Chirurgia (Bucur). 2018;113(3):307-317
http://dx.doi.org/10.21614/chirurgia.113.3.307

Pancreatic Cancer in the Era of Neoadjuvant Therapy: A Narrative Overview

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Abstract

Pancreatic adenocarcinoma is an aggressive systemic disease with around 30% of patient presenting locally advanced disease at diagnosis and being not candidate to surgical resection. Pioneering experiences with neoadjuvant treatment for locally advanced pancreatic cancer (LAPC) were undertaken more than 25 years ago and this strategy kept on gaining consensus over time. In recent years two main breakthroughs have been done: first, clear definitions of resectable, borderline resectable and locally advanced unresectable disease were released, and, soon after, two different chemotherapy regimens (namely, FOLFIRINOX and Gemcitabine plus Nab-Paclitaxel) were introduced in the clinical practice for LAPC after their effectiveness in metastatic patients was demonstrated. This article reviews papers regarding the administration of neoadjuvant chemotherapy, with or without radiation therapy, published from 2011 through 2017 with particular significance been given to reported results in term of resection rates, complete resection (R0) rates and Overall Survival, and briefly summarizes recommendations provided by the most recent guidelines for the treatment of non-metastatic pancreatic cancer.

Key words: pancreatic adenocarcinoma, locally advanced pancreatic cancer, neoadjuvant therapy, FOLFIRINOX, Gemcitabine, prognosis