

P278. Changes of molecular characteristics of endometrium in patients with leiomyoma treated with selective progesterone receptor modulators (SPRM)

M I Yarmolinskaya (RU) [1], M B Kusevitskaya (RU) [2], G Tolibova (RU) [3], A A Tsyurdeeva (RU) [4]

Introduction: Effective treatment of uterine leiomyoma remains a challenge all over the world. In Russia, uterine fibroids account for 50 to 70% of hysterectomies. A SPRM, such as Ulipristal acetate (UA), has recently become quite popular in medical treatment of leiomyoma. During SPRM treatment, specific endometrial changes are observed, known as “PRM-associated endometrial changes”.

Objective: To evaluate the expression levels of progesterone (PR) and estrogen receptors (ER), markers of proliferation Ki-67, cell cycle p53, antiapoptosis Bcl-2, apoptosis regulator - PTEN in the endometrium in patients with uterine myoma, before and after 12 week therapy with 5mg UA daily.

Methods: Analysis of data by measurement of optical density and calculation of Spearman correlation coefficient.

Participants: 30 patients aged 29 to 46 years, with uterine leiomyoma types 3-6 by FIGO, varying in size from 3 to 12 cm. Histological examination of endometrial biopsies was conducted before and after treatment with UA.

Main results: after exposure to UA, endometrium samples expressed declining scores of Ki-67, Bcl-2, PR and ER receptors and increased scores of p53 while PTEN score remained unchanged. We found a positive correlation between level of expression of markers and sex steroid hormone receptors in the endometrial glands' stroma and parenchyma. P53 expression level correlated with levels of Ki-67, PTEN, Bcl-2, ER and PR in endometrial glands, ER in endometrial stroma. We also found reliable correlations between level of PTEN expression and PR and ER scores in endometrial glands, PR score in stroma; there was marked correlation of Ki-67 scores with PR expression scores in endometrial glands, as well as the level of expression of Bcl-2 and PR of endometrial glands.

Results: of the correlation coefficient values were as follows: p Ki-67=0.0038 to p p53=0.5908; p = 0.0015 PTEN to p p53 = 0.6354; Bcl-2 p = 0.044 to p p53 = 0.4332; p Ki-67 = p 0.4704 PTEN = 0.0272; p p53 = 0.5998 to p ER gland = 0.0032; p p53 = 0.5241 to p ER stroma = 0.0123; p p53 = 0.5948 to p PR gland = 0.0035; p = 0.6533 PTEN to p PR gland = 0.001; p = 0.5065 PTEN to p PR = 0.0162 stroma; p = 0.5291 PTEN to p ER gland = 0.001

1; p Ki-67 = 0.4342 to p PR gland = 0.0435; p Bcl-2 = 0.5948 p PR gland = 0.502.

Conclusion treatment with UA leads to a decrease of endometrial Ki-67, Bcl-2, PR and ER receptor expression scores and an increase of p53 without changing PTEN expression scores.