

Importance of the circumferential extent of tumors and clinical lymph node status as prognostic factors after preoperative chemoradiotherapy and surgery in patients with rectal cancer

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ABSTRACT

Aims and background. To evaluate the clinical factors that influence pathological and clinical outcomes after preoperative concurrent chemoradiotherapy in patients with rectal cancer.

Methods. Between 1999 and 2004, 121 patients with cT3-4 or node-positive rectal cancer received preoperative chemoradiotherapy and surgery. Preoperative radiation therapy with 45 Gy was delivered. Fluorouracil-based chemotherapy was administered to most of the patients.

Results. Pathological complete remission was 14.3% after preoperative chemoradiotherapy. More than 60% tumor circumferential extent was an independent adverse factor for complete remission ($P = 0.011$, HR 4.643, 95% CI 1.415-15.231). Local recurrence developed in 9.9% of the cases. Serum CEA level ≥ 5 ng/ml ($P = 0.057$, HR 3.022, 95% CI 0.967-9.441) and $>60\%$ circumferential extent of tumor ($P = 0.064$, HR 4.232, 95% CI 0.918-19.531) were marginal adverse factors for local recurrence. Five-year disease-free survival and overall survival were 72.2% and 86.6%, respectively. Disease-free survival was poor for patients with the lymph nodes ≥ 1 cm in diameter ($P = 0.028$), cN2 stage disease ($P = 0.047$) and $>60\%$ circumferential extent of tumor ($P = 0.058$). Multivariate analysis for disease-free survival showed that the lymph node size ≥ 1 cm was an adverse factor ($P = 0.019$, HR 2.380, 95% CI 1.115-4.906). Patients with $>60\%$ circumferential extent of tumor and cN2 stage had a more unfavorable survival than the other patients (disease-free survival, $P = 0.018$; overall survival, $P = 0.015$). Patients with $>60\%$ circumferential extent of tumor and/or lymph node ≥ 1 cm also had an unfavorable survival (disease-free survival, $P = 0.016$; overall survival, $P = 0.049$).

Conclusions. In rectal cancer, circumferential extent of tumor and clinical lymph node status were important factors for preoperative chemoradiotherapy and surgery. A further prospective study is needed to confirm and expand these findings. Free full text available at www.tumorionline.it

Key words: circumferential extent, lymph nodes, preoperative chemoradiotherapy, prognostic factors, rectal cancer.

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