28) Progesterone Receptor Status of Epithelial Cells as a Predictive Marker for Postoperative Recurrence of **Endometriosis**.

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**Abstract**

**Context:** Progesterone resistance including progesterone receptor (PR) deficiency contributes to the pathophysiology of endometriosis; however, whether the PR expression levels in ovarian endometrioma (OE) correlate with the postoperative recurrence of endometriosis remains unclear.

**Objective:** This study aimed to investigate the association between PR expression levels in OE and the recurrence of endometriosis.

**Methods:** OE specimens were obtained from 132 patients who underwent conservative surgery for endometriosis. The PR expression levels were evaluated using the H score after immunohistochemical staining.

**Results:** Of the 132 patients, 36 (27.3%) experienced recurrence and 96 (72.7%) did not. No differences were observed in the patient characteristics between the recurrence and nonrecurrence groups except for follow-up period. PR immunoreactivity in the epithelial cells (ECs) was statistically significantly lower in the recurrent group than in the nonrecurrent group (P < .01); however, this change was not observed in the stromal cells. Moreover, multivariable logistic regression analysis revealed that the H score of PR in ECs was an independent factor and was statistically significantly associated with the recurrence of endometriosis (P = .01). Furthermore, we divided the patients into PR-negative or PR-positive groups. The cumulative recurrence rate in the negative PR group was statistically significantly higher than that in the positive PR group (P = .046).

**Conclusion:** Low PR expression levels in OE-ECs may predict the recurrence of endometriosis. The PR status in OE-ECs is associated with the pathophysiology of the recurrence of endometriosis, and optimized postoperative management for endometriosis may be provided by referring to the PR status.

**Keywords:** endometriosis; progesterone receptor; recurrence.