

Electrochemotherapy in locally advanced pancreatic cancer: Preliminary results

Francesco Izzo

National Cancer Institute of Naples, Italy

We report the preliminary results on electrochemotherapy (ECT) in the treatment of locally advanced pancreatic cancer of a phase I/II study and described the new functional imaging tools to assess ECT response in magnetic resonance (MR) imaging compared to morphological computer tomography (CT), ultrasound (US) without and with contrast enhancement (CEUS) and MR Imaging. Thirteen patients were enrolled in an ongoing clinical phase I/II study approved by Ethical Committee of National Cancer Institute G. Pascale Foundation - IRCCS of Naples. ECT with bleomycin was performed during open surgery. All patients underwent US and CT scan, before and after ECT treatment; 7 patients were evaluated using morphological and functional (dynamic contrast enhancement-DCE and diffusion weighted-DW) parameters in MR; 5 patients underwent CEUS. Response evaluation criteria in solid tumors (RECIST) criteria were used to evaluate ECT response on US, CT and MR images. Functional parameters were also used to evaluate ECT response on MR images. No acute (intraoperative) and/or postoperative serious adverse events related to electrochemotherapy were observed; no clinically significant electrocardiographic, hemodynamic, or serum biologic changes were noted. No clinically relevant elevation of amylase or lipase levels was observed and no bleeding or damage to surrounding viscera

occurred. In three patients had seen splenic infarction without thrombosis of the splenic vessels. Electrochemotherapy is feasible and safe treatment modality in patients with locally advanced pancreatic adenocarcinoma. Dynamic and diffusion MR imaging in comparison to MR morphological sequence alone and to UC and CT imaging is more suitable to assess ECT treatment response. CEUS is not indicated in follow up after ECT.

Biography

Francesco Izzo is Director and Chief of the Division of Abdominal Surgical Oncology (Hepatobiliary and Pancreatic Unit), within the Department of Surgical Oncology at the National Cancer Institute of Naples. His clinical practice and research focuses on new surgical oncology treatments and he has been a pioneer in designing improved techniques for surgical removal of hepatic tumours and direct tumour injection therapies. Additionally, he is Principal Investigator of a number of national and international protocols in this field and has authored or co-authored more than 220 publications and 18 book chapters relating to the treatment of patients with HPB tumours. He is an active member of numerous professional societies, including the European Society of Surgical Oncology, the World Federation of Surgical Oncology, Society of Surgical Oncology and the American Society of Clinical Oncology. Total impact factor: 638,003; H-index: 35; sum of the times cited: 7.017.

f.izzo@istitutotumori.na.it