

ABSTRACT

A PHARMACOLOGICAL STUDY OF CERTAIN DIURETIC ACTION

OF

MIMUSOPS ELENGI (PIKHUN)

by

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It has been found that Pikhun flowers are used as a diuretic by the country people. A study of the diuretic activity of Pikhun flower extract was performed in order to evaluate in part the mechanism of its diuretic action. An intravenous administration of 1%, 5% and 10% Pikhun flower extract (1 ml/Kg body weight) in pentobarbital anesthetized dogs caused significant diuresis as well as saluretic (Na^+ and K^+) responses. The diuretic effect began after a latency period of approximately 20 minutes. A low concentration (1%) of Pikhun flower extract caused an ipsilateral renal response while bilateral renal responses were obtained from a higher concentration (50%) of Pikhun flower extract after infusion into the renal artery. These results suggest the possibility of a direct diuretic action of Pikhun flower extract on the renal parenchyma. The failure to evoke the hemodynamic improvement following the administration of Pikhun flower extract might be the result of a direct

depressive effect of the high concentration (50%) of Pikhun flower extract on the rats' myocardium. The lower concentrations (1% and 5%) of Pikhun flower extract did not cause any changes in arterial blood pressure or in heart rate, but higher concentrations (10%, 30% and 50%) of Pikhun flower extract produced hypotension and bradycardia in the pentobarbital anesthetized dogs.

The response of Pikhun flower extract given in conjunction with other diuretics (Mercurhydrin[®], Diamox[®] and Lasix[®]) was studied. The results suggest that Pikhun flower extract may exert its action in part as do Diamox[®] and Lasix[®], but in the case of Mercurhydrin[®] with a different mechanism and/or at a different site.