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Effect of Herbal Medicines on Kidney Function Markers in Type II Diabetic Subjects

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Objectives: Herbal medicines have been used in the treatment of diabetes, kidney diseases and other problem for a long time in folk system. Hence in the present study we evaluate the beneficial effect some herbal medicines on kidney function in subjects with diabetes mellitus.

Methods: Total of 100 subjects those who have T2DM were randomly selected from the week end diabetic clinic of Centre for Translation Research, Jiwaji University. The subjects have divided into four groups to evaluate for its antidiabetic activity and. Regimen I- Gymnemma sylvester, Regimen II- Triphala, Regimen III Triphala + Gymnemma sylvester and Regimen IV diabegon kwath (polyherbal formulation) for 3 months. Fasting and PP blood glucose and glycosylated hemoglobin, Kidney markers (Urea, Uric acid, Creatinine) oxidative stress markers (SOD, Catalase, GSH, TBARS) and urine markers (sugar, protein, ketone bodies) were also monitored in the study subjects. ANOVA and paired t-test were made the compare the significance.

Results: Administration of herbal regiments regularly for 3 months resulted in significant reductions of blood glucose ($P < 0.001$) and glycosylated hemoglobin levels ($P < 0.001$) in all regiments. Also, kidney function markers (Urea levels reduced 3.8 - 15.7 % $P < 0.05$, Uric acid levels reduced 7.3 - 12.0 % $P < 0.05$ and Creatinine levels reduced 12.8 - 24% $P < 0.05$ $P < 0.05$) and the antioxidant markers were also improved significantly ($P < 0.05$).

Conclusions: Herbal medicines treatment showed a significant improvement on kidney functions in human type II diabetes mellitus. It may be due to the anti-oxidant property of these medicines.