

Changes in Anti-Oxidant Enzyme Profile during Haematological Malignancy

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ABSTRACT Reactive oxygen species can initiate lipid peroxidation and DNA damage leading to mutagenesis, carcinogenesis and cell death, if the antioxidant system is impaired. The present work aimed to study the changes in the quantitative *in vitro* activities of the antioxidant enzymes – glutathione peroxidase and superoxide dismutase in the whole blood of our study group. Our study group included both blood cancer patients and age, sex matched healthy controls. We found significant decreases in the activities of both glutathione peroxidase and superoxide dismutase in patients as compared with healthy controls. Our previous work has indicated elevated arsenic concentration in the biosamples of patients. Thus, haematological malignancy is found to be associated with changes in the antioxidant defense system which is correlated with arsenic toxicity.