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Oral Presentations

O-50

Evaluation of the expression level of miR-337-3p and its association with the *RAP1A* gene expression in tissue samples of patients with endometriosis

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Background: Endometriosis, a common and multifactorial disease in women, has different symptoms such as pelvic pain and infertility. Recent studies demonstrated that genetic factors have an important role in its pathogenesis so that dysregulation of many genes and microRNAs have been reported in this disease. Based on previous studies, we know that decreased expression level of miR-337-3p in ovarian and cervical cancers can lead to increase its target genes like *RAP1A*, which plays role in the pathogenesis of these diseases. miR-337-3p expression also downregulated in serum samples of endometriosis patients. However, the role of miR-337-3p and its direct target gene *RAP1A* in endometriosis tissues have not been investigated.

Objective: The goal of this study was to compare the expression level of miR-337-3p and its direct target gene, *RAP1A*, in endometriosis tissues and control samples to find their relationship with pathogenesis of endometriosis.

Materials and Methods: We measured miR-337-3p and *RAP1A* expression levels by quantitative polymerase chain reaction (qRT-PCR) in 15 ectopic and eutopic tissue samples from patients with endometriosis and 15 normal endometrium tissue samples from women without endometriosis.

Results: The results showed a significant increase in the expression level of *RAP1A* gene in the endometriosis tissue samples (both of ectopic and eutopic tissues), while miR-337-3p expression level decreased significantly in these tissue samples compared with the normal endometrium samples.

Conclusion: In this study, we found an opposite relationship between miR-337-3p and *RAP1A* gene expression in endometriosis so that decrease in miR-337-3p expression can lead to increase in *RAP1A* gene expression in endometriosis tissues. Changes in the expression of these genes in our study can also interpret as the role of them in the pathogenesis and progression of endometriosis.

Key words: *Endometriosis, microRNA, miR-337-3p, RAP1A.*