Expression of Estrogen and Progesterone Receptors in Endometriosis

V. Denisova, M. Yarmolinskaya, V. Rulev, I. Kvetnoy, V. Polyakova, A. Durnova

Topicality. Considering that endometriosis is estrogen dependent disease, the examination of expression of estrogen receptors (ER)? is interesting, because literature data are contradictory and most of researches are devoted to ERß.

The aim of our study was to investigate expression of ER? and progesterone receptors (PR) in endometrioid lesions and eutopic endometrium in endometriosis.

Materials and methods. The study group included 36 women at the age between 24 and 36 years with endometriosis I - III stages (R-AFS). Diagnosis was proved by laparoscopy and histological examination. Control group included 12 women of reproductive age, who were not found any gynecological abnormality during laparoscopy. Relative area and optical density of expression within mid secretory phase were evaluated by immunohistochemistry investigation.

Results. It was revealed that minimal relative area of expression of ER? was in endometrioid lesions (0.7±0.2%), that was reliably (p=0.0005) lower than in control group. Relative area of ER? expression in endometrium of patients with endometriosis was reliably (p=0.0002) lower than in control group (0.9±0.3% and 4.9±1.5%, accordingly). The relative area of expression of PR in endometrioid lesions was on an average 4.8±0.9%, that was reliably (p=0.009) lower than in control group (10.2±2.2%). The relative area of expression of PR in endometrium of women with endometriosis was decreased (8.6±1.7%). Optical density of expression of ER? and PR in endometrioid lesions, endometrium of patients with endometriosis and endometrium of healthy women was practically the same.

Conclusions. The expression of ER? and PR in endometrioid lesions and endometrium of women with endometriosis is decreased. This can be the pathogenetic mechanism of the resistance of endometriosis to hormonal therapy and the reason of the recurrence of the disease.