Antihypertensive activity of flowering twigs of *Calotropis procera* (Ait.)

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Background: Young flowering twigs of *Calotropis procera* are used in treatment of hypertension in the local tribes of Kohat regions, Pakistan. The current work is an attempt to document scientific rationale for the traditional anti-hypertensive use of flowering twigs of *Calotropis procera*.

Methods: Acute toxicity study of crude methanol extract of *Calotropis procera* was performed using mice model. The crude methanol extract and its fractions were screened for possible antihypertensive activity in experimentally induced HTN in rats. Rabbits' aortic strips were tested in presence and absence of I μM of norepinephrine. The tests samples were also screened on the KCl (80mM) - induced contractions and a tension of 1 g in intact tissues. The same series of experiments were carried out in denuded aortic strips to find out mechanisms. Phytochemical screenings were also performed.

Results: Phytochemical screenings suggested for the presence of saponins abundantly. *Calotropis procera* produced significant fall in hypertension ($P \leq 0.05$). The Aortic stripes were relaxed by the test samples both on NE induced contractions and KCl induced contractions. However, denuded tissues were not relaxed suggesting the involvement of NO releasing mechanism. The 1 μM NE induced contractions were relaxed that suggests for the involvement of receptors operated channels. Relaxing effect on the KCL induced contraction also suggest the inhibition of voltage gated calcium channels ($P \leq 0.05$).

Conclusion: Flowering twigs of *Calotropis procera* have antihypertensive activity which is mainly due to saponins.

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