

Clinical Utility of CEA in the Surveillance of Patients with Resectable Gastric Cancer

Koji MIKAMI, Takafumi MAEKAWA, Yuichi YAMASHITA,
Yasushi YAMAUCHI, Seiichiro HOSHINO, Tetsuo SHINOHARA,
Tomoaki NORITOMI and Takayuki SHIRAKUSA

Second Department of Surgery, Fukuoka University School of Medicine

Abstract : Background : The aim of this study was to evaluate the effectiveness of the serum tumor marker carcinoembryonic antigen (CEA) in an early diagnosis of recurrence for gastric cancer. Methods : Forty-five patients who had a recurrence of gastric cancer after a gastrectomy with curability A or B were evaluated. The serum levels of CEA were both examined preoperatively and postoperatively, with diagnostic imaging also being performed periodically. Results : The change in the CEA level in patients with no recurrence ranged from 0.7 to 2.0 times for the CEA level at three months in the postoperative state. We defined positive CEA as 5.0 ng/ml or more, or 2 times or greater than the CEA level at three months in the postoperative state. The positive rate of CEA for disease recurrence was found in 23 patients (51.1%). Hematogenous metastasis and differentiated adenocarcinoma were both significantly associated with a positive CEA finding. The positive rate of CEA in differentiated adenocarcinoma was 66.7%. Hematogenous metastases, peritoneal dissemination and lymph-node metastases, respectively, were detected at 1.3, 2.5 and 3.6 months before detection by diagnostic imaging using CEA monitoring. Conclusions : These results suggest CEA monitoring to be useful for predicting the recurrence of gastric cancer.

Key words : Gastric cancer, Recurrence, Surveillance, Carcinoembryonic antigen (CEA)