THE IMPACT OF POSTOPERATIVE CHEMORADIOThERAPy ON SURVIVAL IN RESECTABLE GASTRIC CANCER

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Background: Gastric cancer is the second leading cause of cancer related death and thus represents a significant global health problem. The disease is commonly diagnosed at an advanced stage, either with extensive locoregional involvement or with distant metastases. Overall 5-year survival rate approximates 20% and has undergone minimal change over the last decade. Complete surgical resection of gastric cancer is curative in less than 40% of cases. In patients with deep invasion of the gastric wall or regional lymph node metastases the relapse and death rates from recurrent cancer exceed 70-80%. Locoregional recurrences in the tumor bed, the anastomosis or in regional lymph nodes occur in 40 to 65% of patients after curative intent resection. The frequency of this relapse makes adjuvant chemoradiotherapy (CRT) an attractive possibility. U.S. Intergroup study (INT-0116) was the first to demonstrate that combined chemoradiation following complete gastric resection improves median relapse-free survival and overall survival. The adjuvant CRT for the treatment of nonmetastatic gastric cancer was introduced into clinical practice in Slovenia in 2001.

Methods: One hundred and one patients after curative resection for gastric carcinoma, who were treated with postoperative CRT between January 2001 and December 2010, were included in the study. Forty-eight patients got chemotheraphy with 5-flourouracil (5-FU) and leucovorin in combination with irradiation, 39 patients got capecitabin in combination with irradiation and 14 patients got 5-FU and cisplatin in combination with irradiation. The control group included 107 patients who were treated only with resection between January 1995 and December 2000. The study compared survival of two treatments, adjuvant CRT versus resection alone. Survival curves were estimated by the Kaplan-Meier method and compared with a Log-Rank and Breslow tests. Multivariate analysis of prognostic factors was performed by the Cox proportional hazards model.

Results: No survival advantage was detected for patients with CRT compared with patients who received surgery only. The survival rates were longer in the CRT group compared to stages IIIA and IIIB than those in the comparison group. However, according to the Cox proportional hazards model, adjuvant CRT was a prognostic factor for survival as were also T-stage and N-stage of the disease.

Conclusion: In our study the addition of postoperative CRT did not have a major impact on survival compared to historical controls subjected only to surgical treatment.

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