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P268. Immunohistochemical predictive factors for recurrence of ovarian endometrioma after laparoscopic excision

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Context: Recurrence of endometriosis still remains a serious issue: 40-45% of patients have relapse of the disease 5 years after the primary surgery and would require further surgeries. Therefore, biomarkers based on the tissue samples would be more reliable and of practical clinical significance.
Objective: Examine the expression factors of proliferation and apoptosis (ki-67, bcl-2), inflammation factors (NF-k? p65, COX-2), adhesion factors (b-catenin), estrogen (ER-?) and progesterone (PR-?) receptors in ovarian endometrioma from patients with recurrence of ovarian edometroma using immunohistochemical analysis.
Methods: In this study histological and immunohistochemical methods were used. Immunohistochemical analysis of ovarian endometrioma was carried out using the Tissue-Tek Quick-Ray kit, which allows the preparation of paraffin blocks with a large number of tissue samples (tissue microarray). Antibodies to ki-67 (clone 30-9, VENTANA), bcl-2 (clone 124, VENTANA), NF-k? p65 (clone p65, Spring Bioscience Corp.), COX-2 (clone CX-294, Agilent), b-catenin (clone 14, VENTANA), ER-? (clone SP1, VENTANA) and PR-? (clone 1E2, VENTANA) were used. Specimens were prepared according to a standard protocol using the immunohistostainer Ventana Ultra. Statistical analysis was carried out using Statistica 10.0.
Patients: Patients were divided into two groups depending on the course of the disease during the follow-up period of 1.5 years after surgical treatment: 19 patients with recurrent ovarian endometrioma (main group) and 28 patients without recurrence ovarian endometrioma (comparison group).
Interventions: None.
Main Outcome Measures: We found increased expression of PR-? and decreased expression of ki-67 in epithelial component of ovarian endometrioma in recurrent group. We found decreased expression of NF-kb p65 and ???-2 and increased expression of b-catenin in a stromal component of ovarian endometrioma in the recurrent group. Expression ER-? and bcl-2 in ovarian endometrioma is not significantly different between the study groups.
Conclusions: Ki-67, NF-kb p65, ???-2, b-catenin and PR-? may be potentially promising predictive factors for recurrence of ovarian endometrioma after laparoscopic excision. The immunohistochemical analysis of the ki-67, NF-kb p65, ???-2, b-catenin and PR-? expression in ovarian endometrioma will allow to define patients with high risk of a recurrence of ovarian endometrioma and to individualize postoperative treatment.

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