

32nd International Conference on
ONCOLOGY NURSING AND CANCER CARE
September 13-14, 2017 Singapore

Effect of early use of glutamine on prevention of severity of oral mucositis by concurrent chemoradiotherapy in patients with head and neck cancer

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Background: Oral mucositis is one of the most common symptoms of head and neck cancer patients receiving Concurrent Chemoradiotherapy (CCRT), patients could have a high incidence of oral mucositis side effects of 80-90%. If medical staff is not given prophylactic oral mucosal care measures, this may result in severe oral mucositis grade 3 or more. Glutamine can help tissue mucosal repair, insufficient glutamine can lead to serious mucosal damage or even interrupt treatment.

Objective: This study aimed to survey whether early use of glutamine could decrease the severity of oral mucositis in patients with head and neck cancer received concurrent chemoradiotherapy.

Methodology: A total of 44 patients with head and neck cancer has undergone CCRT were randomly divided into 22 patients oral glutamine (G group) and 22 patients in the control group (R group), a glutamine dose of 10 g, 3 times a day a week before CCRT, the control group (R group) are in accordance with the general routine oral care. An oral mucositis evaluation was performed using NCI-CTCAE V3.0 until the end of the CCRT course (period 1-9 weeks).

Result: The patients' mucositis G-4 developed in all patients: Group G 0% and Group R 27%. Glutamine significantly decreased average grade of mucositis (group G: 2.41 ± 0.5 , 95% CI: 2.19 to 2.63, group R: 3.23 ± 0.5 , 95% CI: 2.99 to 3.46, $p=0.002$). Glutamine significantly decreased body weight loss (group G: 10.4 ± 1.2 kg, 95% CI: 9.8 to 10.9, group R: 12.5 ± 1.4 kg, 95% CI: 11.9 to 13.2, $P=0.023$).

Conclusion: Glutamine can prevent severe oral mucositis to avoid interruption of treatment and affect the cure of the disease. Expected results of this study can provide the patient to determine the most appropriate medical decision-making and therefore, patients can have a better quality of care disease.

Biography

Tzu-Hsuan Lin is currently a Postgraduate student of Nursing from Chung Shan Medical University. She has been working for more than 20 years at the Department of Nursing, Hsinchu MacKay Memorial Hospital, Taiwan and has an experience in oncology nursing education.

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