INVESTIGATION OF VALUE OF CARCINOEMBRYONIC ANTIGEN (CEA) AND CARBOHYDRATE ANTIGEN (CA) 19.9 IN THE DIAGNOSIS OF GASTRIC CANCER

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Background: The few studies in the literature have been published and demonstrated that the serum levels of markers such as carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (CA 19-9) are elevated in patients with advanced gastric cancer. The aim of this study was to evaluate, retrospectively, the value of CEA and CA 19-9 in the diagnosis of gastric cancer in Moroccan population.

Methods: 114 patients with gastric cancer were analyzed in this retrospective study from 2008 to 2012. Correlations between CEA and CA 19-9 at diagnosis and clinicopathologic features were evaluated. Serum CEA and CA19-9 levels were measured at diagnosis. The cut-off values for CEA and CA 19-9 were 5.0 ng/ml and 37 U/ml respectively.

Results: On initial diagnosis, the positive rates of CEA and CA19-9 were 31% and 18% respectively. The CEA was elevated in 30% of T4 (23/76), 31% of T3 (10/32), 60% of T2 (3/5) and CA19.9 was elevated in 23% of T4 (18/76), 9% of T3 (3/32). In patient with lymph node metastasis CEA and CA19.9 were elevated in 33% (26/78) and 21% (17/78) respectively. The CEA and CA19.9 were elevated in 25% (2/8), 0% in stage II of TNM classification, 23% (5/21), 9% (2/21) in stage III and 34% (29/85), 22% (19/85) in stage IV respectively. In patients with peritoneal metastases CEA and CA19.9 were elevated in 29% (15/51) and 25% (13/51) respectively. The CA19.9 and CEA were elevated in 12% (6/50), 22% (11/50) of patients with signet ring carcinoma and in 23% (15/64), 40% (25/64) of patients with adenocarcinoma respectively. No correlation was found between the positive rates of CEA and CA19-9 and the T stage, N stage, peritoneal metastases or extent of disease.

Conclusion: In this study, the majority of patients have advanced and metastatic gastric cancer at diagnosis. But, serum levels of CEA and CA19.9 were normal at the majority of them. That suggests no relationship between rate of these tumour markers and advanced or metastatic gastric cancer in our population. Further studies are required to confirm these findings.