

S U M M A R Y

The role of the subfornical organ as a receptor in mediating drinking behavior in rats following intraventricular administration of histamine, acetylcholine and angiotensin-II were studied.

Adult male rats which had chronic cannula implantation aimed at the third ventricle were used. The experiments were divided into two groups: (i) rats with the subfornical organ intact (ii) rats with the subfornical organ lesioned.

It was found that either rats with the subfornical organ intact or rats without the subfornical organ, 5 ug histamine had no effects in eliciting drinking behavior in water satiated rats. The mean water intake was indistinguishable from normal. It was inconsistent with the previous findings that histamine has a function in the control of drinking behavior in rat.

Acetylcholine (1.34 ug) and angiotensin-II (50 ng) elicited the drinking behavior in the satiated rats either in rats with the subfornical organ intact or rats without subfornical organ. In the rats without subfornical organ, the magnitude of drinking response were decreased. The decrease in the magnitude of

drinking response was correspond with the magnitude of the subfornical organ destruction. It appears, therefore, that the subfornical organ is a structure with a significant role in the control of drinking behavior, and that the structure is sensitive to the dipsogenic effects of central cholinergic agents and angiotensin-II.

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