

Effect of Polyherbal Formulation DM13 in the Management of Diabetes Mellitus Type 2 (DMT2) Patients Treated with Glybenclamide and Metformin - A Retrospective Cohort Study

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This study was designed to evaluate the effect of DM13 (Hot water extract) in DMT2 patients who had been treated with Glybenclamide or Metformin, to determine the feasibility of reducing the dosage of Glybenclamide and Metformin and to determine the adverse effects of concomitant administration of DM13 with Glybenclamide or Metformin. Case records of DMT2 patients (25 — 65 years) were selected from the Diabetic Clinic of GWAI, University of Kelaniya.

Fasting blood glucose levels of Glybenclamide Group (GG: n = 37) and Metformin group (MG: n 35) were 227.2 ± 11.6 mg/dl (GG) and 230.43 ± 6.51 mg/dl (MG) prior to the DM13 treatment. Patients had been allowed to use the recommended dosage of Glybenclamide (15.0 ± 1.4 mg/day) or Metformin (1766.0 ± 176 mg/day) in addition to the DM13 (240 ml/day in two divided doses) and instructed to follow the method of diet control.

The dosage of Glybenclamide and Metformin had been reduced gradually and withdrawn completely at the 7th week and 11th week respectively. GG and MG had shown significant reduction in fasting blood glucose levels (GG = 121.43 ± 6.51 and MG = 95.29 ± 1.03 mg/dl) in response to the DM — 13, Glybenclamide and Metformin ($P < 0.01$). They had shown moderate score of severity in polyuria (2.56 ± 0.14), numbness (2.41 ± 0.16) and myalgia (2.09 ± 0.2) and had recovered gradually during the period of 12 weeks ($P < 0.001$).

Hypoglycaemic effect of DM13 was previously established (Chandrasiri et al 2005). DM13 had shown significant effect in controlling the fasting blood glucose level while minimizing the dosage of Glybenclamide and Metformin without adverse reactions. Therefore, DM13 can be recommended for DMT2 patients as an adjunct treatment. It suggests studies to determine the mechanism of the synergistic effect of DM13 with Glybenclamide and Metformin and randomized phase III clinical trials.

Key words: DM13, Glybenclamide Metformin, Diabetes, Hypoglycaemic activity

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