384

Skala C[1], Petry I[1], Albrich S[1], Puhl A[1], Naumann G[1], Koelbl H[1]
1. *Johannes-Gutenberg-University, Department of Obstetrics and Gynecology*

EXPRESSION OF PROGESTERONE RECEPTOR AND ESTROGEN RECEPTOR ALPHA AND BETA IN VAGINAL WALL AND PERIURETHRAL TISSUE IN UROGYNECOLOGICAL PATIENTS

Hypothesis / aims of study
Our objective was to study the expression of estrogen receptor (ER) isoforms ER alpha and ER beta and of progesterone receptor (PR) in the vaginal wall and in periurethral tissue of women who underwent an urogynecological surgical treatment in relation to clinical data.

Study design, materials and methods
93 patients were enrolled in this study. Patient's history and clinical data were evaluated. 84 women were menopausal, of whom 21 were taking estrogen/progestin replacement therapy (HRT), 25 used local estrogen and four were under antiestrogen treatment. Nine women were fertile. 20 underwent an incontinence surgery, 77 underwent a prolapse surgery, four had a simultaneous incontinence and prolapse surgery. Biopsies from the vaginal wall and from periurethral tissue were obtained during surgery. The expression of estrogen receptor isoforms alpha and beta and of progesterone receptor in vaginal wall and periurethral tissue were measured by reverse transcription and polymerase chain reaction. The expression of hormonal receptors was seen in relation to clinical data.

Results
The body mass index had no influence on the expression of ER and PR neither in vaginal nor in periurethral tissue. Concerning the age elderly women showed a higher amount of PR in periurethral tissue (p=0,04), concerning the parity women who gave birth to at least one child had a lower expression of periurethral PR than nulliparous women (p=0,03). Menopausal women showed a higher amount of PR in vaginal tissue than fertile women. A hormonal replacement therapy had no influence on PR and ER neither in vaginal nor in periurethral tissue. The use of local estrogen had no influence on the expression of hormonal receptors. Women with a genital prolapse showed a higher expression of PR in periurethral tissue and PR and ER beta in vaginal wall tissue (p=0,04, p=0,018, p=0,002). There was no correlation between the maximal urethral closure pressure and the expression of ER and PR neither in vaginal nor in periurethral tissue. But women who underwent an incontinence surgery showed a higher amount of ER beta in vaginal wall tissue. Women who suffered from an urgency had a significant lower amount of PR in vaginal tissue.

Interpretation of results
The rising expression of PR might be an age related change. Women with a genital prolapse and women who underwent an incontinence surgery showed a higher expression of ER beta in vaginal tissue. HRT or local estrogentherapy had no influence on the ER and PR expression of vaginal and periurethral tissue.

Concluding message
The influence of HRT and local estrogen therapy on a genital prolapse and SUI has to be further evaluated and a local progesterone therapy has to be considered

Specify source of funding or grant	**no funding, no grant**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethics Committee of the Johannes-Gutenberg-University Mainz**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**