Cardiotonic Activity of *Calotropis Gigantea* Leaf Extract Against Doxorubicin Induced Congestive Heart Failure in Rats

Keywords: Cardio Tonics, Congestive Cardiac Failure, *C. Gigantea*, Digoxin, Langendorff’s Apparatus

Abstract:
Congestive heart failure is a clinical syndrome caused by the inability of the heart to pump sufficient blood to meet the metabolic needs of the body. Cardio tonics are useful in low output failure. *Calotropis gigantea* is an important medicinal plant widely distributed throughout India. Traditionally used to treat various diseases like fever, indigestion, rheumatism, cold, cough, etc. The dried leaf part of *C. gigantea* was extracted with ethanol by continuous hot percolation method. *In-vitro* cardio tonic activity of *Calotropis gigantea* Leaf extract (CGLE) was studied by using Langendorff’s apparatus. Heart failure is represented by using Hypodynamic ringer locke solution (HRLS) and the effect of CGLE was studied by treating with different concentrations. In *in-vitro* study, CGLE at 10 mg/ml showed a significant increase in force of contraction, cardiac output and heart rate in the failing heart.

Conclusion: *C. gigantea* leaf extract (CGLE) possess cardio tonic activity. CGLE 10 mg showed more effective in stimulation of failed heart than CGLE 20 mg. Thus, CGLE shown positive ionotropic & chronotropic effect.

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**Influence of CGLE on force of contraction**

**Effect of CGLE on cardiac output**

**Effect of CGLE on heart rate**

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