

Update Management of Malignant Pancreatic Neoplasm

Essay

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SUMMARY

Pancreatic cancer is one of the most aggressive human cancer. It mainly affects men above the age of fifty, with five-year survival rate not more than 5%. Resection is the only chance for cure. However, only 10-20% of the patients with pancreatic cancer have respectable cancer on presentation.

Over 90% of pancreatic cancer is due to ductal adenocarcinoma of the exocrine pancreas, which has many pathological characteristics that differentiate it from other cancers.

Its affects mainly the head of the pancreas (75% of the cases). Its aggressive behavior causes wide spread disease and dissemination at the of initial presentation, which raises the question about a precursor pathologic lesion to be identified.

The deep location of the pancreas in the abdomen increased the difficulty of both diagnosis and treatment of its disorders, especially malignancy. High index of suspicion is required to evaluate the patient with vague history and normal physical examination.

List of Contents

Page	Title
Introduction	1
Aim of the work	4
Review of Literature	5
○ Anatomy of pancreas	5
○ Physiology of the pancreas	28
○ Pathology of the malignant pancreatic neoplasms	41
○ Epidemiology	78
○ Management of pancreatic cancer	85
○ Pancreatic Endocrine Tumors	160
Summary	179
References	183
Arabic Summary	--

LIST OF TABLES

Tab. No.	Title	Page No.
Table (1):	Inorganic Components of Pancreatic Juice during Secretion	33
Table (2):	Pancreatic Digestive Enzymes.	34
Table (3):	American Joint Committee on Cancer: Cancer Staging for Exocrine Pancreas	71

LIST OF FIGURES

Fig. No.	Title	Page No.
Fig. (1):	Anatomy of the pancreas.....	6
Fig. (2):	Embryological development of the pancreas	6
Fig. (3):	Rotation of duodenum and pancreas during development.....	7
Fig. (4):	Parts of the pancreas	9
Fig. (5):	Ductal anatomy of liver and pancreas	15
Fig. (6):	Blood supply of the pancreas	21
Fig. (7):	The normal architecture of pancreas is destructed by the infiltration of cancer glands. Note remainder pancreatic acini in middle left.....	42
Fig. (8):	Intraductal carcinoma componant of an invasive ductal adenocarcinoma (right) compare with normal duct (left).....	47
Fig. (9):	Mucinous cell hypertrophy combined with ductal papillary hyperplasia.....	53
Fig. (10):	Mucinous non-cyclic carcinoma. Strands of cuboidal cells floating freely in a lake of mucin	54

LIST OF FIGURES (CONT...)

Fig. No.	Title	Page No.
Fig. (11):	Adenosquamous carcinoma showing a mixture of glandular and squamous components	56
Fig. (12):	Undifferentiated (anaplastic) carcinoma showing many multinucleated tumor giant cells	57
Fig. (13):	Intraductal papillary-mucinous carcinoma.....	60
Fig. (14):	Acinar cell carcinoma: high power view illustrating an acinar pattern	63
Fig. (15):	Part of a serous microcystic adenoma.....	65
Fig. (16):	Solid pseudopapillary Neoplasm of the Pancreas.....	68
Fig. (17):	The CT criteria used to define a potentially respectable pancreatic cancer.....	95
Fig. (18):	Duodenoscopic image of two pigment stones extracted from common bile duct after sphincterotomy	100
Fig. (19):	Fluoroscopic image of common bile duct stone seen at the time of ERCP	101

LIST OF FIGURES (CONT...)

Fig. No.	Title	Page No.
Fig. (20):	Fluoroscopic image showing dilatation of the pancreatic duct during ERCP investigation. Endoscope is visible.....	101
Fig. (21):	Unresectable pancreatic carcinoma. CT guided fine-needle aspiration biopsy confirming the diagnosis of pancreatic carcinoma	109
Fig. (22):	Computed tomography images depicting spectrum of localized pancreatic cancer.	116
Fig. (23):	Classical whipple operation.....	119
Fig. (24):	The resected parts before surgery show after resection	120
Fig. (25):	Pylorus Preservation (PPPD) in whipple operation	126
Fig. (26):	Parts removed during Whipple operation	131
Fig. (27):	Papillary malignancy with plastic stenting.	145
Fig. (28):	Papillary malignancy with metal stenting.	145



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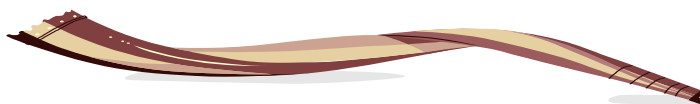
After giving all thanks to **GOD**, the most kind and the most merciful, who helped me to achieve this work

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INTRODUCTION

Pancreatic cancer is the eighth most common malignancy and the fifth leading cause of the adult cancer death in the United States. Only 1-4% of all patients diagnosed with pancreatic cancer can expect to survive 5 years. In the year 2000: 28,300 new cases of adenocarcinoma of the pancreas were diagnosed in the United States, and 28,200 patients died of this aggressive malignancy (*Grau et al., 2004*).

In the year 2006 about 33,000 individuals in the United States were diagnosed with this condition, and more than 60,000 in Europe. Depending on the extent of the tumor at the time of diagnosis, the prognosis is generally regarded as poor, with few victims still alive five years after diagnosis, and complete remission still extremely rare (*American Cancer Society, 2008*).

Risk factors for pancreatic cancer include age, male gender, African ethnicity and smoking. Cigarette smoking causes a 75% risk increase, and the risk persists for at least a decade after quitting. Diets high in red meat, obesity, diabetes mellitus and chronic pancreatitis have been linked, but are not known to be causal. *Helicobacter pylori* infection, occupational exposure to certain pesticides, dyes, and chemicals

related to gasoline are among the risk factors. 5-10% of pancreatic cancer patients have a family history of pancreatic cancer (*Iodice et al., 2008*).

Early diagnosis of pancreatic cancer is difficult because the symptoms are so non-specific and varied, pancreatic cancer is sometimes called a "silent disease". Common symptoms include pain in the upper abdomen, loss of appetite, nausea, vomiting significant weight loss and painless jaundice related to bile duct obstruction (carcinoma of the head of pancreas), diabetes mellitus (*Bakkevold et al., 1992*).

Pancreatic cancer is usually discovered during the course of the evaluation of one of the forementioned symptoms. Liver function tests may show a combination of results indicative of bile duct obstruction (raised conjugated bilirubin, γ -glutamyl transpeptidase and alkaline phosphatase levels). CA19-9 (carbohydrate antigen 19.9) is a tumor marker that is frequently elevated in pancreatic cancer imaging studies, such as ultrasound or abdominal CT scan may be used to identify tumors. Endoscopic ultrasound (EUS) is another procedure that can help to visualize the tumor and obtain tissue biopsy to establish the diagnosis, ERCP (endoscopic retrograde cholangiopancreatography), PTC (percutaneous

transhepatic cholangiography) and MRI (magnetic resonance imaging) are used for diagnosis and "staging of pancreatic cancer (*Ghaneh et al., 2007*).

People with pancreatic cancer may have several treatment options. Depending on the type and stage, pancreatic cancer may be treated with surgery, radiation therapy or chemotherapy. Some patients have a combination of therapies. The surgeon may remove all or part of the pancreas. The extent of surgery depends on the location and size of the tumor, the stage of the disease and the patient's general health (*Evans et al., 2001*).

The mortality rates for the pancreatic resection have fallen substantially over the last two decades. This is related to the better quality of peri-operative care, improvement in the skill and experience of the surgeons and the concentration of these patients in specialist centers (*Evans et al., 2001*).

AIM OF THE WORK

To review the subject of pancreatic malignant neoplasm from epidemiological; etiological and pathological aspects with special attention to stress the update management of the disease.

Anatomy

Introduction

The pancreas is an elongated organ, light tan or pinkish in color that lies in close proximity to the duodenum. It is covered with a very thin connective tissue capsule which extends inward as septa, partitioning the gland into lobules (*American Society Center, 2008*).

Duramen has summarized the anatomical relationship of the pancreas as follow: "the pancreas cuddles the left kidney, tickles the spleen, hugs the duodenum, cradles the aorta, opposes the inferior vena cava, dallies with the right renal pedicle, hides behind the posterior parietal peritoneum of the lesser sac and wraps itself around the superior mesenteric vessels (*Cuschieri, 2002*).