## 9<sup>th</sup> Yazd International Congress and Student Award on Reproductive Medicine with 4<sup>th</sup> Congress of Reproductive Genetics

## **Oral Presentations**

## **O-49**

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

## Yarahmadi G<sup>1</sup>, Vahidi Mehrjardi MY<sup>2</sup>, Kalantar SM<sup>3</sup>.

- 1.Department of Genetics, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
- 2.Medical Genetics Research Center, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
- 3.Research and Clinical Center for Infertility, Yazd Reproduction Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: mmvahidi@gmail.com

**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.