Dyslipidemia is a relatively common problem observed in clinical practice, seen both in instances when evaluating patients with subjective problems as well as among those coming to take a regular preventive exams. Needless to say, discovery of any significant vascular disease necessitates initiation of proven medical therapy, which, ideally, besides its action on blood lipid values, should also exert effect on other, equally important parameters of vascular disease. **Study goal:** Goal of the study was to evaluate effects of regular consumption of quercetin on blood lipid values among healthy persons with dyslipidemia discovered on routine laboratory work up for different reasons. The study was designed as double blind, randomised study with two hundred patients in each arm and total duration of the study being two months. **Results:** Groups were randomized in accordance with age and sex of patients as well as degree of blood lipid elevations. Average cholesterol, triglycerides, HDL and LDL value in both groups were similar to statistically insignificant differences among groups. Test group A had average values of cholesterol 6,21 mmol/l, triglycerides 3,02 mmol/l, HDL 0,89 mmol/l and LDL 3,98 mmol/l. Control group had values of same parameters as follows 6,17 mmol/l, 3,14 mmol/l, 0,92 mmol/l and 3,84 mmol/l respectively. Upon completion of therapy, test group has demonstrated a decrease in cholesterol, triglyceride and LDL values with parallel increase in HDL. Average cholesterol values at the end of the study were 5,09 mmol/l, whereas HDL and LDL values changed to 1,29 mmol/l and 2,91 mmol/l respectively. **Discussion and conclusion:** Patients rarely agree to start taking medications on a permanent basis, medications most of which are related to certain, not that infrequent, side effects. So these persons start using other means in an attempt to put blood lipids under control. Some of these means include lifestyle modifications, exercise, but also use of food supplements that are proven to lower blood lipids under control. Some of these means include lifestyle modifications, exercise, but also use of food supplements that are proven to lower blood lipids. Among these available supplements, quercetin has recently attracted a lot of attention due to its strong antioxidant effects. **Key words:** dyslipidemia, quercetin, health promotion activities.
KONTROLA
Average cholesterol, triglycerides, HDL and LDL value in both groups was similar. Graph 1. R in the discussion of this study. As part of a separate study, measurement also included effect of nutrition on this parameter, we did not include change in this parameter in the discussion of this study. As a part of a separate study, measurement also included analysis on apolipoprotein B which is a proven risk factor for development of cardiovascular diseases, however, due to short duration of the study, decrease observed among patients in the test arm of this study was not considered clinically relevant, although it was documented.

4. RESULTS

Average cholesterol, triglycerides, HDL and LDL value in both groups were similar to statistically insignificant differences among groups. Test group A had average values of cholesterol 6,21 mmol/l, triglycerides 3,02 mmol/l, HDL 0,89 mmol/l and LDL 3,98 mmol/l. Control group had values of same parameters as follows 6,17 mmol/l, 3,14 mmol/l, 0,92 mmol/l and 3,84 mmol/l respectively. Upon completion of therapy, test group has demonstrated a decrease in cholesterol, triglyceride and LDL values with parallel increase in HDL. Average cholesterol values at the end of the study were 5,09 mmol/l, whereas HDL and LDL values changed to 1,29 mmol/l and 2,91 mmol/l respectively. We also observed a decrease in triglyceride values, however as the study was not designed to monitor changes in triglyceride values and bearing in mind great effect of nutrition on this parameter, we did not include change in this parameter in the discussion of this study. As a part of a separate study, measurement also included analysis on apolipoprotein B which is a proven risk factor for development of cardiovascular diseases, however, due to short duration of the study, decrease observed among patients in the test arm of this study was not considered clinically relevant, although it was documented.

5. DISCUSSION

Dyslipidemia remains very important risk factor for the development of myocardial infarction, stroke and other cardiovascular and cerebrovascular disorders (3). Side effects, costs and duration of statin therapy makes it unappealing to many asymptomatic patients found to have this problem and are one of the main reasons making patients try some alternative methods of bringing these parameters under better control. Different supplements have more or less effect in this regard but they are all limited in their action to dyslipidemia only. Quercetin, just like statins, has pluripotential actions which are mostly due to its antioxidant actions (6). In this study, we have proven that quercetin use exerts positive effects on blood lipids. Throughout duration of the study, none of the patients had any undesired side effects necessitating cessation of therapy or exclusion from the study. Logical sequel to this study is to evaluate whether long term treatment with quercetin brings about reduction in incidence of cardiovascular diseases among persons with dyslipidemia. This will definitely be of interest given reduction of apolipoprotein B observed incidentally in this study. In any case, we can easily state that we have added another valuable supplement to our therapeutic armamentarium – Quercetin.

Conflict of interest: none declared.

REFERENCES

4. Niu CS, Chen CT, Chen LJ, Cheng KC, Yeh CH, Cheng TF. Horm. Decrease of blood lipids induced by Shan-Zha (fruit of Crataegus pinnatispida) is mainly related to an increase of PPA Rx in liver of mice fed high-fat diet. Metab. Res. 43(9): 625–630.