

P-58-67 The Effect of Corticotropin-Releasing Hormone on Experimental Pain Perception in Humans

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The antinociceptive action of corticotropin-releasing hormone (CRH) has been established in several animal studies. Both peripheral and central sites of action are considered. However, there have not yet been controlled experimental trials to demonstrate the potential analgesic properties of CRH in humans. For this purpose, we studied the effect of CRH on experimental heat pain perception in 19 healthy men, using a double-blind, crossover and placebo-controlled design. An IV-dose of 100 μg was chosen because of its well-known neuroendocrine efficacy in humans. Pain responses were assessed by means of visual analogue scales (for the sensory and affective pain components) and pain threshold measurement. To differentiate between a direct CRH effect on pain perception and effects of subsequent pituitary-adrenal hormones (ACTH, β -endorphin, cortisol), CRH was applied in combination with and without a dexamethasone pretreatment (1.5 mg, oral). In neither of the two conditions were there any experimental pain responses, which differed systematically from placebo in a way that suggests analgesic actions of CRH or of its secondary neurohormonal products. The difference between our findings and those obtained in animal studies may be explained by the usually higher dosage used in the animals studies (approximately 10- to 20-fold) or by differences between species.