

Immunohistochemical Expression of EGFR and Ki67 in Adenocarcinoma of Stomach at Mandalay General Hospital

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ABSTRACT

Gastric cancer is one of the commonest malignant tumors worldwide. It is the fifth most common malignancy in the world. Epidermal growth factor receptor (EGFR) belongs to receptor tyrosine kinase and is the expression product of pro-oncogene ErbB1 (HER1). The nuclear protein Ki67 is an established prognostic and predictive indicator of cancer. The aim of this study is to study immunohistochemical (IHC) expression of EGFR and Ki67 in adenocarcinoma of stomach at Mandalay General Hospital. The hospital and laboratory-based, cross-sectional and descriptive study was conducted on 60 cases of adenocarcinoma of stomach from August 2018 to July 2019. In this study, the mean age of participants was 56.9 ± 13.5 years, with 33 males (55%) and 27 females (45%). There were 37 gastrectomy biopsies (61.7%) and 23 endoscopic biopsies (38.3%). For the histology types, 58 cases were of intestinal type and 2 cases of diffuse type. For the differentiation of adenocarcinoma, 7 (11.7%) were well-differentiated, 23 (38.3%) moderately differentiated and 30 (50%) poorly differentiated. In IHC expression of EGFR, there were 8 (13.3%), 17 (28.3%), 22 (36.7%) and 13 (21.7%) cases for score 0, 1+, 2+ and 3+ respectively. In IHC expression of Ki67, there were 9 (15%), 24 (40%) and 27 (45%) cases for <10%, 10-40% and >40% positivity respectively. According to the result, there was statistically significant association between differentiation of adenocarcinoma of stomach and IHC expressions of both EGFR and Ki 67 ($p < 0.05$). Therefore, the result from this study can be helpful in the selection of uses of anti-EGFR-targeted therapy in treatment options and disease management of adenocarcinoma of stomach.

Key words: adenocarcinoma of stomach, EGFR, Ki 67, immunohistochemical expression