Rotational behavior in the cat induced by electrical stimulation of the pulvinar-lateralis posterior nucleus complex: Role of the cholinergic system

Motles,

Gonzalez,

Infante,

We studied the involvement of the cholinergic system in the contralateral head-eye-body turning induced in the cat through stimulation of the pulvinar-lateralis posterior nucleus complex (P-LP). In 17 cats through a cannula aimed at the P-LP, agonists and antagonists of the cholinergic system were injected. The electrical activity of the P-LP could be recorded through the same cannula or through electrodes attached to it. In addition, electrodes were implanted ipsilaterally in the dorsal hippocampus, caudate nucleus, amygdala, and superior colliculus to record through them and through one screw placed on the skull the electrical activity of those structures and of the cortical P-LP projection. Seven days after surgery, carbachol, an agonist of the cholinergic system was injected in the P-LP, and the behavior and electrical activity of the unrestrained cat (previously accustomed to a plastic cage) were recorded. A control volume of 0.9% NaCl was always injected previously. The usual dru