

Prolonged survival of a patient affected by pancreatic adenocarcinoma with massive lymphocyte and dendritic cell infiltration after interleukin-2 immunotherapy. Report of a case

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ABSTRACT

Several studies have shown that there is a paucity of immune cells within the stroma of pancreatic adenocarcinoma, a very aggressive cancer with a median survival of about 18 months. A 65-year-old man presented with jaundice. Abdominal ultrasound revealed intra- and extrahepatic bile duct dilatation and a 45-mm diameter hypoechoic solid mass within the pancreatic head; a computed tomography scan excluded vascular infiltration and metastatic lesions. The patient received immunotherapy consisting of 6,000,000 IU human recombinant interleukin-2 administered subcutaneously twice a day for 3 consecutive days. Thirty-six hours after the last dose, he underwent a pylorus-preserving pancreatoduodenectomy. Because of the presence of high-grade dysplasia detected by intraoperative histological examination of a distal section, a spleen preserving total pancreatectomy was performed. The postoperative course was uneventful. The patient died 32 months after surgery because of local recurrence. Histopathology showed G3 pancreatic ductal adenocarcinoma infiltrating the anterior and posterior peripancreatic tissue, duodenal wall and intrapancreatic common bile duct, with sarcoma-like foci and a component of intraductal tumor involving the common bile duct. In the distal pancreas, widespread foci of pancreatic intraepithelial neoplasia (PanIN2-3) were found. The Ki-67 proliferation index was 16%. TNM staging was pT3 pN1 R1. Sections were immunostained for the T-lymphocyte marker CD3 and for the dendritic cell marker CD1a. Intratumoral infiltration was high for CD1a+ cells and mild for CD3+ cells. Preoperative immunotherapy with interleukin-2 may contribute to massive stromal infiltration of immune cells in pancreatic adenocarcinoma. This may prolong the survival even in the presence of negative prognostic factors (age >65 years, tumor diameter >20 mm, R1, tumor grade G3).

Key words: intratumoral lymphocyte and dendritic cell infiltration, preoperative immunotherapy, pancreatic ductal adenocarcinoma.

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Received May 25, 2007;
accepted June 11, 2007.