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Oral Presentations

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Evaluation of the expression level of miR-1271 and its association with the *GRB2* gene expression in tissue samples of patients with endometriosis

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Background: Endometriosis, a relatively prevalent gynecologic disorder, affecting 6 to 10 percent of women in reproductive ages around the globe. Primary recognition can help to decrease its progression and morbidity. Many studies demonstrated that microRNA has a vital role in the pathogenesis of endometriosis. miR-1271 and its direct target gene, *GRB2*, expression have been studied in gynecologic cancers and found to be involved in cell proliferation, migration, and metastasis, while their role in endometriosis has not been studied.

Objective: In this study, we measured *miR-1271* and *GRB2* genes expression in the endometrial tissues of patients (eutopic and ectopic tissues) compared to the control samples.

Materials and Methods: In our study, the endometriosis tissue samples of 15 patients with endometriosis and 15 women without endometriosis were collected. We used quantitative polymerase chain reaction to check the level of *miR-1271* and *GRB2* genes expression in these samples.

Results: We observed a significant decrease in *miR-1271* expression level in both ectopic and eutopic samples of patients with endometriosis compared with control samples, while there was a noticeable increase in the expression level of its target gene, *GRB2*, in tissues of endometriosis patients compared with normal control samples.

Conclusion: We discovered an inverse relationship between the reduction of *miR-1271* expression level and increase in the expression level of *GRB2*. Therefore, increased *GRB2* expression in endometriosis tissues can be due to decreased expression of this microRNA. Our findings suggested that miR-1271 maybe play the role as a biomarker in the diagnosis of patients with endometriosis.

Key words: *Biomarker, Endometriosis, miR-1271, GRB2.*