 4 patients (29%) had complications of exocrine insufficiency and 4 cases (29%) developed DM postoperatively. Table (5).

Table 5 shows perioperative mortality and morbidity

Type of complication	No. (%)
Delayed gastric emptying	6/14 (43%)
Endocrine insufficiency (DM)	4/14 (29%)
Exocrine insufficiency	4/14 (29%)
Pancreatic stump leakage	3/14 (21%)
Wound infection	2/14 (14%)
Bile duct leakage	1/14 (7%)
Intra-abdominal abscess	1/14 (7%)
Mortality	1/14 (7%)

Discussion

Cancer of the pancreas is most prevalent in men [5,6,7]. Lowenfels and Maisonneuve^[20] attribute this to the difference in the number of smokers, which is greater in males.. Several authors point out that the predominant age of patients with pancreatic cancer is above 60 years old [5,7,9,10]. However, when the surgical procedure was analyzed, it was found that the majority of patients (52%) underwent palliative surgery versus 11% for radical surgery; because they were in late stages explaining the prevalence of palliative procedures as the surgical procedure in this study rather than a radical surgical procedure. Such data are in accordance with other studies Lefebvre et al^[6] and Abraham et al^[1] demonstrated a similar likelihood of curative surgical operations in their studies, at around 11%. In our study, postoperative morbidity and mortality was observed in 43% and 7% respectively and this is in accordance with other reports^[11,12]. Perioperative morbidities included; delayed gastric emptying (43%), endocrine insufficiency (29%), exocrine insufficiency (29%), pancreatic fistula (21%), wound infection (14%), bile leak (7%) and intra-abdominal abscess (7%) [11,12]. In our study; delayed gastric emptying was the most common complication. The occurrence of delayed gastric emptying resulted in prolonged nasogastric tube decompression, initiation of enteral or parenteral nutrition, and prolonged hospital stay. The pathogenesis of delayed gastric emptying has been attributed to decrease gastric motility secondary to decreased levels of motilin^[13]. Pancreatic fistulas

occur in 21% of patients in our study. It is in agreement with Lermite et al^[9].

This complication depends on various factors, among them; the consistency of the pancreatic remnant (soft, normal or hard) and the caliber of the pancreatic ducts. Subjective evaluation of the greater consistency of the pancreas, associated with ductal dilatation, contributed to a lower incidence of pancreatic fistulas^[14].

Conclusion

Our results are comparable to international figures. Early detection of pancreatic tumors well increase the number of operations with curative potential and well diminish postoperative morbidity and mortality.

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