

Limited-stage small-cell lung cancer treated with early chemo-radiotherapy: the impact of effective chemotherapy

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ABSTRACT

Aims and background. Small cell lung cancer is characterized by an aggressive clinical course and a high sensitivity to both chemotherapy and radiotherapy. We present the Florence University experience in concurrent early radio-chemotherapy in patients affected by limited-stage small cell lung cancer, with particular emphasis on treatment safety, disease outcome and prognostic factors.

Methods and study design. Fifty-seven patients were treated between June 2000 and February 2005. All patients underwent platinum-based chemotherapy, administered intravenously following two different regimens, for at least three cycles. Eighteen patients (31.6%) received epirubicin and ifosfamide in 3-week cycles alternating with etoposide and cisplatin, administered on day 1 to 3; 39 patients (68.4%) received etoposide and cisplatin. A total of 6 cycles were planned. Radiotherapy was administered concurrently to the first cycle of etoposide and cisplatin.

Results. Clinical stage ($P = 0.036$) and number of chemotherapy courses ($P = 0.009$) emerged as the only significant death predictors at univariate analysis. Number of chemotherapy courses persisted as a significant death predictor also at multivariate regression analysis, with a reduced death risk for 5-6 chemotherapy cycles in comparison to 3-4 cycles (hazard ratio, 0.44). At a mean follow up of 38.5 months (standard deviation, 3.24 years; range, 6-164 months), considering the best overall tumor response achieved at any time during the whole treatment period, we obtained 32 complete responses (56.1%), 23 partial responses (40.3%) and 2 stable diseases.

Conclusions. Our analysis showed that concurrent early radio-chemotherapy in limited-stage small cell lung cancer treatment represents a safe and effective approach in patients. We confirmed the relevant impact on overall survival of effective chemotherapy delivery.

Key words: concurrent treatment, early chemotherapy radiotherapy, limited stage, small cell lung cancer.

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