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Reversing Time :A possibility through chronobiology EFFECT OF TIME RESTRICTED MEAL INTAKE ON ANTHROPOMETRIC AND BIOCHEMICAL PARAMETERS IN TYPE 2 DIABETICS

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Abstract

300 diabetics of OPD, Endocrinology, KGMU were randomly divided based on whether they have consented (TRM(time restricted meal) group) or not (control group). Baseline parameters were recorded and follow up was done at 6 and 12 months for anthropometric measurement, height, weight, waist hip ratio, aBSI, neck size, blood sugar (Fasting and post prandial), HbA1c and lipid profile (Serum Cholesterol, Serum triglycerides, HDL-Cholesterol, LDL- Cholesterol, VLDL Cholesterol). Patients were told about chronomedicine and how it affects their health. Single intervention in TRM group - timing of dinner was at or around 7 pm.

Results

65% of TRM group had normal control of blood sugar level (Hba1c values) and only 40 percent of those in the non- TRM group (control group) had normal sugar level after 12 months. BMI ($p < 0.0030$), Hip size ($p < 0.0012$), systolic blood pressure ($p < 0.0211$), HbA1c ($p < 0.0017$), blood sugar (fasting ($p < 0.0167$), and post- prandial $p < 0.0001$) changed significantly. Total cholesterol decreased by 18 mg/dl (p value 0.3), Triglycerides decreased by 32 mg/dl (p value 0.01), LDL decreased by 21mg/dl (p value 0.03), VLDL decreased by 5.5 mg/dl (p value 0.04), HDL increased by 8 mg/dl (p value 0.20). p value was significant in all parameters of lipid profile.

Conclusion

Highly significant results were obtained in the case of fasting and post prandial values of blood sugar in TRM group, when compared to the control group. The effects of time restricted meal intake in diabetics show promise and are worth exploring further.

Keywords: Chronobiology, Endocrinology, Circadian Rhythm, Time restricted meal intake, Type 2 diabetics

Abbreviations: TRM: Time restricted meal

Funding and Conflicts of Interest

None