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# Antihyperlipidemic effect of Melothria maderaspatana leaf extracts on DOCA-salt induced hypertensive rats

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## Abstract

To investigate the antihyperlipidemic effect of crude ethanolic extract of Melothria maderaspatana (M. maderaspatana) leaf (CEEM) on deoxycorticosterone acetate (DOCA)-salt hypertensive rats. A midscapular incision was made on each rat and the left kidney was excised after ligation of the renal artery. The surgical wound was closed using an absorbable suture. After one week recovery period, hypertension was induced by subcutaneous injection of DOCA-salt solution, twice a week, and the rats received a 1% sodium chloride solution as drinking water throughout the experimental period. CEEM or nifedipine was administered orally once a day for 6 weeks. In DOCA-salt hypertensive rats, the level of plasma and tissues of total cholesterol (TC), triglycerides (TG), free fatty acids (FFA) and phospholipids (PL) significantly increased and administration of CEEM significantly reduced these parameters towards normality. Further, the levels of low density lipoprotein-cholesterol (LDL-C) and very low density lipoprotein-cholesterol (VLDL-C) significantly increased while high density lipoproteincholesterol (HDL-C) decreased in hypertensive rats and administration of CEEM brought these parameters to normality which proved their antihyperlipidemic action. Histopathology of liver, kidney and heart on DOCA-salt induced rats treated with CEEM showed reduced the damages towards normal histology. These findings provided evidence that CEEM was found to be protecting the liver, kidney and heart against DOCA-salt administration and the protective effect could attribute to its antihyperlipidemic activities.