

## **ANALYSIS OF B-CELL FUNCTION AND LIPID PROFILE AFTER TWO MONTHS GUAR THERAPY IN INSULIN DEPENDENT DIABETES (IDDM)**

*A. Gupta, V. Singh, B.C. Sangal*

*Dept. of Medicine E.S.I. Hospital, S.M.S. Medical College, S.D.M. Hospital & Research Centre, Jaipur*

The study included 10 Insulin requiring diabetics aged 10-40 years ( $29.2 \pm 13.98$  years) (8 males and 2 females, B.M.I. =  $22.77 \pm 4.43$ ) and duration of diabetes 8 months to 10 years ( $4.53 \pm 3.93$  years). They were supplemented with 5 gms. guar gum granules daily for two months period. However their dose of insulin (actrapid/monotard) was carefully adjusted after periodical assessment of Blood and Urine Sugar measurement throughout the study.

Oral glucose tolerance test, glycosylated hemoglobin (Hb Alc), C-peptide estimation by R.I.A. method and lipid profile of these patients were estimated before start and after two months of guar diet.

There was a statistically/significant reduction in overall glycaemic response of glucose (from fasting to two hours Blood Glucose Values  $P = < 0.01$ ) and in glycosylated hemoglobin from  $7.7 \pm 0.44\%$  to  $6.26 \pm 0.66\%$  ( $P = < 0.001$ ) after guar therapy.

The c-peptide value was increased from  $1.48 \pm 0.21$  ng/ml to  $1.94 \pm 0.19$  ng/ml. ( $P = < 0.001$ ) after guar diet which shows the significant effect of guar gum on B-cells of pancreas in insulin dependent diabetics. Whereas their S-cholesterol, LDL Cholesterol, VLDL Cholesterol and S-Triglycerides showed decreased values & HDL- Cholesterol showed increased value after guar therapy but these values are not statistically significant.

Simultaneously their insulin requirement was also decreased from  $20.0 \pm 16.43$  units to  $14.66 \pm 10.50$  units (Actrapid) and from  $35.0 \pm 17.32$  units to  $22.5 \pm 8.66$  units (Monotard) after initiation of guar therapy.

These results confirm that dietary supplementation of guar gum (5 gms. per day) improves overall diabetic control and also decrease insulin requirement to some extent without influencing the lipid profile in insulin dependent diabetics (IDDM).