

ACUTE AND CHRONIC EFFECT OF ERDOSTEINE ON AIRWAY DEFENSE MECHANISMS

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Erdosteine a mucolytic agent has an ability to decrease the mucus viscosity and thus enhance its expulsion by cough or ciliary movement Our objective was to determine whether erdosteine can directly contribute to mucus clearance by monitoring its acute and chronic effect on ciliary beat frequency CBF and cough sensitivity as well as to evaluate its effect on airway smooth muscle reactivity An experiment was performed using healthy guinea pigs to which erdosteine mg kg was administrated perorally as a single dose or chronically during days The cough reflex and specific airway resistance were evaluated in vivo The CBF assessed on tracheal brushed samples and changes in the contractile response of tracheal smooth muscle strips to bronchoconstrictor mediators were evaluated by in vitro methods Neither chronic nor acute therapy has shown a significant effect on cough sensitivity and airway reactivity in vivo Under in vitro conditions erdosteine increased CBF and reduced tracheal smooth muscle contractility induced by histamine with greater results obtained after chronic treatment In conclusion erdosteine have shown a great ciliostimulatory and slight bronchodilator activity Since statistically significant results were obtained after repeated erdosteine administration it is possible that observed effects are mediated by active erdosteine metabolites.