

Preoperative radiotherapy and concurrent chemotherapy with bolus 5-fluorouracil for rectal cancer: a prospective analysis of 98 patients

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ABSTRACT

Aims and background. Surgical resection of rectal cancer is associated with a high pelvic recurrence rate. Preoperative large-fraction radiotherapy (RT) with a short interval after local excision has been associated with a significant improvement in locoregional recurrence rates and overall survival, but with high rates of toxicity. We here present the results of our combined-modality treatment protocol for patients with locally advanced rectal cancer.

Methods. Between September 1999 and June 2005, 98 patients were prospectively entered into the protocol. Eligibility criteria included any of the following: cT3-4 disease, clinically positive lymph nodes, or tumor located less than 6 cm from the anal verge. RT was delivered with a three-field technique to a dose of 45 Gy, plus an optional 5.4-9 Gy boost. Chemotherapy, administered concomitantly with RT, consisted of bolus 5-fluorouracil (5-FU) 500 mg days 1-5 followed by 5-FU 600 mg/m² and leucovorin 50 mg on days 16, 23, 30 and 37. Surgery was performed 6-8 weeks after RT completion and was followed by 8 courses of 5-FU 900 mg/m² and leucovorin 100 mg/m² every 14 days.

Results. Low anterior resection was performed in 64.5% of the patients and in 38.8% of those with tumors located less than 6 cm from the anal verge. All patients except one had clear pathological margins, 68.8% had negative nodes, and pathological complete response was seen in 13.5%. With a median follow-up of 31.5 months, 3 patients (3.0%) had locoregional recurrence, 19 (19.3%) developed distant metastasis, and 10 patients (10.1%) died. The estimated median disease-free survival was 70.6 months. Grade 3 or 4 gastrointestinal toxicity was seen in 24.5% of the patients and 3.0% had neutropenic fever. One fatal toxicity occurred during treatment.

Conclusions. Our results suggest that our combined-modality treatment protocol is well tolerated and achieves high locoregional control in this unselected population. The overall survival results are also encouraging. Further studies are required to confirm the toxicity profile and survival results of this regimen. Free full text available at www.tumorionline.it

Key words: rectal cancer, radiotherapy, adjuvant treatment.

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