ABSTRACTS :

Usage of: Second Generation Sulphonylurea in indian-Diabetics

Present Status :

Glipizide and glyburide are two new second generation sulphonylurea -agents for use in NIDDM Type II Diabetes. Second generation sulphonylureas potentiate insulin biological effects and also have extra-pancreatic effects. On weight basis the new agents may be more effective at lower dosage though overall hypoglycaemic response is as for other sulphonylurea. These drugs are well tolerated with less frequent complications and adverse drug interactions. Prolonged hypoglycaemia following chronic administration of oral anti-diabetics which may prove sinister, is rarer with glipizide.

On the contrary, many world wide comparative studies generally indicate that the first generation oral hypoglycaemic drugs are equally effective in non-insulin dependent diabetes mellitus when doses are adjusted on an individual basis to produce best obtainable euglycaemic control. Even the rates of primary and secondary failure with these new drugs" are virtually identical to those observed over many years with first generation drugs. Thus far; the available data do not indicate any substantial advantages with the second-generation drugs in treating diabetes, again these are costlier. Only gain is, fewer side effects.

Properly designed comparative studies addressing this issue are underway in many parts of the world.

Following are some abstracts of the Indian literature on clinical evaluation of the second gentration sulphonylurea drugs.

Reference

Kreisberg, G.A, : The Second-Generation-sulphonylurea : change or progress ? Annals of Internal Medicine, (1985) 102, 1, 125-126.

Clinical Efficacy of Glipizide in Non-Insulin Dependent Diabetes Mellitus in India

Sharma, G.P. & Ahuja, M.M.S.

Presented at Jt. Annl. Conf. of A.P.I., 1983

An open trial of second generation sulphonylurea-Glipizide in non-insulin dependent diabetes is reported. The patients included were :

Group I : NIDDM (20 cases) without prior drug therapy-Mean age 47.3 yrs; mean body weight 57.7 Kgs; mean duration of diabetes-3 months.

Group II : NIDDM (30 cases} on different drug therapy, mean age 58 yrs, mean body weight 61 kgs, mean duration of diabetes 10.3 yrs.

Mean dose of drug employed was 19 mg/24 hours in two divided doses, mean period of follow up was 6 months, successful control was possible in 81%. Glycaemia levels were lower in Group I than in Group II. Cholesterol and triglycerides showed no change in pre- and post-therapy values. No side effects were observed in this open trial.

Short term hypoglycaemic response of 'Minidiab (Glipizide) in 40 Type II diabetics.

P. Shyam Sunder

In this study, 17 newly diagnosed Type II diabetics and 23 diabetics who were already on oral therapy were given glipizide and followed for 6 months.

The dose requirement was much lower in newly diagnosed diabetics and none of the cases manifested secondary failure during the 6 month follow up period.

Journal of Diabetic Association of India 1981 Vol. XXII, No. 3,

Abstracts Based on Communications,from U.S. Vitamin (India) Ltd.

Glipizide in the Control of Maturity Onset Diabetes Mellitus

Dr. Prithika Chary, MD (Medicine), DM (Neuro.), Ph. D.
Dr. Sam G.P. Moses, B.Sc., MD, FICA, Madras

30 subjects with maturity onset diabetes mellitus, between the ages of 30-70 years were studied at a private diabetological practice over a 6 month period, to assess the efficacy of **GLIPIZIDE** as an oral antidiabetic agent. Minimum dose of 2.5 mg per day and maximum dose of 15 mg. per day had been used. 70% showed a good response, while 6.67% showed a poor response. Tolerance was very good in all except one patient. Side effects occurred in 33.33 % and were mainly restricted to mild gastrointestinal disturbances like nausea and dyspepsia. 13.33 % showed mild hypoglycaemic symptoms.

Glipizide in Diabetes Mellitus

Alpa Parikh, H.B. Chandalia, Bombay

A group of 15 insulin dependent, newly diagnosed diabetic were treated with diet therapy and glipizide (Glynase) in doses of 2.5 mg OD to 2.5 mg TDS for one month period. The post-prandial blood glucose fell significantly on treatment : pretreatment (Mean±SEM) 302±22.6 mg/dl; post-treatment 196±14.4 mg/dl, $p<0.005$. The glycosylated hemoglobin also registered a drop : pretreatment (Mean±SEM) 10.2±0.7%; post-treatment 9.2±0.4%. None of the patients had hypoglycaemia or any other adverse side effect on treatment with glipizide.

Effect of Glipizide Treatment on Glucose and lipid metabolism in patients with non-insulin dependent diabetes mellitus

Dr. V. Mohan, Dr. N.P. Singh Verma

Department of Medicine, Maulana Azad Medical College, New Delhi

The study consisted of 20 NIDDM patients, all of whom were newly diagnosed and were not on any prior medication for diabetes.

Pre-treatment-the mean basal fasting blood glucose was 204.0±64.26 mg% (Range 130-330mg%). The mean basal post-prandial blood glucose was 299.7±83.34 mg% (Range 208-490 mg%). The mean basal HbA1 level was 12.26±2.20 (Range 9.2-16.26%). The mean basal serum cholesterol was 215.35±31.26 mg% (range 170.280 mg%). At 2 months fasting blood glucose was 111.6±30.9 mg% and post prandial blood glucose 165.25±51.63 mg%. Hb A/C was 11.14±2.0% cholesterol was 204.05±23.4 mg %).

The average dose of glipizide used was 8.25±3.72 mg. The least dose was 5 mg. and the highest dose 17.5 mg.

Results showed excellent metabolic control in 75%, good control in 10% and fair metabolic control in 15 % . There was no patient in the study in the poor control category at the end of 2nd month on glipizide therapy.

Side effects were as follows : 1 (5 %) patient developed nausea, 1 (5%) developed paresthesias, 1 (5%) developed mild skin rashes, 1 (5%) had hypoglycemic episode and 2 patients (10%) developed vertigo.

Plasma fibrinogen and fibrinolytic activity in diabetics before and after glipizide therapy

B.D. Agarwal, K.K. Sikka, D.K. Srivastava & Ambrish Mithal

G.S.V.M. Medical College, (Diabetes Clinic, K.P.S. Institute of Medicine) Kanpur.

30 diabetics with maturity onset diabetes, mean age 51.33f8.7 years, were administered Glipizide, mean dose of 11.0 mg ± 4.57 mg and followed for 6 weeks. Excellent blood glucose control was observed in 84%, good in 13.3% and poor in 6.67%. Plasma fibrinogen, ECLT, reduced by 35.35 mg/dl and 45.62 (min.) respectively in 6 weeks. However, these values are still remaining elevated as compared to a control group.

Comparative trial of glipizide and glibenclamide in the treatment of maturity-onset diabetes mellitus

Subba Rao A. V.

Dissertation submitted to S. V. University, Tirupati

40 diabetics with NIDDM were administered matched therapy-Glipizide and Glibenclamide. Mean dose for glipizide was 6.3 mg/day and for glibenclamide 7.6 mg/day. Excellent to good response was observed in 65% on glipizide and 70% on glibenclamide, poor response was seen equally 5% in each instance.

Though age of onset did not seem to influence response, diabetics with longer duration of disease respond better to glibenclamide than glipizide and same applied to those receiving previous medication. Side effects such as hypoglycaemia were more frequent in glibenclamide group 20% compared to with Glipizide 5%, other side effects were similar.