Objectives

Micronutrients have been implicated in the aetiopathogenesis of preeclampsia. To date, studies on serum Ca$^{2+}$ and Mg$^{2+}$ levels amongst women presenting with preeclampsia are conflicting and those on serum calcium-magnesium ratio are scanty globally. This study, therefore, aimed at determining the serum calcium-magnesium ratio in women with preeclampsia. It aimed at providing preliminary data that could influence the prevention and management of preeclampsia.

Methods

This case-control study was conducted at the University of Benin Teaching Hospital, Nigeria on 81 pregnant women comprising of 27 patients with preeclampsia and 54 normotensive women matched for age, gestational age and parity. Statistical analysis was done using IBM SPSS 21.0.

Serum Ca$^{2+}$ level correlated negatively with SBP ($r=0.45$, $p=0.05$) & DBP ($r=0.49$, $p=0.01$) among the cases. Hypocalcaemia was a risk factor (AOR=7.63, 95% CI=1.64-35.37), while social class 2 & 3 were protective factors (AOR=0.01, 95% CI=0.00-0.46 and AOR=0.01, 95% CI=0.00-0.24 respectively) against PE.

Conclusion

The result of this research supported the implication of micronutrients in preeclampsia and may help to understand the pathophysiological process of preeclampsia and will help to establish and enhance existing preventive strategies for the condition.