

Investigating of HER-2/Neu Expression in Gastric Cancer and Its Correlation with Histological Findings of Tumor

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Abstract

Background: In Cancer cells, HER-2/Neu acts as an oncogene. Its overexpression leads to increased protein in the membrane of cancer cells. The role of HER-2/Neu was known in a wide variety of cancers such as breast and lung neoplasms. This study aimed to investigate HER-2/Neu expression in gastric cancer by using immunohistochemistry (IHC).

Materials and methods: This cross-sectional study was performed on 48 individuals with gastric cancer who had undergone gastrectomy. After diagnosing gastric cancer by histologic reports, the specimen were reassessed for HER-2/Neu evaluation. IHC was used to determine HER-2/Neu expression (Biogenax kit, DAKO criteria). Data were analyzed by descriptive and analytical methods and SPSS software version 20.

Results: The study cases are comprised of 48 individuals (79.2% male). The average age of cases was 59.93 ± 13.95 years. The mean of tumor size was 5.5 ± 2.45 cm. The most common tumor location was antrum and pylorus (43.8%). Intestinal type of gastric cancer was the most common (72.9%). The most of cases were in stage T3 (87.5%). HER-2/Neu positive expression was present in 10.4%, while the majority of cases showed a HER-2/Neu-negative status (89.6%). There was no significant relationship between HER-2/Neu expression and investigated variables ($p > 0.05$).

Conclusions: According to the results of this study, HER-2/Neu expression in gastric cancer was low. More extensive studies are needed.

Keywords: HER-2/Neu, Gastric Cancer, Immunohistochemistry, Gene Expression