

Fig leaves varieties reduce blood pressure in hypertensive rats through modulation of antioxidant status and activities of arginase and angiotensin-1 converting enzyme.

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Abstract

The medicinal application of sandpaper leaves in the management of hypertension has been reported with very little knowledge on the variety with better anti-hypertensive properties. Hence, this study seeks to compare phenolic content and the effect of some varieties of sand paper leaves (*Ficus* spp.), namely, *Ficus exasperata* (FE), *Ficus asperifolia* (FA), *Ficus mucuso* (FM) and *Ficus capensis* (FC) on the systolic and diastolic blood pressures (SBP and DBP), angiotensin-1-converting enzyme (ACE), and arginase activities and antioxidant status in L-NAME induced hypertensive rats. The animals were divided into eleven groups ($n = 6$): normotensive control rats, hypertensive rats, hypertensive rats treated with atenolol (10 mg/kg/day), hypertensive rats treated with 2.5% and 5% FE, FA, FM, and FC extract inclusive diet respectively. There was a significant rise ($p < 0.05$) in the systolic and diastolic blood pressures, ACE and arginase activities, and antioxidant status in the hypertensive rats. However, there were reductions in the SBP, DBP, ACE, and arginase activities and increase in the antioxidant status of the rats fed with the *Ficus* leaves. FM had the highest phenolic (91.09 mg/100 g) and flavonoid content (43.35 mg/100 g). FA showed the best anti-oxidant property, while FC showed the strongest inhibition of ACE and arginase activities.

Keywords: Sandpaper leaves; Angiotensin-1-converting enzyme ; Arginase hypertension

Cite this article

Ajeigbe, O.F., Oboh, G., Ademosun, A.O. *et al.* Fig leaves varieties reduce blood pressure in hypertensive rats through modulation of antioxidant status and activities of arginase and angiotensin-1 converting enzyme. *Comp Clin Pathol* (2021). <https://doi.org/10.1007/s00580-021-03244-x>

DOI: <https://doi.org/10.1007/s00580-021-03244-x>

Journal : *Comparative Clinical Pathology* (2021)