3. AIMS AND OBJECTIVES

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Speculation that reactive oxygen species (ROS) participate in the pathogenesis of diabetes and its complication has prompted interest in the use of antioxidant supplementations in diabetes.

The aim of present study was to determine oxidative stress and antioxidant status in diabetics and to evaluate the efficacy of antioxidant vitamins and multiantioxidant supplementation in type 1 and 2 diabetic patients.

The project was designed with following well defined aims and objectives keeping in mind.

Objectives - We have studied following biochemical parameters.

1. To determine the concentration of plasma glucose levels (PG) fasting and postprandial in both type of diabetes mellitus.

2. To estimate amount of glycated hemoglobin (HbA1c) in both type of diabetes mellitus.
3. To estimate serum total lipid peroxide in form of MDA and serum nitric oxide (NO) to evaluate the oxidative stress.

4. To measure the status of various antioxidants like serum superoxide dismutase (SOD), erythrocyte reduced glutathione (GSH), serum total antioxidant binding capacity (FRAP).

5. To determine the percentage of platelet aggregations.

6. To estimate concentrations of erythrocyte membrane proteins, cholesterol and phospholipids in both type of diabetic patient.

7. After assessment of baseline concentrations of above biochemical parameters, the diabetic patients were divided into different groups and supplemented antioxidants like Vitamin E (Evinal 400 mg/day), C (Celin 500 mg/day), vitamin (E+C) and Multi antioxidants (A-Z tablets / day) for a period of 90 days and evaluation of efficacy of antioxidant supplementation using statistical tests.