

Preliminary study of quercetin affecting the hypothalamic-pituitary-gonadal axis on rat endometriosis model.

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Abstract

In this study, the endometriosis rats model was randomly divided into 6 groups: model control group, ovariectomized group, Gestrinone group, and quercetin high/medium/low dose group. Rats were killed after 3 weeks of administration. The expression levels of serum FSH and LH were detected by ELISA. The localizations and quantities of ER α , ER β , and PR were detected by immunohistochemistry and western blot. The results showed that the mechanism of quercetin inhibiting the growth of ectopic endometrium on rat endometriosis model may be through the decreasing of serum FSH and LH levels and then reducing local estrogen content to make the ectopic endometrium atrophy. Quercetin can decrease the expression of ER α , ER β , and PR in hypothalamus, pituitary, and endometrium, thereby inhibiting estrogen and progesterone binding to their receptors to play the role of antiestrogen and progesterone.