

MODULATION OF COUGH REFLEX BY FEMALE SEX HORMONES AND ANTIOESTROGENS

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Cough hypersensitivity syndrome is a clinical problem characterized by a long-lasting, treatment-resistant cough - either spontaneous or to stimuli that do not cause cough in otherwise healthy people, such as laughter, speech, exercise, the use of cosmetics or household cleansers. It mainly affects women with an increased incidence in the postmenopausal period of life, implicating the hormonal influences. It would be naive to think that the effect of sex hormones is restricted to the sex organs influencing exclusively the process of reproduction in both male and female. This contribution highlights the effect of female sex hormones on structure, physiology and pathophysiology of the airways and the lungs, especially the airway defence reflexes. Our study group showed these are modulated by the level of sex hormones i) cough reflex sensitivity increases in girls after puberty, ii) it depends on the stage of menstrual cycle and hormonal contraception use, iii) it is also modulated by antioestrogen treatment in animal model. The question remain opened whether and how hormonal substitution therapy modulates cough physiology and how effective it can be in the treatment of hypersensitive cough syndrome in postmenopausal female.