

6<sup>th</sup> Global Diabetes

# Summit and Medicare Expo

November 02-04, 2015 Dubai, UAE

## Intracellular adhesion molecule 1 polymorphism and systemic oxidative stress

Seval Aydın

Istanbul University, Turkey

Gestational diabetes mellitus (GDM) has been defined as glucose intolerance first detected during pregnancy. Systemic oxidative stress may contribute to GDM related perinatal complications. Intracellular adhesion molecule-1 (ICAM-1) is related to female reproductive system disorders. The ICAM-1 gene has two single-base polymorphisms which are common genetic variations associated with DM. In the current study, we aimed to investigate the relation between ICAM-1 polymorphism and various systemic redox homeostasis biomarkers in pregnant women with and without GDM.

In GDM, systemic levels of both protein oxidation biomarkers {protein carbonyl groups (PCO), advanced protein oxidation end products (AOPP), protein thiol groups (P-SH)} and lipid hydroperoxides (LHP) were significantly different than healthy pregnant women (HP). Cu, Zn superoxide dismutase (Cu, Zn-SOD) activities as antioxidant parameter were found lower than HP. No significant differences were found in plasma ICAM levels between GDM patients and HP.

In GDM, ICAM-469 with AA genotype PCO, LHP levels were higher and Cu, Zn-SOD activities were lower than HP. The systemic redox profile of GA genotype only differs from AA genotype with respect to higher AOPP levels. In GDM, ICAM-469 with GG genotype PCO levels were higher and Cu,Zn-SOD and P-SH were lower than HP.

In GDM, ICAM-241 with GG genotype PCO, AOPP, LHP and Cu,Zn-SOD were different from HP. In GA only Cu,Zn-SOD levels were different from HP. The polymorphic genotypes of ICAM-1 and/or its plasma levels may not related to systemic redox homeostasis.

[ctfsevalaydin@gmail.com](mailto:ctfsevalaydin@gmail.com)

Notes: