

Assessment of antioxidant status in different genotypes/phenotypes at codon 72 of TP53 gene for patients with sporadic colorectal cancer in Babylon province

Moaed E. Al-Gazally^{1*}, Alaa S. Al-Awad², Hamzah H. Kzar³

¹Department of biochemistry, Faculty of medicine, Babylon university, Iraq

²Oncology centre, Merjan teaching hospital, Babylon, Iraq

³Department of chemistry, Faculty of veterinary medicine, Al-Qasim green university, Iraq

Abstract: One of most frequent malignant disease in the developed countries is colorectal cancer and it is the seventh most common cancers among Babylon population /Iraq. It was reported that oxidative stress status is being play a very important roles in development of carcinogenesis. The purpose from this study was assessment of antioxidant status in different genotypes/phenotypes(GG/AA, GC/AP, and CC/PP)of patients with sporadic colorectal cancer in Babylon province. This investigate was done by using colorimetric method to measure of total antioxidant capacity(TAO-C) in patients with these genotypes/phenotypes. All patients included in this study were receiving adjuvant chemotherapy regimen and subdivided into two groups according to Duke's classification of malignant into early stages (A+B) and(C+D) advance stages, cancer site (colon and rectum), and according to the number of dosage of chemotherapy regimen (half dosage and total dosage). Colorimetric method was using to measurement of serum TAO-C ,while PCR-RFLP was used for TP53 gene codon 72 polymorphism analysis. The results were showed significant decrease in the mean-/+SD of serum TAO-C concentration of GG/AA genotypes/phenotypes in advanced stages of patients group compared to same genotypes/phenotypes in early stages.

Key words: Antioxidant status, TP53 gene, Sporadic colorectal cancer, Adjuvant chemotherapy.