THE ASSOCIATION BETWEEN EXPRESSION OF EPIDERMAL GROWTH FACTOR RECEPTOR WITH PRIMARY TUMOR VOLUME OF NASOPHARYNGEAL CARCINOMA PATIENTS

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Objective: Tumor development was triggered by the excess population of Epidermal Growth Factor Receptor (EGFR). Expression of EGFR with primary tumor volume of in patients with NPC. Expression of EGFR has a role in the increasing of metastasis, self-renewal, drug resistance and anti apoptosis. EGFR expression associated with tumors size, positively nodules and advanced tumor stage in NPC patients. High level of EGFR expression by immunohistochemical examination associated with the development, progression and differentiation cell of tumors.

Study Design: Cross sectional.

Methods: Formalin-fixed paraffin-embedded biopsy specimens were obtained. The expression of EGFR was studied with immunohistochemistry using EGFR polyclonal antibody (Bioss, USA). Assessment of the staining was performed by pathologist consultant used histoscore. The Pearson’s correlation test was used to determine the correlation between expression of EGFR and primary tumor volume of nasopharyngeal carcinoma. Statistical significance was defined as p < 0.05.

Result: Total samples are 19 patients. The result of EGFR expression in NPC patients with primary tumor volume of 1-50 ml are 5 sampels with a weak positive expression and 4 sampels with moderate positive expression. NPC with a primary tumor volume of 51-100 ml are 2 sampels of negative expression, 1 sampel of weak positive expression, 3 sampels with moderate positive expression and 2 sampels with strong positive expression. NPC with primary tumor volume >100 ml are 1 sampel positive weak expression and 1 sampel strong positive expression. Statistical analysis using Pearson’s exact test was obtained p = 0.047 with a correlation coefficient 0.461. EGFR expression from all of patients there was 2 sampel (10,53%) negatif, 7 sampel (36,84%) weak positive, moderate positive was 7 sampel (36,84%), and strong positif 3 sampel (15,79%).

Conclusion: There was association between expression of EGFR with primary tumor volume of nasopharyngeal carcinoma.

Keywords: Nasopharyngeal carcinoma, expression of EGFR, primary tumor volume.