Summary and Conclusion

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Forty renal patients as well as ten healthy volunteers were selected for this study.

The selected subjects were classified into the following groups.

-**Group I:** Control group (comprises 10 volunteers, 5 females and 5 males)

-**Group II:** 10 patients with end stage renal failure under dialysis (4 females and 6 males).

-**Group III:** 30 renal patients under conservative treatment (14 females and 16 males).

All patients were subjected to a thorough history taking and clinical examination with special stress on: -

❶ Etiology and manifestation of renal failure.

❷ Duration of disease and duration of dialysis.

❸ Manifestations of atherosclerosis and recurrent infection.

The following laboratory tests were performed to every subject:

❶ Complete blood picture

❷ Complete urine analysis.

❸ Serum albumin, Serum urea, Serum creatinine and creatinine clearance.

❶ Serum glutathione and glutathione reductase.

Each patient was given an antioxidant therapy composed of vitamin A (5.54mg/day), vitamin C (100mg/day) and vitamin E (30 mg/day) for 6 months. The patients were reevaluated and the laboratory investigation were reperformed after treatment.

The following were reported in our work: -

-Antioxidant activity as measured by glutathione and glutathione reductase was significantly lower in all renal patients when compared with controls.

-Glutathione and glutathione reductase was significantly lower in group II when compared with group III.

-Hemoglobin level, creatinine clearance and serum albumin were significantly lower in all renal patients when compared with controls.

-Hemoglobin level, creatinine clearance and serum albumin were significantly lower in group II when compared with group III.

-Serum creatinine and serum urea was significantly higher in all renal patients when compared with controls.

-Serum creatinine and serum urea was significantly higher in group II when compared with group III.

-There was significant positive correlation between glutathione and glutathione reductase, hemoglobin level, serum albumin and creatinine clearance.

-There was significant negative correlation between glutathione and serum creatinine, urea, and duration of disease, hypertension, infection and proteinuria.

-There was significant positive correlation between glutathione reductase and hemoglobin level, serum albumin and creatinine clearance.

-There was significant negative correlation between glutathione reductase and serum creatinine, urea, and duration of disease, hypertension, infection and proteinuria.

Treatment with antioxidant for 6 month has the following effects: -

-Significant elevation in glutathione, glutathione reductase and hemoglobin level in group II (dialysis group).

-Significant elevation in glutathione, glutathione reductase creatinine clearance serum albumin and hemoglobin in group III (patients under conservative treatment).

-Significant reduction in serum creatinine and serum urea in group III.

Conclusion:

Our study clearly showed the beneficial effect of antioxidant therapy in improving the antioxidant status, reduction of complication and reduction of progression of renal impairment in all patients.