

ANTIDIABETIC EFFECTS OF POLYHERBAL PREPARATION AS COMPARED TO STANDARD ALLOPATHIC DRUGS IN ALLOXAN INDUCED DIABETIC ALBINO RATS

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(Accepted 26 February 2009)

ABSTRACT – Alloxan induced animal model was used to evaluate the potential antidiabetic effect of polyherbal preparation of eleven selected plant extracts viz. *Gymnema sylvestre*, *Ficus glomerata*, *Pterocarpus marsupium*, *Juniperus communis*, *Balsamodendron mukul*, *Trigonella foenum-graecum*, *Phyllanthus niruri*, *Mucuna pruriens*, *Cichorium intybus*, *Momordica charantia* and *Sphaeranthus indicus* as compared to standard allopathic drugs. The diabetic animals were given allopathic medicines Duotrol (mfd. by USV Ltd. B.S.D. Marg, Govandi, Mumbai) composition (Glibenclamide and Metformin hydrochloride) 25.25 mg/kg body weight and Enselin-2 mg (Mfd. by Torrent Pharamaceuticals Ltd. Indrad-382721, Distt. Mehsana, India) composition (Rosiglitazine) 0.06 mg/kg body weight both twice a day and another group were given polyherbal preparation 1 g/kg body weight twice a day) with normal diet and the treatment continued for thirty days. It maintained the weight of the animals near to the control rats but a significant decrease in weight was noted in diabetic animals without any treatment. The blood glucose level in treated animals were near to that of control ones. Blood urea ($P < 0.01$) and serum cholesterol ($P < 0.05$) increased significantly in alloxan diabetic rats. The polyherbal treatment decreased the blood urea ($P > 0.05$) and serum cholesterol ($P > 0.05$) to that of control ones. A similar effect was seen with allopathic drugs treatment. The results indicates that the active principles in polyherbal preparation of plant extracts have similar hypoglycemic activity to standard allopathic drugs treatments. However, in amelioration of diabetes the polyherbal treatment showed a better action as compared to standard allopathic drugs.

Key words : Alloxan, antidiabetic, polyherbal preparation, glibenclamide, metformin hydrochloride, Enselin, rat.