

REPLY

Urgent Calls for Effective Earlier Disease Detection and Multi-Modal Therapeutic Strategies in Pancreatic Cancer

Muhammad Wasif Saif

Yale Cancer Center, Yale University School of Medicine. New Haven, CT, USA

Introduction

Pancreatic carcinoma is unfortunately usually a fatal disease. Pancreatic cancer in its early stages is a protean disease that can be difficult to distinguish from other common disorders that may cause similar symptoms. Early diagnosis is therefore often a problem. Many patients have sought care for symptoms for weeks to months before a definitive diagnosis of pancreatic cancer is made. The collective median survival time of all patients is 4-6 months. Most patients eventually succumb to local invasion and metastatic disease. Patients who are deemed resectable with potential curative resection (only about 20% of patients), median survival time ranges from 12-19 months, and the 5-year survival rate remains 15-20%.

Increase in Annual Number of Pancreatic Head Resections Does not Affect Mortality of Pancreatic Cancer in the United Kingdom

Ypsilantis *et al.* [1] submitted a letter in response to our recent publications [2, 3] and evaluated the trends in the annual numbers of pancreatic head resections performed in the United Kingdom during the last seven years, in order to identify any potential effect on the overall disease mortality. Retrospective analysis of the United Kingdom National Hospital Admission Episodes Database, provided by the NHS Information Centre, was performed. The incidence of pancreatic

cancer has remained unchanged between 1999 and 2007, with an increase in the number of hospital admissions of all patients with pancreatic cancer (mean annual increase of 8.6%). The number of pancreatic head resections was increased by 71%, which however has not altered appreciably the overall disease mortality. The authors acknowledge the limitations of a retrospective review and caution careful interpretation of the results.

Incidence and Mortality

The incidence of pancreatic cancer has risen slowly over the years. In 2008, an estimated 37,680 new cases of pancreatic cancer (18,770 in men and 18,910 in women) were estimated to be diagnosed in the United States; 34,290 persons (17,500 men and 16,790 women) died of the disease in 2008 [4]. The overall incidence of pancreatic cancer is approximately 8-10 cases per 100,000 persons per year [5, 6]. Although the overall incidence of pancreatic cancer has been relatively stable for decades, the incidence of pancreatic cancer in males has been slowly dropping over the past 2 decades, while the incidence in females has increased slightly. These trends probably represent the effect of changing smoking rates for men and women. On the other hand, pancreatic cancer ranks 13th in incidence but 8th as a cause of cancer death worldwide [4, 5]. The highest incidence rate is approximately 13 cases per 100,000 persons per year in African American males in the United States. Native Hawaiian males and men of Korean, Czech, Latvian, and New Zealand Maori ancestry also have high incidence rates, that is, 11 cases per 100,000 persons per year. Most other countries have incidence rates of 8-12 cases per 100,000 persons per year. In some areas of the world, pancreatic cancer is quite infrequent; for example, the incidence in India is less than 2 cases per 100,000 persons per year [7].

Pancreatic cancer is the fourth leading cause of death among both men and women, comprising 6% of all cancer-related deaths. The incidence of pancreatic

Received June 17th, 2009

Keywords Adenocarcinoma; Carcinoma, Pancreatic Ductal; Cholangiopancreatography, Endoscopic Retrograde; Endosonography; General Surgery; Pancreatic Neoplasms; Salvage Therapy; Treatment Failure; Whipple Disease

Correspondence Muhammad Wasif Saif

Yale Cancer Center, Yale University School of Medicine, 333 Cedar Street, FMP 116, New Haven, CT, USA
Phone: +1-203.737.1569; Fax: +1-203.785.3788
E-mail: wasif.saif@yale.edu

Document URL <http://www.joplink.net/prev/200907/28.html>

cancer has risen slowly over the years. The death rate has risen from 5 per 100,000 population in 1930 to more than 10 per 100,000 in 2003 [4, 5].

Late Diagnosis and Late Stage at Diagnosis

Pancreatic cancer is notoriously difficult to diagnose in its early stages. At the time of diagnosis, 52% of all patients have distant disease and 26% have regional spread. No screening tools are validated at present.

Multidisciplinary Management of Pancreatic Cancer

The management of pancreatic carcinoma is a multidisciplinary process. In the best setting, the management of pancreatic cancer would entail consultations with a gastroenterologist, medical oncologist, surgical oncologist, radiologist, radiation oncologist, pathologist, nutritionist and a social worker. A gastroenterologist would perform EUS and/or ERCP (with or without stent placement) for definitive diagnosis. A medical oncologist operates to select and administer chemotherapy (neoadjuvant, adjuvant, or palliative). In addition, he would also manage supportive care, especially pain and nausea. The surgeon may perform diagnostic laparoscopy or even laparoscopic ultrasonography prior to an attempt at curative resection. If curative resection is not feasible due to local invasion or distant metastasis, surgeon may operate for palliation of biliary and/or duodenal obstruction. An interventional radiologist may be required to manage percutaneous transhepatic cholangiography if indicated. Consultation with a radiation oncologist is usually considered at the discretion of a medical oncologist when combined chemoradiotherapy may be beneficial either in the neoadjuvant, adjuvant or palliative setting. A pathologist helps in confirming the diagnosis and identifies high risk factors. In addition, a genetic counselor should be part of a time to recognize any genetic or familial predisposition to develop pancreatic cancer.

Deterrence/Prevention

- Stop smoking;
- prevent a diet high in energy intake and low in fresh fruits and vegetables;
- avoid excessive alcohol consumption (chronic pancreatitis -> pancreatic cancer).

Conclusions

The disease is notoriously difficult to diagnose in its early stages. At the time of diagnosis, more than 50% of patients have distant disease and 26% have regional invasion. We concur that it is possible that the percentage of patients amenable to surgery is still too small to affect the overall disease mortality, which would support urgent calls for effective earlier disease detection. In the meantime, more effective multi-modal therapeutic strategies are needed to improve survival in this challenging disease.

Conflict of interest The author has no potential conflicts of interest

References

1. Ypsilantis E, Courtney ED, Warren H. Increase in Annual Number of Pancreatic Head Resections Does not Affect Mortality of Pancreatic Cancer in the United Kingdom. JOP. J Pancreas (Online) 2009 Jul 6; 10(4):462-3.
2. Lee MX, Saif MW. Screening for early pancreatic ductal adenocarcinoma: an urgent call! JOP. J Pancreas (Online) 2009; 10(2):104-8. [PMID 19287101]
3. Li J, Saif MW. Advancements in the management of pancreatic cancer. JOP. J Pancreas (Online) 2009; 10(2):109-17. [PMID 19287102]
4. American Cancer Society. Cancer Facts and Figures, 2008. Atlanta, GA, USA: American Cancer Society, 2008.
5. Anderson KE, Mack T, Silverman D. Cancer of the pancreas. In: Schottenfeld D, Fraumeni JF Jr, eds. Cancer Epidemiology and Prevention. 3rd Ed. New York: Oxford University Press; 2006.
6. Flanders TY, Foulkes WD. Pancreatic adenocarcinoma: epidemiology and genetics. J Med Genet Nov 1996; 33:889-98. [PMID 8950667]
7. American Cancer Society. Cancer Facts and Figures for African Americans 2007-2008. Atlanta, GA, USA: American Cancer Society, 2007.