AB020. S020. Importance of adjuvant hepatic arterial infusion chemotherapy using high-dose 5-fluorouracil with systemic gemcitabine for resectable pancreatic cancer

Kota Nakamura, Akahori Takahiro, Minako Nagai, Satoshi Nishiwada, Kenji Nakagawa, Toshihiro Tanaka, Hideyuki Nishiofuku, Kimihiko Kichikawa, Naoya Ikeda, Masayuki Sho

Nara Medical University Hospital, Kashihara, Japan

Background: Despite recent advances in cancer treatment, postoperative recurrence remains an unsolved issue for resectable pancreatic cancer. To prevent hepatic recurrence and prolong postoperative survival, we introduced postoperative adjuvant chemotherapy of high-dose 5-fluorouracil (5-FU) hepatic arterial infusion (HAI) with systemic chemotherapy using gemcitabine in 2006. We retrospectively evaluated the clinical impact of HAI.
Methods: A total of 251 patients who underwent pancreatic resection for pancreatic cancer (PC) were analyzed. Patients received weekly high-dose 5-FU through the hepatic artery using a port-catheter system (1,000 mg/m^2 for 5 h) plus concurrent systemic gemcitabine (1,000 mg/m^2) followed by systemic 3 cycles of gemcitabine or 4 cycles of S-1. Patients were divided into two groups. The patients who completed planned adjuvant chemotherapy of HAI were classified as the completion group (HAI), and the patients who failed to complete HAI or received systemic adjuvant chemotherapy other than HAI were classified as the control group.
Results: One hundred thirty-eight patients (55%) completed planned adjuvant chemotherapy of HAI. On the other hand, 28 patients (11%) failed to complete HAI and 85 patients (34%) received systemic adjuvant chemotherapy alone. The reasons for incompletion of HAI were as follows: any recurrence during HAI treatment in 8, poor general condition of patients in 4, hepatic arterial stenosis in 4 and catheter trouble in 3. Initial hepatic metastasis rate was significantly lower in the HAI group than the control group (15.2% *vs.* 26.3%, P=0.029), and liver metastasis free survival was significantly better in the HAI group than the control group (P=0.001). The HAI group had a better prognosis than the control group (58.1 *vs.* 26.9 M, P<0.001). Prognostic factor analysis indicated that failure to complete HAI (P<0.001, HR =1.95), borderline resectable tumor (P=0.028, HR =1.63), and lymph node metastasis (P=0.018, HR =1.59) were the independent adverse prognostic factors.
Conclusions: Our data demonstrate that HAI can significantly prevent hepatic recurrence and also improve the postoperative prognosis in pancreatic cancer.

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