SHORT COMMUNICATION

EFFECT OF GLUCOCORTICOID DEXAMETHASONE ON CYCLIC AMP FORMATION STIMULATED BY PITUITARY ADENYLATE CYCLASE-ACTIVATING POLYPEPTIDE (PACAP) IN THE CEREBRAL CORTEX AND HYPOTHALAMUS OF CHICK

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In this study we tested in chicks the effects of acute and chronic in vivo treatment with a glucocorticoid dexamethasone (4 mg/kg, ip) on PACAP-stimulated cyclic AMP formation in [3H]adenine-prelabeled slices of the hypothalamus and cerebral cortex. PACAP (1–100 nM) concentration-dependently stimulated cyclic AMP formation in both brain regions of chick. In acute experiments, dexamethasone (single dose)-injected chicks were killed after 2, 24 and 48 h; while in chronic experiment the glucocorticoid was given once daily for 12 days and the animals were killed 48 h after the last injection. The ability of PACAP to stimulate cyclic AMP formation in the hypothalamus and cerebral cortex was similar in vehicle-treated (control) and dexamethasone-treated animals, with the exception of the nucleotide response to 100 nM of the peptide in both brain regions, which was significantly larger in the group of chicks killed 48 h after the administration of the single steroid dose.

Key words: dexamethasone, PACAP, cyclic AMP, brain, chick

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