

PHARMACOLOGICAL INVESTIGATION OF AN ALKALOIDAL FACTOR OF RAUWOLFIA SERPENTINA

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Comparative studies in the different alkaloidal factors obtained by S. Siddiqui from fresh undried roots of *Rauwolfia serpentina* and referred to the author for pharmacological investigation, have indicated that one of them, named as "serpajmaline", possesses properties of outstanding clinical value. It is much more effective than reserpine in reducing blood pressure and has no sedative effect.

Methods

Measurements of blood pressure were made on dogs in phenobarbitone narcosis. The *A. Femoralis* was connected to a mercury manometer. Application — intravenous.

The sedative effect was investigated in mice, using the smoked-plate-method due to *Forst.*¹ Observation time — 4 hours.

Results

The blood-pressure tests showed that serpajmaline has a reducing effect on blood-pressure even when the amount is as low as 0.25 mg./kg. An increase of this amount gives rise to a corresponding intensification of

the blood-pressure-reducing action. In the corresponding tests made with reserpine, a content as high as 2 mg./kg. was ineffective. (Observation time — 1 hr.). At a dosage of 1 mg./kg., serpajmaline had a definitely inhibiting action on the blood-pressure effect after bilateral carotid occlusion. At this dosage, reserpine had no effect.

The smallest amount of reserpine for which a sedative action was observed was 0.5 mg./kg.; for serpajmaline in parallel tests, amounts as large as 5 mg./kg., were ineffective, no sedative effect being observed.

It may be concluded from these results that if serpajmaline is used for clinical purposes, the blood-pressure-reducing effect will be stronger than that of reserpine at the same dosage, while the central secondary effects, such as the sedative effect, which are perceived by the patient as unpleasant, are eliminated.

Reference

1. A.W. Forst, *Arch. exp. Path. K. Pharmacol.*, **189**, 288 (1938).