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Ginkgo Biloba for Reducing Hyperlipideamia: Case Study

Ammal E. Ibrahim[1] , Dhuha H. Fadhil[2], Alaa H. Jawad[2], Jnan Thabit[3], Rasha Alqadery[2], Ahmed Al-Amiery[4] and Emad Yousif[1]

1. Department of Pharmaceutical Chemistry, College of Pharmacy, Al-Nahrain University, Baghdad, Iraq; dr.ammalalobaidi@yahoo.com
2. Department of Chemistry, College of Science, Al-Nahrain University, Baghdad, Iraq; dhuhafadhil@yahoo.com (D.F.); alaaalqaisisma@gmail.com (A.H.J.);drrashaalqadery@yahoo.com (R.A.); emad_yousif@hotmail.com (E.Y.)
3. The Central Agency for Standardization and quality control, The Ministry of Planning, Baghdad, Iraq, Jnan _1972@yahoo.com.
4. Environmental Research Center, University of Technology, Baghdad, Iraq * Correspondence: dr.ahmed75@ukm.edu.my

Abstract

Hyperlipidemia case was described as a rise of lipid profile or lipoproteins in the blood. This study describe briefly investigate the reducing hyperlipideamia impact of Ginkgo biloba on the level of lipid profile.

Key word: GINKGO, hyperlipideamia, lipid profile.

Introduction :

Ginkgo biloba is the ancient famous living tree and could be traced evidence more than tow hundered milion years. The issu of ginkgo was mentioned firstly in shen nong,s classic material materia medica and were published in 2,800 B.C. Recently the researchers focus on the advantages and efficient ingredients of ginkgo biloba overdue 1950s. 20 years of researchs prouce the development of proprietary standards extract of leaf of ginkgo. Now aday, ginkgo biloba extract has been one of the exceedingly utilized phytophagous in the universe and the focus of comprehensive scientific researchs, inclusive more than 400 published papers and cases.[1] A ginkgo biloba (GBE) could help maintain normal with the healthy circulation in the human body, having the extremity. In addition enhanced efficient

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circulations through maintaining the elasticity with the strength of the both large blood vessels and capillaries. It became easier for the blood and oxygen to reachs the extremity or organ properties through the fine capillaries. Lactones (Terpene), that were specific to ginkgo biloba, could inhibits PAF (platelet activating factors). Specifically, ginkgolide B has been appeared to PAF recepotors. It is considered as a dynamic and practical constituent in biloba.[2] Logical investigations involving human subjects, institutionalized ginkgo biloba concentrate was to positively affect enhancing blood dissemination. The body had lipid contents in the cell layers. This properties make them defenseless against attacks and harmed by free-radicals. Oxidized lipid, for example, lipid peroxide, can change cells and layers prompting to the progressive loss of semi permeability.[3] Flavonoid glycosides with proan-thaiocyanidines in GBE had cancer prevention agent bolster the body,s cell reinforcement protection framework fighting free radicals. In continuation of previous studies [4–14], herein we are reporting investigation started from the Ginkgo biloba as the active material for reducing level of lipid profile in human.

Experimental Section

This investigation represent the effects of Ginkgo ß-active supplement on the level of lipid profile was investigate. The subject used Ginkgo ß-active it is manufactured by a GMP pharmaceutical production facility, manufacturing is strictly controlled contains 120mg of standardized ginkgo bibola leaf extract (extraction ratio 50:1), in scientifically-supported ration of 27% ginkgo flavonoid glycosides and 7% terpene lactones (ginkolides A,B,C and bilobalide content). Lipid profile measurement done with Reflotron plus EN device from German with reflation strip. The samples collected in 0, 30, 60, and 90 days the results revealed in the Fig. 1.

Results and discussion

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The study reveals a significant reduction in serum cholesterol in all the Gingko biloba treated groups. Although Ginkgo used in some countries as a hypolipidemicagent, of its action on lipid profile [15]. Flavonoids present in Ginkgo bilobamay be responsible for its antioxidant as well as hypolipidemic action. The present study, however, has not investigated the mechanism of action of Ginkgo biloba. This should be explored further in future studies. Ginkgo biloba, according to reports from the literature has not been used clinically as a lipid lowering agent .GBE and its flavonoid components -- quercetin, kaempferol, and isorhamnetin are widely found in fruits and vegetables. They reduce the hepatic lipid accumulation and up-regulate the expression of CPT1A [16-19]. In addition, physiological over-expression of this rate-limiting enzyme *in vivo* and *in vitro* was sufficient to prevent the fatty acid-induced lipid accumulation and even reduce insulin resistance [20,21].

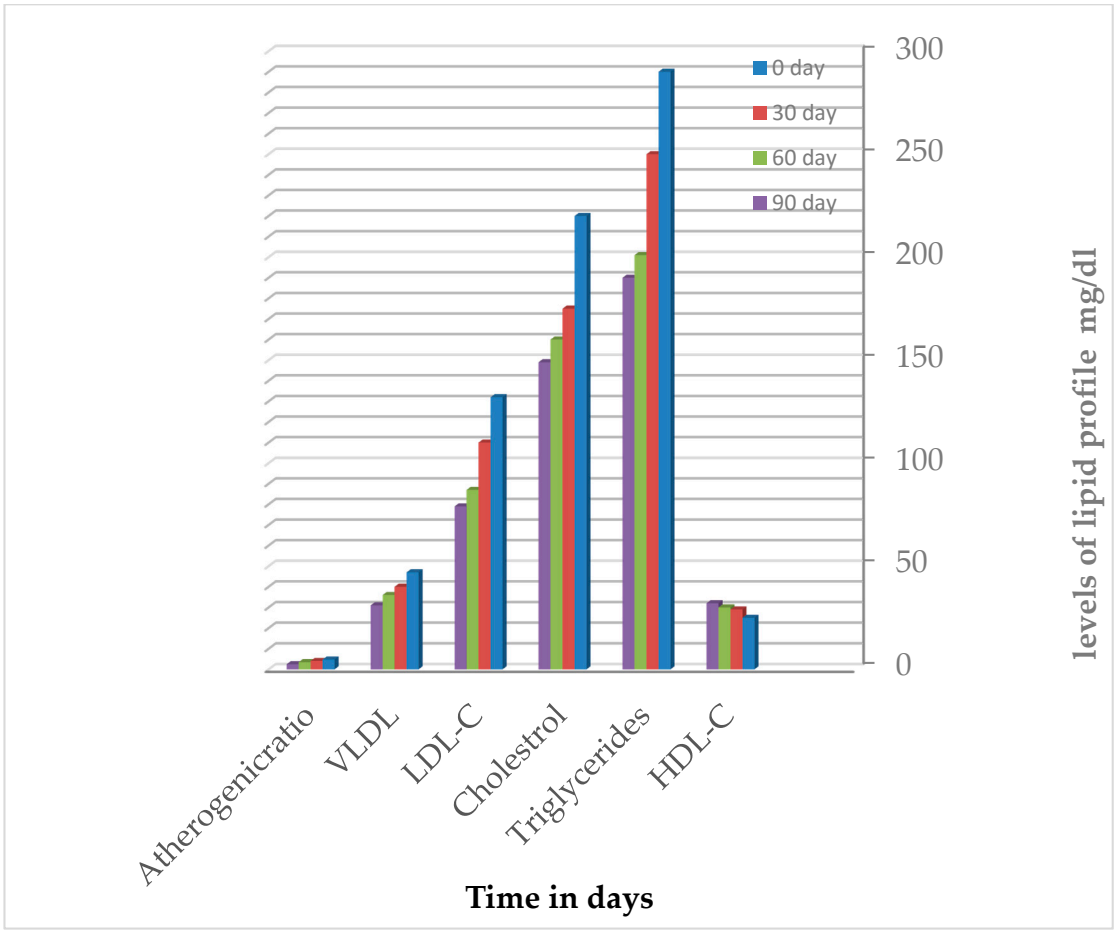

Figure (1) the change in the level of lipid profile during the study

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The majority of fatty acid oxidation in the liver occurs in mitochondria and is regulated by CPT1A. GBE and its flavonoid contents quercetin and kaempferol minus isorhamnetin lowered triglycerides without influencing CPT1A expression, which suggested there were alternative pathways at play. β-oxidation was also reported to occur in peroxisomes and microsomes [22]. GBE had also been reported to up-regulate a suite of genes related to peroxisomes and microsomes oxidation in an NAFLD rat model, such as straight-chain acyl-CoA oxidase (Acox), PPARα, and cytochrome P450 enzymes, indicators of fatty acid consumption. Quercetin and kaempferol were also confirmed to affect partial genes [23-27]. Therefore, GBE and its flavonoids might increase CPT1A expression to promote β-oxidation in mitochondria, as well as in peroxisomes and microsomes.

Conclusion

In conclusion, the present findings have demonstrated that the Ginkgo biloba displays significant activities, in reducing level of lipid profile in human. These findings may be attributed to the numerous effects of the different flavonoids present in the Ginkgo biloba.

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