**Original article:**

**The levels of oxidative stress and antioxidants in diabetes mellitus before and after diabetic treatment with or without antioxidants**

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**Abstract:**

**Background**: Hyperglycemia which is associated with increased oxidative stress and decreased antioxidant status because of imbalance between oxidative stress and antioxidant status is considered as primary cause of diabetic micro as well as macrovascular complications.

**Material and Methods**: The present study has been undertaken to evaluate oxidative stress and antioxidants in diabetes mellitus before and after diabetic treatment with and without antioxidants. In all 90 subjects were enrolled, 30 subjects were age (35-55years) and sex matched controls. Test group comprised of clinically diagnosed cases of Type 2 (n=60) diabetic patients. Biochemical parameters like serum Malon-di-aldehyde (MDA), nitric oxide (NO), Superoxide dismutase (SOD), Reduced Glutathione (GSH) and total antioxidant status (TAS) were analyzed in control and diabetic patients. The diabetic group was further categorized as Group I (n=30) had only diabetic treatment and Group II (n=30) had received A-Z multiantioxidant tablet (vitamins & minerals) along with diabetic treatment for a period of 3 months. All above parameters reassessed after 3 months.

**Results** : The results shows significant increased concentration of MDA and NO and significant decreased concentration of SOD, GSH and TAS in diabetes mellitus as compare to controls. But group II showed significant reduction in oxidative stress and significant rise in antioxidant status as compare to group I who were treated without antioxidants.

**Conclusion** : Hence the present study concluded that the supplementation of multiantioxidants along with diabetic treatment improve antioxidant status and decreased oxidative stress which can help to minimize further micro as well as macrovascular complication in diabetes mellitus.

**Keywords:** Oxidative stress, Antioxidants, type 2 Diabetes mellitus