Pancreatic Carcinoma: An Overview

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Editorial

Pancreatic cancer is the 12th most common cancer in the world. The estimated 5-year prevalence of people in the world living with pancreatic cancer is 4.1 per 100,000. The average lifetime risk of developing a pancreatic carcinoma for both men and women is 1.5%. The number of new cases of pancreatic cancer is 12.4 per 100,000 men and women per year and the number of deaths is 10.9 per 100,000 men and women per year, making it one of the most deadly solid organ tumors of the body [1,2].

The various proven risk factors for the development of Pancreatic cancer include cigarette smoking (current> past), Diabetes Mellitus, Obesity, Heavy alcohol intake, Chronic Pancreatitis [4]. 10% of all the pancreatic cancers are hereditary, mostly being associated with syndromes like HNPC (Hereditary Non Polyposis Colorectal Cancer), Familial Breast cancer associated with BRCA2 mutation, Peutz-Jeghers syndrome, Ataxia-telangiectasia syndrome etc [5]. With recent genetic improvements, kRAS has been identified to be the most common associated genetic abnormality (>95%). The other commonly associated genetic alterations include p53, p16 and DPC4 [6].

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Patients with duodenal outlet obstruction may be palliated with Gastrojejunostomy, expandable metallic bowel sounds and those with pain may be palliated by opioids, NSAIDs, USG/CT-guided celiac plexus blocks, intra-operative chemical splanchnicectomy [4,8]. Various adjuvant therapies have been tried with drugs like 5-flourouracil, Gemcitabine etc. Gemcitabine has been proven to increase median disease free survival from 6.9 to 13.4 months [10]. Many novel agents like Bevacizumab (Angiogenesis inhibitor), Tipifarnib (kRAS inhibitors), Erlotinib (EGFR inhibitor) have been tried with varied success [8]. Finally at the end, even after so many technological advances, the tumor-specific 5 year survival rates are only 15% for patients with pancreatic carcinoma. Factors affecting survival of pancreatic carcinoma include tumor size of >3cm, positive resection margin, histological grade and regional lymph node metastases [11].

References
1. Pancreatic cancer statistics (2017) World Cancer Research Fund International [Internet]. Wcrf.org.
2. Rebecca Siegel MPH, Deepa Naishadham MA, AhmedinJemal DV (2013) Cancer statistics. CA Cancer J Clin 404: 320-323.
3. Bettschart V, Rahman MQ, Engelken FJ, Madhavan KK, Parks RW, et al. (2004) Presentation, treatment and outcome in patients with ampullary tumours. Br J Surg 91(12): 1600-1607.
4. Wolfgang CL, Herman JM, Laheru DA, Klein AP, Erdel MA, et al. (2013) Recent progress in pancreatic cancer. CA Cancer J Clin 63(5): 318-348.
5. Shi C, Hruban RH, Klein AP (2009) Familial pancreatic cancer. Arch Pathol Lab Med 133(3): 365-374.
6. Rozenblum E, Schutte M, Goggin M, Hahn SA, Panzer S, et al. (1997) Tumor-suppressive pathways in pancreatic carcinoma. Cancer Res 57(9): 1731-1734.
7. Blumek DA, Fishman EK (1998) CT and MR evaluation of pancreatic cancer. Surg Oncol Clin N Am 7(1): 103-124.
8. Wolfgang CL, Schulick RD, Cameron JL (2013) Cancers of the periampullary region and the pancreas. In: Zinner MJ, Ashley SW (Eds.). Maingot’s Abdominal Operations (12th edn), McGraw Hill, Philadelphia, USA, pp. 1187-1209.
9. National Comprehensive Cancer Network (NCCN) (2016) NCCN Clinical Practice Guidelines in Oncology. Pancreatic Adenocarcinoma Version 2.2016. National Comprehensive Cancer Network.
10. Raut CP, Evans DB, Caine CH, Pisters PW, Wolffa RA (2004) Neoadjuvant therapy for resectable pancreatic cancer. Surgical oncology clinics of North America 13(4): 639-661.
11. Qi-lu Qiao, Yi-guo Zhao, Mu-lin Ye, Yin-mo Yang, Jian-xun Zhao, et al. (2007) Carcinoma of the ampulla of Vater: factors influencing long-