

ABSTRACT

Background and objective: *Pre-eclampsia is one of the major gestational health issues. Pre-eclampsia is a pregnancy-specific syndrome that can affect virtually every organ system. This diagnosis is made in women whose blood pressures reach 140/90 mm Hg or greater for the first time after midpregnancy. The purpose of the present study was to evaluate of expression level LNCRNA TERRA and Telomere length and their association with Pre-eclampsia.*

Methods: *In this case-control study, 25 mothers with Pre-eclampsia who referred to Ardabil Alavi Hospital and diagnosed with Pre-eclampsia were fetched for them after obtaining consent and completing the designed questionnaire, Placenta specimens were taken and analyzed by LNCRNA TERRA and Telomere length. The mothers of the control group were selected from mothers with Normal Pregnancy and tests for the control group were also performed in their placenta specimens. The relationship between LNCRNA TERRA and Telomere length and Pre-eclampsia was investigated in both case and control groups, and then the statistical analysis software was analyzed.*

Results: *In this study, the mean for expression level of LNCRNA TERRA in the case group was 7.87 ± 1.9 and in the control group was 9.8 ± 2.8 . The results showed that there was a significant difference between the two groups in terms of expression level of LNCRNA TERRA. The mean for Telomere length in the case group was 4.35 ± 1.9 and in the control group was 6.2 ± 1.54 . The results showed that there was a significant difference between the two groups in terms of Telomere length,too. The mean of gestational age in this study was 37.3 ± 2.1 weeks and the mean BMI of the subjects was 24.1 ± 3.8 . There was no statistically significant difference in expression level of LNCRNA TERRA and Telomere length between the sexes of newborns in the patients group.*

Conclusions: *Our data identified LNCRNA TERRA and Telomere length signature involvement in Pre-eclampsia.*

Key words: *Pre-eclampsia , LNCRNA TERRA, Telomere*