Expression and significance of the imprinted gene PEG10 in placenta of patients with preeclampsia

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Received June 10, 2013  
Accepted October 29, 2013  
Published December 18, 2014  
DOI http://dx.doi.org/10.4238/2014.December.18.2

ABSTRACT. The aim of this study was to investigate the expression and significance of the imprinted gene PEG10 (paternally expressed gene 10) in preeclampsia placental tissue. Quantitative real-time reverse transcriptase polymerase chain reaction and immunohistochemistry to evaluate mRNA and protein expression and distribution of PEG10 in placental tissues obtained from 22 preeclampsia patients (8 patients with mild preeclampsia, 14 cases of severe preeclampsia). At the same time, 22 cases of normal pregnant women served as controls. PEG10 expression was determined in the placental tissue of the two different groups. In the normal pregnancy group, the average expression level of PEG10 was 0.5832 ± 0.045, while in the preeclampsia group, this level was 0.1943 ± 0.035. Statistical analysis showed that the two groups differed significantly (P < 0.05). The downregulated expression of the imprinted gene PEG10 may be an important reason for the occurrence of preeclampsia.

Key words: Imprinted genes; Preeclampsia; PEG10; Trophoblastic cells