Ewa Skarżyńska et al., J Proteomics Bioinform 2017, 10:12(Suppl)
DOI: 10.4172/0974-276X-C1-110

Ceruloplasmin, lactoferrin and myeloperoxidase in serum of healthy pregnant women

Ewa Skarżyńska[1], **Paulina Wilczyńska**[1], **Joanna Żytyńska-Daniluk**[2] and **Barbara Lisowska-Myjak**[1]
[1]Medical University of Warsaw, Poland
[2]Central Clinical Hospital- Ministry of the Interior, Poland

Introduction & Aim: Maintaining homeostasis in terms of redox status determines the suitable environment for the development of pregnancy. Metalloproteins: ceruloplasmin (CP), lactoferrin (LF), myeloperoxidase (MPO) modulate oxidative stress. The aim of the study was to determine the dynamics of changes in the concentrations of these proteins and the relationship between them.

Methods: The concentrations of proteins were measured in serum (n=113) in subsequent trimesters, postpartum (n=28) and in non-pregnant women (n=17) using immunoturbidimetric assay (CP) and ELISA kits (LF, MPO).

Results: CP [mg/dl] (mean±SD) in trimesters; first (33.0±8.7), second (43.1±6.2), third (44.5±5.8), postpartum (42.39±6.4), non-pregnant (24.12±7.4) revealed the largest increase between the first and remaining trimesters (approximately 35%). LF and MPO [μg/ml] (mean±SD respectively) in trimesters; first (6.19±4.54; 0.17±0.12), secend (5.68±4.4; 0.14±0.08), third (6.34±6.98; 0.17±0.14), postpartum (4.86±3.64; 0.25±0.4), non-pregnant (3.9±2.56; 0.14±0.05) were no significant differences. Significant correlations were found ($p<0.05$) between LF vs MPO in all groups as well between CP vs LF and CP vs LF/MPO ratio in the first trimester and in non-pregnant women respectively.

Conclusions: CP synthesized in the liver exhibits tends to increase during pregnancy, unlike neutrophil proteins: LF, MPO. Significant statistical correlations between CP, LF, MPO indicate involvement of these proteins during pregnancy, particular in the first trimester.

Biography

Ewa Skarżyńska is an university Lecturer and Researcher at Medical University of Warsaw. She received her PhD in Pharmacy Sciences from the same Medical University. At present she is working on protein biomarkers, particularly involved in maintaining systemic homeostasis including oxidative-reducing equilibrium.

ewaskarzynska@wp.pl