자유연제 1-1

Relationship between Cyclooxygenase(COX)-2 Expression and Treatment Failure in Nasopharyngeal Cancer

Kyubo Kim, M.D.,* Chong Jai Kim, M.D., Hong-Gyun Wu, M.D., Charn Il Park, M.D.

Department of Therapeutic Radiology and Pathology, Seoul National University College of Medicine, Seoul, Korea

Purpose : Cyclooxygenase (COX)-2 is well known to have an important role in carcinogenesis in various type of cancer. The purpose of this study was to evaluate the relationship between treatment failure and COX-2 expression in nasopharyngeal cancer patients treated with radiation therapy.

Methods and Materials : Twenty-two patients with nasopharyngeal cancer were subjects of this study. All patients were treated with neoadjuvant chemotherapy followed by radiotherapy or radiotherapy alone at Seoul National University Hospital (SNUH). The formalin-fixed, paraffin-embedded tissues of 11 patients who developed local recurrence (n=7) or distant metastasis (n=4) were compared with those of 11 patients who were free of disease. Prognostic factors including histologic type, stage, radiation dose and chemotherapy were well balanced between two groups. COX-2 expression was determined immunohistochemically.

Results : COX-2 expression was stronger in the patients with local recurrence or distant metastasis than in those with free of disease. COX-2 expression was shown to have a statistically significant influence on treatment failure by the Mann-Whitney U test (p=0.024) and Mantel-Haenszel Chi-Square test (p=0.018). COX-2 expression also influenced treatment outcome significantly by the Mann-Whitney U test (p=0.039) and Mantel-Haenszel Chi-Square test (p=0.037).

Conclusions : COX-2 expression is believed one of the important factor associated with local recurrence or distant metastasis. Our results suggest that inhibiting COX-2 may decrease treatment failure in nasopharyngeal cancer and that COX-2 inhibitor administration may be considered as an adjuvant treatment policy.