

Clinical study of concurrent chemoradiotherapy or radiotherapy alone for esophageal cancer patients with positive lymph node metastasis

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ABSTRACT

Aims and background. Esophageal cancer patients with pathologic lymph node involvement generally have a poor prognosis. Many randomized controlled trials have not achieved consistent results similar to those of the RTOG8501 trial, and the long-term survival rate has not increased. The present study aimed to compare the efficacy and toxic side effects of concurrent chemoradiotherapy and radiotherapy alone to treat N1 esophageal carcinoma.

Methods and study design. A total of 130 N1 esophageal carcinoma patients were enrolled and randomly divided into two groups: concurrent chemoradiotherapy group (n = 65) and radiotherapy group (n = 65). Both groups received three-dimensional conformal radiotherapy with a total dose of 64-66 Gy. Meanwhile, to the concurrent chemoradiotherapy group, an additional chemotherapy protocol (nedaplatin, 20 mg/m²/d, 5-FU, 500 mg/m²/d for four days) was given from day 1, and such treatment was repeated until day 29. From day 21 after radiotherapy, two cycles of a consolidated chemotherapy protocol were given at an interval of 28 days.

Results. The survival rates at one, two, and three years were 72.3%, 55.3%, and 40% in the concurrent chemoradiotherapy group, respectively, and 75.3%, 38.5%, and 18.5% in the radiotherapy group ($P = 0.007$), respectively. The survival rates of the patients in the concurrent chemoradiotherapy group who completed one to two cycles and three to four cycles at one, two, and three years were 70%, 53.3%, and 30%, and 74.2%, 57.1%, 48.6% ($P = 0.128$), respectively. Three-year distant metastasis rates were 10.7% in the concurrent chemoradiotherapy group and 16.9% in the radiotherapy group. Acute toxicity in the concurrent chemoradiotherapy group was higher than in the radiotherapy group. Late toxic side effects were similar in the two groups.

Conclusions. Compared with radiotherapy alone, concurrent chemoradiotherapy in the treatment of esophageal carcinoma with local lymph node enlargement can improve the three-year survival rate. Moreover, completion of three to four cycles of chemotherapy may have better efficacy than one to two cycles.

Key words: chemotherapy, esophageal carcinoma, lymph node metastasis, radiotherapy.

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