

LETTER TO THE EDITOR

SOME CENTRAL EFFECTS OF *ACRONYCHIA LAURIFOLIA* LINN.

Sir

Products from a number of plants have been studied for ataractic activity with encouraging results (1,3). *Acronychia baueri*, a plant belonging to the natural order, Rutaceae, has been shown to possess tranquillizing property (2). A related plant, *Acronychia laurifolia* Linn was subjected to phytochemical and pharmacological screening. A water soluble quaternary alkaloid fraction was isolated from the alcoholic extract of the leaves, which unfortunately could not be crystallised at present. The central nervous system activity of this uncharacterised portion has been studied on the following parameters: (1) Behavioural activity in rat, (2) activity on spontaneous motility in mice, (3) potentiation of pentobarbitone induced hypnosis in mice, (4) antagonism to amphetamine toxicity in mice, (5) antagonism to electrically induced convulsions in rats, (6) antagonism to harmine induced tremor in mice.

The test material was administered intraperitoneally in rats for pretreatments and half an hour was allowed for evaluating its activity. It has been observed that the alkaloidal fraction in a dose of 1 ml/kg produced no behavioural alterations in animals, but doses of 2.5 and 5 ml/kg induced calmness, ataxia, ptosis and partial loss of righting reflexes. Higher doses than that showed respiratory depression, convulsion and caused death of animals. The fraction by itself in a dose of 0.5 ml/kg showed no sedative effect but prolonged the pentobarbitone (30 mg/kg) induced sleeping time. Spontaneous motility in mice was also greatly reduced by drug pretreatment in the same dose. The degree of excitement and lethality in amphetamine induced group toxicity tests in mice were greatly lessened by this alkaloidal fraction. Tonic phases of electrically induced convulsions in rats were abolished and harmine induced tremor in mice was moderately prevented by pretreatment with this compound in a dose of 0.5 ml/kg.

The quaternary alkaloidal fraction isolated from the plant *Acronychia laurifolia* Linn thus showed a profile of activity associated with those produced by known tranquillizing agents. The typical behavioral effects, potentiation of barbiturate induced hypnosis and antagonism of amphetamine group toxicity are known to be produced by other tranquillizers.

Further work is in progress in order to separate the individual alkaloids and compare them with known tranquillizing agents so as to assess their potency.

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