LETTER TO THE EDITOR

The adrenal gland and ACTH

It is very possible that paracrine and autocrine factors can modulate susceptibility of the adrenal gland to ACTH. Indeed it has been reported that adrenal innervation can modulate the response to ACTH (1, 2). Therefore, these local mechanisms may contribute to a hyperresponsiveness of the adrenal to ACTH. However, concerning the subnormal response to exogenous ACTH following repeated stimulation, the secretory capacity of the cortical cell itself has to be considered. Adrenocorticotropic stimulation of the adrenal cortex (3, 4) and CRH treatment (5) result in depletion of lipid droplets. Lipid droplets are considered to store cholesterol as a substrate of steroid production. Therefore, the secretory capacity of intact adrenocortical cells may decrease with repeated stimulation due to the depletion of substrate.

References


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