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Hepatoprotective effect of aqueous leaf extracts of Atalantia ceylanica, Nauclea orientalis, Vernonia cinerea and Mussaenda frondosa against Carbon tetra Chloride induced liver damage in rats

Hepatic dysfunction due to ingestion and inhalation of hepatotoxic xenobiotics such as environmental pollutants and alcohol are increasing worldwide. A survey revealed that about 75 plants in Sri Lanka are commonly used in the treatment of liver disorders. The present study reports the results of preliminary investigations into the hepatoprotective effect of the fresh leaf extracts of *Atalantia ceylanica(a), Nauclea orinetalis (b),Vernonia cinerea (c0 and Mussaenda frandosa (d*) against carbon tetra chloride induced liver damage in rats.

Healthy, Wistar strain male albino rats (150-175g) were fasted for 16-18h prior to oral administration of 5ml of aqueous leaf extracts of a-d (treated groups, n=6/group) or distilled water (induced control, n=6). After 1h, the rats were intraperitoneally injected with 0.2ml/100g rat of CCl_4 (40% CCl_4 in liquid paraffin). 24h later, they were sacrificed

and sera were analyzed for the estimation of SGOT,SGPT and serum alkaline phosphatase.

The elevated levels of SGOT and SGPT caused by CCl_4 were significantly ($p<0.01$, Students't-test) declined by the extracts of *A. ceylanica, Vcinerea* and *M.froundosa.* The reduction in the level of SGOT and SGPT values by these plants*; A ceylanica, V.cinerea* and *M. frondosa* against induced control group were 71.29,57.02, 63.44% and 69.56, 65.43, 73.44% respectively. *A ceylanica* and *M. frondosa* were able to reduce the serum allkaline phoophatase level by 8.85 and 79.1% respectively. N. orientalis did not cause a reduction in the above serum enzyme levels. The results of the present study provide scientific proof for the use of *A.ceylanica, V. cinerea* and *M.frondosa* in the treatment of liver disorders by the traditional physicians of Sri Lanka.