Palliative Management of Unresectable Pancreas Cancer

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KEYWORDS

• Pancreatic adenocarcinoma • Unresectable • Metastatic • Biliary decompression
• Palliative bypass • Gastric outlet obstruction • Celiac plexus block

KEY POINTS

- Palliative surgical resection resulting in grossly positive margins offers no survival benefit and is not recommended for patients with unresectable or metastatic pancreatic cancer.
- Endoscopic biliary stenting and operative biliary bypass are both effective in relieving biliary obstruction without significant differences in mortality or overall survival.
- Prophylactic gastrojejunostomy should be performed at the time of hepaticojejunostomy, given a significant decrease in the incidence of postoperative gastric outlet obstruction without an associated increase in postoperative morbidity or mortality.
- Celiac plexus block improves pain control and decreases narcotic pain medication usage for patients with unresectable pancreatic cancer, resulting in few long-term adverse side effects.

BACKGROUND

Pancreatic adenocarcinoma (PDAC) is the fourth leading cause of cancer death in the United States with a 5-year all-stage overall survival of only 6%.[1] This dismal survival rate is in part attributed to a delay in diagnosis given limitations in disease screening and nonspecific symptoms. Most patients are often asymptomatic or present with vague, nonspecific symptoms, such as weight loss, abdominal pain, fatigue, or jaundice, so that when they are finally diagnosed, the disease is often progressed and has spread to distant organs, limiting treatment options.[2] Currently, surgical resection provides the best opportunity for survival, but is limited to patients with locally resectable

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tumors without distant metastases. As a result, only 15% to 20% of patients with pancreatic cancer present with tumors amenable to surgical resection, creating a large population of patients in whom treatment options are limited.[3] In addition, the local and distant spread of disease often creates symptomatic problems such as pain or obstruction, necessitating treatment for palliation of symptoms. This article reviews the current palliative treatment options in patients with unresectable pancreatic cancer, including palliative resection, surgical and endoscopic biliary and gastric decompression, and pain control with celiac plexus block.

CURRENT TREATMENT OF UNRESECTABLE PANCREATIC CANCER

Surgical resection offers the best opportunity for prolonged survival and the only chance for potential cure in patients with pancreatic adenocarcinoma. Five-year survival rates approach 25% in published series at specialized centers.[4,5] However, very few patients present with disease at a stage in which curative resection can be effectively offered. An analysis of 58,655 patients with pancreatic cancer diagnosed between 1977 and 2001 demonstrated only 8.9% had localized disease compared with 22.4% who presented with regional spread and 49.5% with distant metastases at the time of diagnosis, including an additional 19.4% who were unstaged.[6] Looking at the specific period between 1997 and 2001, only 7.4% presented with localized disease compared with a known 25.8% with regional disease and 49.8% with distant metastases.[6] Even without taking into account those with unstaged disease or delineating which patients with regional spread of disease were unresectable, at least half of all patients presenting with pancreatic cancer are unresectable at diagnosis because of the presence of distant metastases.

In addition to distant disease, current National Comprehensive Cancer Network guidelines define unresectable pancreatic tumors as those with greater than 180° encasement of the superior mesenteric artery or celiac artery, superior mesenteric vein or portal vein occlusion not amenable to reconstruction, invasion of the aorta, or the presence of nodal metastases beyond the field of resection.[7] Even in patients with small pancreatic cancers and no evidence of distant metastases, a proportion will be deemed unresectable based on the tumor's location to vital vasculature. Advances in surgical technique in recent years have allowed for pancreatic resection with portal vein resection and reconstruction at specialized centers in patients with borderline disease.[8] However, although this has increased the number of patients in whom pancreatic resection is possible, most patients are still not surgical candidates.

The main treatment currently for patients with locally unresectable and metastatic pancreatic adenocarcinoma is chemotherapy with or without radiation therapy.[9,10] Studies have shown a modest survival benefit with the addition of chemotherapy and radiation in these patients compared with no treatment. In patients with locally advanced, unresectable cancers, median survival ranges between 11 and 15 months in recent reports for patients undergoing treatment with chemotherapy and radiation.[11–15] In patients with metastatic pancreatic cancer, overall survival is much lower and 5-year survival is estimated at only 2%.[1] First-line treatment for metastatic pancreatic cancer often involves gemcitabine-based chemotherapy. Randomized trials of different chemotherapeutic regimens have not demonstrated much of a survival increase beyond a median survival of 5 to 8 months.[16] However, the addition of abraxane (nab-paclitaxel) before gemcitabine treatment in patients with metastatic pancreatic cancer has been shown in a randomized clinical trial to substantially increase median overall survival compared with gemcitabine alone (8.5 months vs 6.7 months, respectively).[17] In addition, patients treated with a gemcitabine-abraxane combination