THE CENTRAL HYPOTENSIVE EFFECT OF RILMENIDINE . A COMPARATIVE STUDY WITH CLONIDINE .

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ABSTRACT

Hypertension was induced experimentally in rats by DOCA ( in a dose of 50mg / kg / week I.M. for 6 weeks ) and salt . The effect of a single dose of Rilmenidine ( 0.5 mg / kg I.P. ) and Clonidine ( 1mg / kg I.P. ) on Gamma Amino Butyric Acid ( GABA ) and Norepinephrine (NE) in Cerebral Cortex ( CC ), Thalamus – hypothalamus ( TH ), Midbrain and Pons ( MB-P ) and Medulla Oblongata ( MO ) were determined.

Rilmenidine and Clonidine showed reduction in blood pressure.

Hypertensive non treated rats showed significant elevation of NE level in all tested areas , on the other hand , there was significant reduction of GABA concentration in CC , TH , MB-P while significant elevation in MO.

Hypertensive rats treated with rilmenidine showed significant reduction of NE level in MO and significant elevation of GABA concentration in the same brain area . While that treated with clonidine showed significant reduction of NE and elevation of GABA concentrations in all tested areas.

In conclusion : elevated NE level and reduced synaptic GABA level in MO with depletion of GABA stores in other brain areas may