Standardization of Traditional Ayurvedic Arjuna Formulations in Treatment of Cardiometabolic Disorders

Gaurav Pathak *, Addepalli Veranjanellu

SPTM, NMIMS University, Mumbai, India

Address for Correspondence: Gaurav Pathak; gaurav.sptm@gmail.com

ABSTRACT: Traditional System of Medicine (TSM) of India date back to 5000 B.C. Bestowed with diversified climatic and geographical variations, India is rich repository of bio-diversity being named as “World Herbal Garden”. At the same time, India as a long cherished tradition of “Ayurveda” our own way of healing and maintenance of health. But as far as pharmacological validation, these ayurvedic formulations have a gloomy image. In the present study, pharmacological screening which includes toxicological, antioxidant, antihyperlipidemic and antihypertensive has been done for Arjuna kwath and Arjunarishta which are traditional ayurvedic Arjuna formulations useful in cardiovascular disorders from ancient time. In the acute toxicity (14 days) and repeated dose toxicity (28 days) as per OECD guideline oral administration of 1or 2 gm/kg of these formulations produced neither mortality nor changes in behavior or any other physiological activities in mice and rats. Hematological and urine analysis showed no marked differences in any of the parameter examined in either the control or treated group. There were no significant differences in the body or organ weights. Pathologica lly, neither gross abnormalities nor histopathological changes were observed. Treatment with Arjuna kwath and Arjunarishta reduces cholesterol, triglycerides, low density lipoprotein in Triton induce group. Lipid profile demonstrated by the standard lovastatin was found to be analogous to that of traditional arjuna formulations. Simultaneously there was significant decrease in elevated blood pressure in cadmium chloride as well as fructose induce hypertensive animals when treated with Arjunarishta and Arjuna kwath. The present study shows the efficacy of Terminalia arjuna formulations as a hypolipidemic agent and antihypertensive agent and in overall management of cardiometabolic disorders.

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