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Studying of Some Immunological Parameters in Gastric Cancer Patients in Hilla City

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Abstract: Gastric cancer remains one of the deadly diseases with poor prognosis. White blood cells count and immunological cytokines are highly expressed in the gastric mucosa and potently activates Th2 immunity. In Hilla city there is no previous study dealing with the association between some immunological parameters and stages of gastric carcinoma. The present study aims to investigate the relationship between some immunological parameters in both six of patients with different age groups with the stages of gastric cancer.

Methods: This study involved seventy subjects, forty six of them were suffering from gastric carcinoma with (69.6%) of *H. pylori* positive infection (+ve) which divided into two groups male (n=23) and female (n=23) each group subdivided into six groups according to the age [(≥ 20), (21-30) , (31-40), (41-50) , (51-60) , (61 ≤)] male and female in sequence and into four groups according to the stages of disease (stage I, stage II, stage III and stage IV) male and female in sequence. Healthy control group include twenty four subjects which divided into two groups male (n=12) and female (n=12) were not receiving any medications and not have any history of chronic or acute illnesses.

Blood specimens were collected for studying the white blood cells count and their differential types(lymphocytes , monocytes, basophils, eosinophils , neutrophils and white cells) by using CELL—DYN Ruby hematology analyzer, also we studying the levels of IL- 10 and IL- 33 by automated microtiter plate ELISA reader**.**

Results: The results explained a significant increased ($p<0.05$) of the gastric cancer in male than female in two age groups [(41-50), (51-60)] as follow [n=7, (15.21%) & n= 6, (13.04%)] respectively in male and [n=6, (13.04%) & n=5, (10.86%)] respectively in female, also we measured the white blood cells count and we found a significant increased ($p<0.05$) in the number of all differential cell types in male than female groups compared with an increased in their numbers in all stages of disease in both sex of gastric carcinoma. We saw a significant increased in the concentrations of IL- 10 and IL- 33 in patients of both sex compared with healthy control groups with progression of their concentrations respectively in four stages of disease.

Conclusions: We can conclude that the significant increased in the white blood cells count occur during several cases linking to inflammation and progression of cancer. IL- 10 and IL- 33 are regarded as an impotent and a prognostic immunological parameters for gastric carcinoma.

Keywords : Gastric carcinoma; white blood cells counts; IL- 10; IL- 33.

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