5. CONCLUSIONS
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Diabetes is one of the most common non communicable diseases of worldwide significance. The use of numerous natural and plant-derived compounds as supplement therapy has increased considerably over the past few decades. The possible benefits of supplements’ use for reducing the risk of developing chronic diseases have been reported (Hercberg et al., 1998). Adequate intake of fruits and vegetables, which are rich sources of vitamins and minerals, has been reported to lower the risk of all cause morbidity and mortality in chronic diseases (Ness & Powles, 1997; Law & Morris, 1998) including diabetes (Feskens et al., 1995; Snowdon et al., 1985; Colditz et al., 1992; Gittelsohn et al., 1998).

Although numerous experimental studies have been reported on the use of compounds from various plant origins in diabetes, only limited clinical data are available regarding the use of supplements and whether they are associated with lower risks for developing diabetes mellitus. The present study was, therefore, undertaken to investigate health outcome measures and vascular risk factors in patients with T2DM receiving resveratrol or vitamin C supplementation.

The following are some of the important conclusions made from the present study;

i. Oral supplementation of vitamin C (500mg/OD) along with the antidiabetic drugs is found to be effective in patients with T2DM to improve not only hyperglycemia but also the associated risk factors like body weight, oxidative stress and lipid profile. Supplementation of vitamin C is thus, helpful in the control of diabetes and management of long term microvascular and macrovascular complications.

ii. To the best of the writers’ knowledge, this is the first clinical study to evaluate the effect of resveratrol as supplement in Indian patients with T2DM. Oral supplementation of resveratrol (250 mg/OD) along with the antidiabetic agents is
found to be effective in patients with T2DM to improve vascular risk factors, namely body weight, oxidative stress and lipid profile. Resveratrol supplementation may also help in improving the blood glucose level. However, in the present study the change in glycaemic control was very small. But any small change can also be very helpful in controlling the long term complications of diabetes.

iii. T2DM patients are known to be more sensitive to be deterioration in the QoL because of the chronic disease, related complications, alternative treatments, diet restriction and lifelong treatment with tablets or insulin. Supplementation of vitamin C or resveratrol is found to be effective in improving the QoL in patients with T2DM. Supplementation with vitamin C or resveratrol also improves the patient treatment satisfaction.

The strength of this study is its prospective, open label randomized control design which decreases the probability of confounding as the baseline data reveal equal distribution of covariates. Its limitation is that open label trials are open to challenge for bias as they do nothing to reduce the placebo effect and the study is also limited by its relatively small sample size.

5.1 Implications and recommendations

The following implication and recommendation are made for interventions and future research based upon the findings of this study,

The supplementation of vitamin C (500mg/day) in the treatment and management of T2DM is recommended. However, more randomized controlled clinical trials with a large number of people are needed to fully and unequivocally establish this.
Conclusions

This preliminary study provides data about the possible clinical effects of resveratrol supplement in patients with T2DM and a base for future studies. More clinical trials are, however, needed to elucidate the effect of resveratrol in T2DM.

On the basis of the present study it is also suggested that the health outcome measures should also be integrated in clinical studies, which give a better picture of any intervention.