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A randomized, open label, controlled, single centre study to evaluate the efficacy and safety of *Lagenaria siceraria* fruit juice in patients diagnosed with cardiovascular disorders

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Background: Daily consumption of *Lagenaria siceraria* fruit juice is believed to be offering protection against cardiovascular disorders such as coronary blockade. There are some pharmacological experimental studies which support antihyperlipidemic effect of the fruit juice. 'Hriday Mitra Mandal' a non-profit organization in Nagpur, India dedicated to help heart patients has in its collection several reports (about 20 in number) of patients who were advised cardiovascular surgery, which was avoided by use of *Lagenaria siceraria* fruit juice. However this lacks appropriate clinical trials.

Objective: The proposed study is the assessment of the effect of *Lagenaria siceraria* fruit juice on diseased patients with the incidence of cardiovascular events such as hyperlipidemia and hypertension by appropriately designed clinical trials.

Methods: A randomized open labelled, control group, single centred, pilot study to evaluate the efficacy and safety of *Lagenaria siceraria* fruit juice in patients diagnosed with hypertension and hyperlipidemia or both. This study evaluated whether *Lagenaria siceraria* fruit juice obtained from 200 g fruit twice a day will provide effective blood pressure and lipid lowering while maintaining a good safety profile in patients diagnosed with hypertension and hyperlipidemia or both. This study comprises of 30 days study duration and two visits.

Results: There was significant improvement in blood lipid profile of majority of the subjects. Difference between both treatment and control group studies for 30 days, and the total cholesterol values were found to be statistically significant ($p=0.047$) after daily ingestion of *L. siceraria* juice. Statistically significant decrease in plasma concentration of very low density lipids VLDL ($p=0.024$), Triglycerides ($p=0.022$) and serum glutamate oxaloacetate transaminase (SGOT) ($p=0.017$) was conspicuous. Also there was a significantly marked change in the systolic blood pressure ($p=0.017$) of the treatment group after study as compared to the baseline. Results were recorded and analyzed statistically by applying Wilcoxon Rank sum test for changes within a group and for group comparison Mann-Whitney test ($P<0.05$) for non-normal distribution data or ordinal data. Significant improvement in left ventricular ejection factor was also noticed which supports the hypothesis of its action on myocardium.

Conclusion: The benefits of cholesterol lowering effects of *Lagenaria siceraria* fruit juice can slow the progression of coronary blockade and inhibit the development of new coronary lesions in the patients with high cholesterol levels. *Lagenaria siceraria* fruit juice may also exert its beneficial effect on cardiovascular system through its modulation of NF κ B receptors.

Biography

Sameer D Kulkarni is pursuing his PhD from the Department of Pharmaceutical Sciences & Technology, Birla Institute of Technology, Mesra. He is the recipient of prestigious Institute Fellowship from Birla Institute of Technology. He has published 3 international research articles in reputed journals.

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