Joint Event
Breast Pathology & Cancer | Gynecology and Obstetrics Pathology | Palliativecare & Gerontology
June 28-29, 2019 | Oslo, Norway

Hsa_circ_0000376: A potential novel biomarker for the prediction of primary ovarian insufficiency

Yihui Feng
Guangzhou University of Chinese Medicine, China

Background: Primary ovarian insufficiency (POI) is a reproductive disorder occurs to women before 40 years old, which affects their fertility and life quality. However, the mechanisms of POI remain largely unknown, approximately 50% accordingly. Circular RNAs (circRNAs) have recently been implicated in ovarian aging, but their potential as biomarkers was never investigated in POI. Herein, this study aimed to identify the role of circRNAs as a potential biomarker in POI patients.

Methods: CircRNA expression screening was performed in plasma RNA from five pairs of POI patients and age- and sex-matched controls using circRNA microarray. In the validation phase, 18 circRNA candidates were validated by quantitative reverse transcription polymerase chain reaction (qRT-PCR) in a cohort of 25 patients diagnosed with POI and 25 age- and sample storage time-matched controls.

Results: Of 6644 differentially expressed circRNAs, 12 significantly up-regulated and 23 significantly down-regulated circRNAs were identified in the POI patients compared with the control group, which showed as red points in the volcano plot analysis ($p<0.05$, fold change>1.5). Based on the evaluation of initial expression quantity and fold change values, 18 circRNAs candidates were selected for the validation phase. Hsa_circ_0000376 was significantly downregulated in POI patients compared with the control group in qRT-PCR ($P<0.05$). The area under the ROC curve (AUC) of hsa_circ_0000376 was 0.698 (95% CI 0.499-0.897). The sensitivity and specificity at the cutoff value of 0.685 were 73.3% and 60%, respectively.

Conclusion: Taken together, our study indicates that hsa_circ_0000376 may play potential roles in predicting POI.

Biography

Ying Zhao has completed her PhD, is the Professor of Obstetrics and Gynecology in the Guangzhou University of Chinese Medicine. She is also the Director of the Center for Women's Health Research and an expert in using Chinese Medicine as the treatment for Reproductive Disorders. She has published 49 papers in reputed journals, which focused on her specialties: Reproductive Endocrinology and Infertility, Gynecology. She has been the Leader in several research programs, which funded by the National Natural Science Foundation of China.

supersuccessmaria@hotmail.com