

BSTRACT

Background: Human epidermal growth factor receptor-2 (HER2/neu, c-erbB2), is an oncogene reported to be over-expressed in gastric cancer. Its over-expression is a requirement for treatment with trastuzumab. Ki-67 is a nuclear proliferation-associated antigen. Prognosis and level of gastric cancer aggression are reflected in expression of Ki-67.

Methods: A Laboratory cross-sectional study was conducted among 75 FFPE endoscopic gastric cancer tissue blocks, each case was evaluated for the expression of Her-2 and Ki-67 using immunohistochemistry (IHC) staining. The IHC expression and its correlation with histological grades were also determined. Data was analyzed in Stata, and presented in the form of proportions to determine the level of significance between IHC expressions with histology grades. Spearman's correlation coefficient was used to find the correlation between the IHC expressions with histology grades. P values <0.05 were considered significant.

Results: The mean age of gastric cancer cases was 54 years with a range of 26 to 80 years. Poorly differentiated histology 32/75 (43%) was the most profound. Her-2 over expression was seen in 15/75(20%), of the cases. High Ki-67 expression was seen in 42/75 (56%), low Ki-67 expression was seen in 5/75 (7%) of the cases. It was found that Her-2 overexpression correlated significantly with moderate differentiation ($r_s = 0.3362$, $p = 0.0032$) and poor differentiation ($r_s = -0.2291$, $p = 0.0480$). A significant correlation between moderate differentiation of gastric carcinoma with low intensity of Ki-67 staining was noted ($r_s = 0.2546$, $p = 0.0275$).

Conclusion: Her-2 overexpression had a prevalence of 20%, all the cases expressed Ki-67, with the high activity dominating. The expression of Her-2 and Ki-67 showed a correlation, with histology grades. The aggressiveness of gastric cancer may be indicated by over expression of Her-2 and a high Ki-67 nuclear proliferation index.

