Concurrent 3-DCRT plus S-1 in treatment of elderly patients with esophageal cancer in Chinese population: a meta-analysis of 13 trials

Q. Enyi1, Z. Xiyue2, S. Jie1, Z. Jin1
1Department of Radiation Oncology, Wenzhou Central Hospital, Wenzhou, China
2Department of Anesthesiology, 1st Affiliated Hospital of Wenzhou Medical College, Wenzhou, China

Aim/Background: To evaluate the efficacy and safety of concurrent three-dimensional conformal radiotherapy (3-DRT) plus S-1 vs 3-DRT in patients with esophageal cancer in Chinese population.

Methods: We searched the relevant decade data (2005.1–2015.4) from domestic and foreign relevant databases (PubMed, Medline, Cochrane Library, Wanfang Data, Chinese Journal Database), meeting the conditions of the clinical randomized controlled trials, and evaluated the quality of each document according to the Cochrane Review’s handbook 5.0. We used Meta-analysis method to analyze the published literatures about clinical randomized controlled trials, which were concurrent three-dimensional conformal radiotherapy plus S-1 in treatment of elderly patients with esophageal cancer. RevMan5.1 statistical analysis software analysed corresponding research index.

Results: 13 separate clinical randomized controlled trials including 894 cases were researched into the Meta-analysis. Objective responsiveness and survival: The overall response (CR + PR) rates, 1-year overall survival rates and 2-year overall survival rates (P < 0.05) of CCRT group were superior to RT group. The RR Values and 95%CI were 1.37 (1.26∼1.48), 1.35 (1.19∼1.53), 1.58 (1.26∼1.99). But the 3-year overall survival rates were no statistically significant differences (P >0.05). Adverse reactions: The grade 3∼4 gastrointestinal adverse reactions, the grade 3∼4 gastrointestinal radiation esophagitis and the grade 3∼4 neutropenia were more severe in the cCRT group than in the RT group. The RR and 95%CI were 62.31 (1.20∼4.43), 1.74 (1.14∼2.67), 6.33 (2.37∼16.92). But there were no grade 3∼4 radiation bronchitis or pneumonitis in both groups. The funnel plot showed no significant publication bias in each indexes.

Conclusions: The short-term response rates and survival rates of patients with esophageal cancer treated by cCRT were superior to RT, but at the cost of increasing acute adverse reactions.

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