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Effect of the water extract of dried flowers of *Aegle marmelos* on fasting serum glucose concentrations and glucose tolerance of healthy volunteers

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Abstract

Hypoglycaemic effect of the water extract of dried flowers of *Aegle marmelos* (WEAM) has been established in wistar rats. To evaluate the effect of WEAM in healthy volunteers (n=30), blood was collected following an overnight fast and oral glucose tolarance test (OGTT) was performed. On Day 0, subjects received 50ml of water 30min prior to glucose loading (75g in 300ml) and blood was collected after 2h. Serum glucose concentrations were determined by the glucose oxidase method. On Day 1, the same subjects received 50ml of the WEAM (85mg/kg) and OGTT was repeated. This was followed by a single dose of WEAM every morning for 14 days and OGTT on Day 15. The subjects were monitored for one month and serum ALT, AST, ALP, Gamma GT, Hb and Creatinine levels were measured. There was a statistically significant ($P<0.001$) reduction in fasting and post glucose load serum glucose concentartions after administration of WEAM for 14 days (Table 01). Adverse effects were not reported during this period. No statistically significant ($P>0.05$) differences between serum parameters prior to and after taking WEAM were observed. The water extract of dried flowers of *A. marmelos* improves glucose tolerance of healthy humans and exerts no adverse effects.

Table1: Serum glucose concentrations in healthy humans

Day	Fasting serum glucose concentrations (mmol/l)	Serum glucose concentrations following OGTT (mmol/l)
Day 0	4.46 ± 0.05	5.19 ± 0.08
Day 1	4.45 ± 0.05	4.53 ± 0.06 (13%)*
Day 15	4.20 ± 0.06 (6%)*	4.18 ± 0.08 (20%)*

($p<0.001$)* Figures in parentheses indicate percentage reduction.

Biography

Mrs. Kumari K.D.K.P. is a Bachelor of Science in Human Biology (Microbiology Specialization), from University of Sri Jayewardenepura, Sri Lanka. Presently she is following a PhD. in Biochemistry, attached to the Faculty of Graduate studies, University of Sri Jayewardenepura. She is having a one publication and ten communications.