

Anti-hyperlipidemic and cardioprotective effects of plant natural products: A review

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Abstract

Present review article explains various antihyperlipidemic and cardioprotective effects of various plant natural products. These are antioxidants which found in vegetable oils, fruits, seeds, plant leaves, stem and plant roots. This article emphasize therapeutic potential of sulfur-containing compounds, anthraquinones, thiosulfinates and ajoenes, tricin, quercetin, Kaikasaponin III and tectorigenin, polyphenols, vitamins, and minerals, Flavonoid and phenolics mainly naringenin; aglycone, flavanone (+)-catechin, (-)-epicatechin, and procyanidin thymol and carvacrol, ceramidine B (limonoid), ginsenoside Rb1 and Rb2, naphthalenic compounds 6-methoxysorigenin and its glycosides, acylates, madecassoside (terpenoids), Miroestrol(phytoestrogen), quercetin rutinoside (rutin), tournefolal, tournefolic acids A and B. Few other compounds such as thiobarbituric acid, niacin, hederagenin monodesmosides, kalopanaxsaponin A (KPS-A) and sapindoside C, abietane and seco-abietane diterpenes, lycopene, Curcubitacins A, B, C, D, E, I, J, K, and L and Colocynthosides A, and B were found active. For a healthy life regular use of plant natural products/ possess bio-organics to reduce the cardiovascular risks by using traditional plant based diets and herbal preparations. Before use well-designed clinical trials are essentially

Introduction:

Today due to bad food habits hyperlipidemia, diabetic cardiomyopathy and cardiovascular diseases (CVDs) become serious global health problems. Cases related to obesity, hyperlipidemia, atherosclerosis and diabetic cardiomyopathy (DCM) are increasing day by day and large numbers of deaths are occurring worldwide [1]. There are two important reasons of these CVD diseases and disorders; first one is metabolic storage of excess fat/lipids (adipogenesis) in body tissues after dietary use, second genetic or heredity related disorders. Hyperlipidemia, is main cause of generation of CVDs myocardial infarction and strokes. It is a major pathological condition associated with disrupted lipid levels and physiological redox homeostasis. Increased cholesterol levels create problems in streaming of blood through blood vessels. This hypercholesterolemic state causes multiple risks to cardiovascular system impose excessive release of reactive oxygen species (ROS) that leads to enhanced lipid peroxidation[2]. It also aggravates atherosclerosis and oxidative stress in patients (Hannan PA et al, 2016) [2]. Today most of the people are affected due to obesity induced blood pressure, blood vessel inflammation arteriosclerosis and diabetic cardiomyopathy (DCM). This is a more common and severe complication of diabetes that is causing high mortality in association of blood pressure [3]. Cardiovascular diseases (CVDs) and other associating disorders such as myocardial infraction, hypertension, peripheral vascular diseases, coronary heart disease,