

TIME FACTORS IN POSTOPERATIVE RADIOTHERAPY OF HEAD-AND-NECK CANCER

Kuan-Yin Hsiao¹, Ching-Hsiung Chang¹, Yu-Chang Hu¹, Chien-Hsun Chen¹, Pei-Chien Tsai²

¹ *Department of Radiation Oncology, Kaohsiung Veterans General Hospital*

² *Graduate Institute of Public Health, Kaohsiung Medical University*

Purpose : To study the locoregional tumor control in postoperative radiotherapy of head-and-neck cancer in relation to the duration of the surgery-radiotherapy interval, overall radiation treatment time (OTT), and treatment gap.

Methods and Materials : This retrospective study included 141 patients with cancer of head and neck, treated with surgery first, followed by postoperative irradiation between 1996 and 2004. The patients who had recurrence before radiotherapy or only received biopsy were not included. The median of the total radiation dose, surgery-radiotherapy interval, and the overall treatment time were 61.2 Gy, 34 days, and 48 days respectively. No interruption during radiotherapy (except for weekend breaks) was found in 27.7% of patients. Twenty point six percent of patients had more than 5 days of gap.

Results : The median duration of follow-up was 14 months. The median recurrence-free survival time was 34 months. Recurrence developed in 61 patients (43.3%). Increased surgery-radiotherapy interval to more than 30 days was significantly related to a decrease in recurrence-free survival (RFS) ($p = 0.0328$). However, the duration of OTT and treatment gaps did not influence RFS significantly.

Conclusions : In our study, increased surgery-radiotherapy interval to more than 30 days would cause an adverse effect. Although the overall treatment time and treatment gap did not affect RFS significantly, we should do our best to shorten the surgery-radiotherapy interval and avoid the treatment gaps.

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Key words: Head-and-neck cancer, Postoperative radiotherapy, Overall treatment time, Treatment gap.