Transarterial chemoperfusion with gemcitabine and mitomycin C in pancreatic carcinoma: results in locally recurrent tumors and advanced tumor stages

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PURPOSE
The purpose of this study was to evaluate local transarterial chemoperfusion (TACP) in locally recurrent pancreatic carcinoma and advanced tumor stages which did not respond to prior systemic chemotherapy. The tumor response, survival, and pain response were retrospectively analyzed.

MATERIALS AND METHOD
Forty outpatients (median age 62 years, range 36-79) were treated with a minimum of 3 (mean 6, range 3-12) applications per patient in four-week intervals. Twenty-eight patients were in advanced tumor stages, and 12 patients had locally recurrent tumors. Gemcitabine (1,000 mg/m(2)) and mitomycin C (8.5 mg/m(2)) were administered within 1 hour through a celiac trunk catheter. The tumor response (diameter, volume) was measured using MRI or CT and classified according to RECIST. The pain response was defined as a reduction of pain intensity of more than 50% on a visual analog scale, or a reduction of more than 50% in analgesics consumption, or a switch to a less potent analgesic agent.

RESULTS
The treatment was tolerated well by all patients. No clinically relevant problems or grade III or IV toxicity according to CTC (Common Toxicity Criteria) were observed. Tumor-related pain was relieved in 20/32 (62.5%) cases. Radiologically, "complete response" was found in 3/40 (7.5%), "partial response" in 9/40 (22.5%), "stable disease" in 16/40 (40%), and "progressive disease" in 12/40 (30%) of the patients. The median survival period since initial diagnosis and first TACP was 16.4 months and 8.1 months, respectively. Locally recurrent tumors showed better, but still not significant results regarding tumor response (41.7% vs. 25%) as well as survival (14.4 vs. 7 months) compared to advanced tumor stages. Responders (CR+PR) showed a significant survival advantage compared to patients with tumor progression (13.0 vs. 6.0 months; p=0.013).

CONCLUSION
TACP is a minimally invasive outpatient treatment for therapy-resistant locally recurrent pancreatic carcinoma and advanced tumor stages. It may be considered as an important aspect in palliative symptomatic pain-relieving treatment, or may even result in improved survival by achieving tumor response.

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