

INTERNATIONAL PEDIATRICS, INFECTIOUS DISEASES AND
HEALTHCARE CONFERENCE
&
8th International Conference on
BACTERIOLOGY AND INFECTIOUS DISEASES
November 22-24, 2018 Cape Town, South Africa

Investigation of nitric oxide, proangiogenic and antiangiogenic factors in serum from HIV infected pre-eclamptic South African women

Olatoye Isaac Ajadi, Maduray Kaminee, Eche Simeon and Mackraj Irene
University of KwaZulu-Natal, South Africa

Pre-Eclampsia (PE) characterized by high blood pressure is a major cause of maternal and fetal morbidity and mortality worldwide. Angiogenic, anti-angiogenic and vasoactive factors have been shown to be linked to placental dysregulation during PE; although, its exact pathogenesis is still unclear. It has been proposed that infection with Human Immunodeficiency Virus (HIV) may reduce the risk of developing PE even though few studies have tried to study their correlation in pregnancy. Therefore, this study investigated the serum levels of endothelin-1; endothelial Nitric Oxide Synthase (eNOS); soluble fms-like tyrosine kinase 1 (sFlt-1); soluble endoglin (sEng) and Placental Growth Factor (PlGF) in women with HIV associated PE. Serum mRNA expression levels of endothelin-1 and eNOS was measured using real-time PCR. The serum concentrations of sFlt-1, sEng and PlGF were quantified using ELISA kits. Results indicated an up-regulation of sFlt-1 levels in the PE groups (HIV uninfected 4.39 ± 1.29 ng/ml; HIV infected 5.10 ± 1.10 ng/ml) compared to the normotensive groups (2.59 ± 0.83 ; 2.20 ± 0.85 ng/ml; $p \leq 0.05$). There were no significant differences in the mean serum sEng levels across the study groups. The mean PlGF levels was higher in the HIV uninfected PE versus the infected normotensive groups (29.69 ± 4.47 pg/ml vs. 32.86 ± 6.46 pg/ml; $p = 0.002$). Meanwhile, elevated expression level of endothelin-1 mRNA was observed in the HIV infected and uninfected PE. This study strongly supports that sFlt-1, an anti-angiogenic factor is a key role player in its pathogenesis and endothelin-1; being a vasopressor, has a substantial contribution to the raised blood pressure which is one of the characteristic features of PE. However, the findings of our study shows that HIV infection has no alteration on the levels of the selected biomarkers thus may not have effect on the incidence or disease progression of PE.

Biography

Olatoye Isaac Ajadi is a Medical Doctor from Nigeria with eight years of work experience in clinical medicine both at teaching hospitals and private facilities. He had his Medical training at Ladoke Akintola University Teaching Hospital where he later served before joining the medical team at Olabisi Onabanjo Teaching Hospital. Due to his strong passion for medicine, he founded Divine Treasure private hospital. As an accolade to his academic achievements, he recently bagged a Master's degree in Health Science with a focus on preeclampsia and HIV pathogenesis at the University of KwaZulu-Natal in South Africa.

toyeajadidh2014@yahoo.com

Notes: