

Risk and Clinical Treatment of Oxidative Stress in Hypertensive Diseases Pregnancy with Gestational Diabetes Mellitus: A Prospective Cohort Study

Brona Piotr*

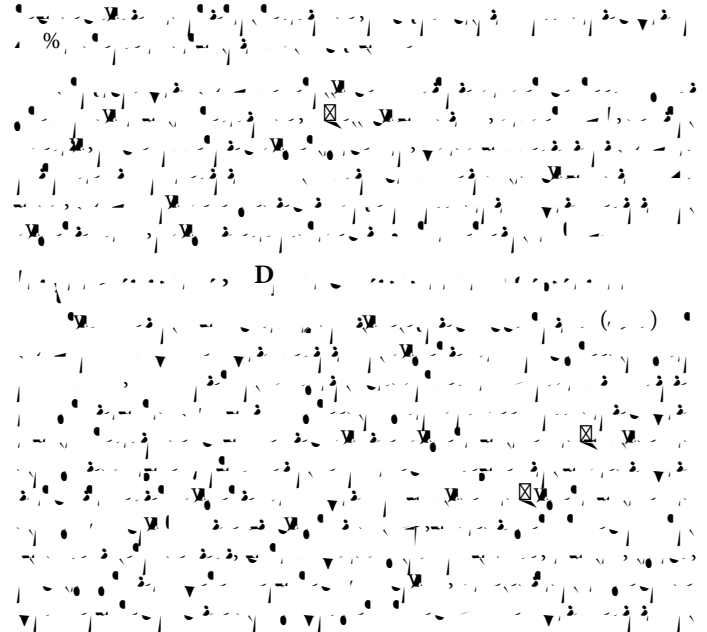
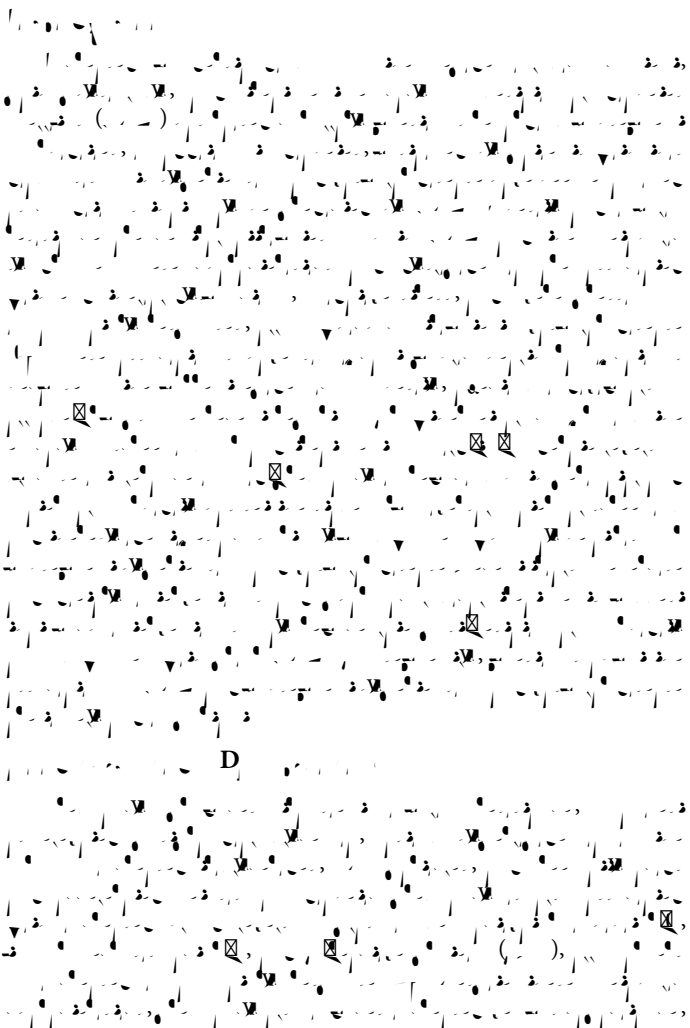
Department of Life and Consumer Sciences, University of South Africa, Science Campus, Florida, Roodepoort, South Africa

Abstract

Introduction: Oxidative stress is linked to the development of gestational diabetes mellitus (GDM). Maternal antioxidant vitamins in early pregnancy may play a role in GDM occurrence. We aimed to investigate the associations of vitamins A and E in early pregnancy with the risk of GDM and to explore whether these antioxidant vitamins can be biomarkers for the early prediction of GDM.

Methods: We carried out a prospective cohort study conducted in Beijing and enrolled pregnant women with vitamins A and E measurements at 9 weeks of gestation and having one-step GDM screened with a 75-g oral glucose tolerance test between 24 and 28 weeks of gestation.

Results: Vitamin A levels were significantly higher in women with GDM compared to those without GDM and positively correlated with fasting blood glucose. In multivariate models, vitamin A levels were significantly associated with the risk of GDM. Vitamin E levels were not significantly associated with the risk of GDM. The findings suggest that vitamin A may be a biomarker for the early prediction of GDM.



*Corresponding author: Brona Piotr, Department of Life and Consumer Sciences, University of South Africa, Science Campus, Florida, Roodepoort, South Africa, E-mail: piotrbrona@edu.sa.com

Received: 03-Jan-2023, Manuscript No: jdce-23-87726, Editor assigned: 05-Jan-2023, PreQC No: jdce-23-87726 (PQ), Reviewed: 18-Jan-2023, QC No: jdce-23-87726, Revised: 25-Jan-2023, Manuscript No: jdce-23-87726 (R), Published: 31-Jan-2023, DOI: 10.4172/jdce.1000177

Citation: Piotr B (2023) Risk and Clinical Treatment of Oxidative Stress in Hypertensive Diseases Pregnancy with Gestational Diabetes Mellitus: A Prospective Cohort Study. J Diabetes Clin Prac 6: 177.

Copyright: © 2023 Piotr B. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

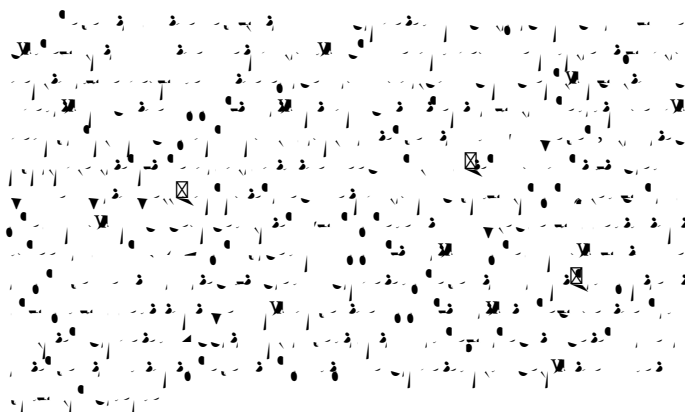
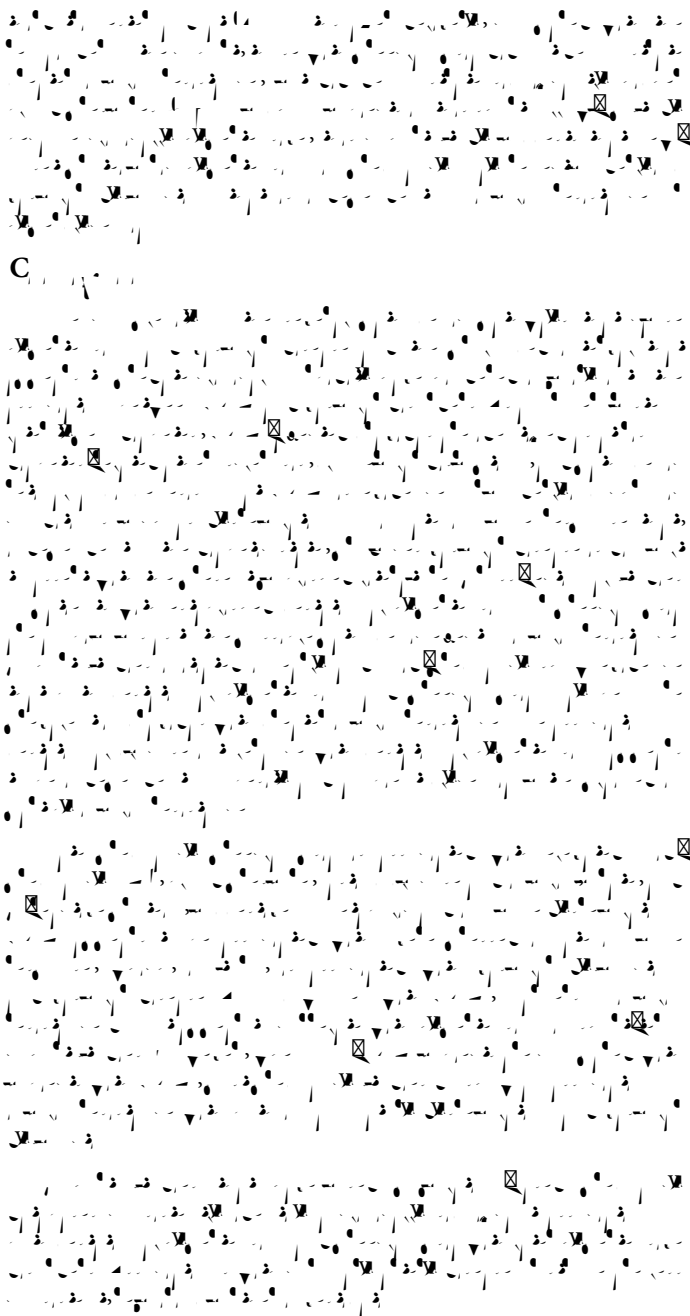
Abstract

Background: Oxidative stress is a key factor in the pathogenesis of hypertension and gestational diabetes mellitus (GDM). This study aims to evaluate the risk and clinical treatment of oxidative stress in hypertensive diseases pregnancy with GDM.

Methods: A prospective cohort study was conducted involving 100 pregnant women with GDM and hypertension. The study included baseline assessment of oxidative stress markers, blood pressure, and glucose levels. The participants were followed up during pregnancy and postpartum to monitor changes in oxidative stress markers and clinical outcomes.

Results: The study found that oxidative stress markers were significantly elevated in the hypertensive pregnant women with GDM compared to the control group. The clinical treatment with antihypertensive and antidiabetic medications resulted in a significant reduction in oxidative stress markers and improved clinical outcomes.

Conclusion: Oxidative stress is a key factor in the pathogenesis of hypertension and GDM. The clinical treatment with antihypertensive and antidiabetic medications is effective in reducing oxidative stress and improving clinical outcomes in hypertensive pregnant women with GDM.



References

1. Khan RMM, Chua ZJY, Tan JC, Yang Y, Liao Z (2019) From Pre-Diabetes to Diabetes: Diagnosis, Treatments and Translational Research. *Medicina* 55.
2. Gheith O, Farouk N, Nampoory N, Halim MA, Al Otaibi T (2016) Diabetic Nephropathy: A Review. *J Nephropharmacol* 5: 49-56.
- 3.