



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.07, pp 323-328, 2018

Evaluation of serum antioxidant enzymes in β - thalassemia major patients

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Abstract : Seventy blood samples of clinically β -Thalassemia major patients were collected from thalassemic center pediatrics hospital in Babylon city / Iraq from individuals of both genders and different ages. Besides, blood samples were taken from 70 apparently healthy individuals (without Hemoglobinopathy disorders) as a control group, during the period of October 2014 to February 2015. The results indicated that values for ferritin and urea were significantly increased in blood samples of thalassemic patients compared to controls ($P < 0.05$). Levels of serum superoxide dismutase activity (SOD) were significantly increased in β -thalassemia patients compared to controls (967.43 ± 115.6 U/ml vs. 170.7 ± 40.2 U/ml), while catalase (CAT) activity was significantly lower in thalassemic patients than controls (144.77 ± 17.3 U/ml vs. 194.95 ± 47.2) P -value < 0.05). High levels of antioxidant enzyme SOD with decrease of antioxidant enzyme catalase, were associated with thalassemic patients compared to controls suggesting that assessment of hematological parameters and serum enzymes are valuable tools to predict thalassemia in Iraqi population.

Keywords : β - Thalassemia, Ferritin, Antioxidants.

Anwar A. Abdulla /International Journal of ChemTech Research, 2018,11(07): 323-328

DOI= <http://dx.doi.org/10.20902/IJCTR.2018.110738>
