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Beneficial effect of *Aloe vera* on renal functions in STZ-induced diabetic nephropathic animal by reducing oxidative stress and electrolyte imbalance

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Diabetic nephropathy is the vascular complications of diabetes diagnosed by increase blood pressure, micro albuminuria and decrease GFR. The present study evaluates the possible beneficial effects of *Aloe vera Power* (AP) on renal functions in STZ induced Diabetic Nephropathic (DN) animal and its possible mechanism. Diabetic nephropathy was induced by single dose of STZ (60 mg/kg of body weight, i.p.) and confirms it by assessing the blood and urine biochemical parameters on 28th day of after its induction. Selected DN animal were treated with AP (150 mg/kg and 300 mg/kg, p.o.) for the period of four week. Biochemical parameters in blood and urine were estimated after four weeks of treatment i.e. 56th day of protocol and oxidative stress parameters like Lipid Peroxidation (LPO), Superoxide Dismutase (SOD), Catalase (CAT) and reduced Glutathione (GSH) were estimated in the tissue homogenate of kidney. It was observed that treatment with AP results in significant improvement in renal function parameters. Results of the study also suggested that AP treated group's shows significant improvement in the oxidative stress parameters like decrease in SOD, CAT and GSH level and increase in LPO level significantly ($p < 0.01$) compared to DN animal. The levels of electrolytes were found to be improved in AP treated DN animal compared to DN animal. Present study concluded that AP ameliorates the renal function by reducing the oxidative stress and electrolyte imbalance in DN animals.

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