INHIBITORY EFFECT OF LORGLUMIDE ON CCK-8-INDUCED RESPONSES OF THE EXOCRINE SECRETION IN ISOLATED PERFUSED PREPARATION OF THE RAT PANCREAS

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1. The effects of lorglumide on CCK-8-induced secretory responses (protein output and juicl flow) were examined in the isolated perfused rat pancreas.
2. Continuous stimulation with 10pM or 30pM CCK-8-induced secretory responses which maintained steady levels. Continuous stimulation with 100pM CCK-8 induced secretory responses that consisted of two phases ; a rapid initial rise followed by a secondary plateau. Continuous stimulation with 1nM CCK-8 induced secretory responses consisting of two phases ; a rapid initial small rise followed by a gradual decline.
3. Lorglumide (0.3μM) partially inhibited the secretory responses induced by 10, 30, and 100pM CCK-8. A higher concentration of lorglumide (1μM) inhibited completely the secretory responses induced by 10pM, 30pM, or 100pM CCK-8.
4. Lorglumide (0.3μM) did not decrease, but rather increased, the secretory responses induced by 1nM CCK-8.
5. Lorglumide caused a parallel right shift of the dose-response relation for CCK-8-induced secretory responses.
6. Lorglumide (1μM) could not inhibit the secretory responses induced by carbachol (1μM).
7. These results obtained on the isolated perfused rat pancreas are compatible with the view that lorglumide is a potent, selective, and competitive CCK antagonist.