ABSTRACT

Background:

Carcinoma of stomach is one of the leading causes of cancer deaths in the world. Paucity of the clinical symptoms, delays early detection of this killer disease. Hence resulting in a majority of patients presenting in an advanced or inoperable stage of the disease. In this era of medicine where targeted molecular therapy is gaining importance two markers in relation to gastric carcinoma are analysed. One such marker is HER2 neu. Many studies had predicted amplification of this protein in gastric carcinoma. The other marker is Ki 67. According to various studies Ki 67 reflects the cell proliferation characteristics that reflect the aggressive behavior of tumour. In this study the histopathological characters and relationship between tumour grading and expression of HER2 and Ki 67 were analysed.

Methods:

This study was carried out in the Department of Pathology, Thanjavur Medical College from the Period of July 2012 – June 2014. A total of 140 cases of Gastric carcinoma were analysed. This included 90 endoscopic biopsies and 50 gastrectomy specimens. The Co relation with age, sex, anatomical location, histological type, grading, extent of tumour invasion and nodal status were analysed. Immunohistochemistry was used to analyse the amplification of HER2 and degree of Ki 67 expression. Co relation between the grades of differentiation, HER2 amplification and Ki 67 proliferation index were studied.
Results:

The incidence of gastric carcinoma as estimated in this study is 6.78/1000 cases. The most commonly affected age group is 50-60 years. Males are more commonly affected than females. Frank malignancy was detected in 45.6% of endoscopic biopsies in male and 40% of cases in females. The most common site of malignancy is the gastric antrum, localizing nearly 60% of cases. 83.57% of the cases were tubular adenocarcinomas. Lauren’s intestinal type of tumours constituted 89.28% of cases with most of the carcinomas invading the muscular layer at the time of surgery. HER2 positivity was seen in 8% of the cases subjected to immunohistochemistry. HER2 expression was more in Intestinal type of carcinomas. Out of 25 cases analysed for Ki 67 labeling index, 52% of the cases had low Ki67 index and 48% of the Cases had a high Ki 67 index. No significant co relation was observed between the grading, HER2 amplification and the proliferation index.

Conclusion:

In this study it was concluded that the percentage of HER 2 amplification in Gastric Carcinomas is 8%. There was no significant co relation observed between the degree of HER2 amplification and Ki 67 expression with the tumour grade.

Key words:

Gastric carcinoma, HER2, Ki 67, Amplification, Tumour grading, Proliferation index.