

## **The Effect of Dopamine and Furosemide on Renal Hemodynamics in Dogs Injected with Russell's Viper Venom**

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The effects of dopamine (3 mcg/kg/min, iv.) and furosemide (1 mg/kg, bolus dose, iv. and 16.7 mcg/kg/min, maintenance dose, infusion) on renal hemodynamics following a 30 min infusion of Russell's viper venom (RVV, 3.33 mcg/kg/min) were studied in anesthetized male mongrel dogs. All parameters were determined before RVV injection and at every 2 hours over a period of six hours. The results confirm that dopamine combined with furosemide could restore the glomerular filtration rate (GFR) and increase the urine flow rate (V) that were markedly reduced by the RVV. In spite the renal blood flow (RBF) kept lower than the control period. Dopamine or furosemide alone showed less improvement of renal function. No alteration in the profound hypotensive effect of RVV during the first 30 min of RVV injection was observed in all groups. These findings suggest the facilitative effect of furosemide by dopamine. Renal vasodilating effect of dopamine leading to more furosemide gain access to the intralumina site of action may responsible for the synergistic effect.