

## Comparative study on oxidative stress and antioxidant enzyme status in type-2 diabetes mellitus with and without altered lipid profile in Allahabad-India

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The present study entitled "Comparative study on oxidative stress and antioxidant enzyme status in Type-II Diabetes mellitus with and without altered lipid profile in Allahabad-India" was carried out in research laboratory of Biochemistry in Faculty of Health Sciences, Sam Higginbottom Institute of Agricultural, Technology and Sciences-(SHIATS) Allahabad during December 2011-February 2012. The study group was consist of 500 known diabetic patients between the age group 35-65 yrs of both sexes. The blood sample was collected from different government and private hospitals of Allahabad city. The patients were divided in to 2 groups-Groups I having 250 patients with altered lipid profile and Group -II having 250 patients without alteration in lipid profile. The blood sample of all patients was analysed for melondialdehyde (MDA), Superoxidedimutase, catalase, lipid profile, and HbA1 and blood glucose. From the study it is reveals that MDA level is high in Group I as compare to group II patients, on the other hand SOD and Catalase activity comparatively low in group I as compare to group II .Cholesterol, Triglycerides, LDL cholesterol is high in group I as compare to group II .On the other hand HDL cholesterol is low in group I as compare to group II. There is no significant difference between blood glucose and HbA1 level of group I and group II. It is concluded from the study that group I patients have high lipid per oxidation so they have more oxidative stress which may lead many diseases caused by free radicals and stress. On the basis of the present study it is recommended that monitoring of antioxidant enzyme activity in diabetic patients could be vital important for prevention of secondary complications caused by diabetes mellitus.

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