

Comparative Study of the Serum Magnesium levels and the Foeto-Maternal Outcomes In Pre-Eclamptic and Normotensive Pregnant Women In South Eastern Region of Nigeria

Wokoh D. N¹, Adizua U. C², Nduka E. C¹, Okali U. K¹

¹Department of Obstetrics and Gynaecology, Federal Medical Centre, Umuahia, Abia State. Nigeria

²Department of Chemical pathology, Federal Medical Centre, Umuahia, Abia State. Nigeria.

(Received June 05, 2020; Revised June 15, 2020; Accepted June 16, 2020)

Abstract

Pre-eclampsia is a multi-organ disorder of pregnancy characterized by elevated blood pressure and proteinuria. It complicates 2 - 8% of pregnancies, and results in significant foetal and maternal morbidity and mortality worldwide. In spite of various theories of the aetiology, the exact cause has not been identified. Its association with low serum magnesium levels has been postulated. This study aimed to compare the serum magnesium levels in healthy pregnant women and pre-eclamptic women as well as to determine their foetomaternal outcomes. This hospital based comparative study recruited 42 pregnant women (21 in the healthy group and 21 in the pre-eclamptic group) at the Federal Medical Centre, Umuahia, who satisfied the inclusion criteria. Blood samples were collected and analyzed for quantitative serum magnesium, and urine samples for urinalysis. Ultrasonography ruled out multiple gestation and molar pregnancy. No significant difference was found between serum magnesium levels in pre-eclamptic and the normotensive pregnant women ($P=0.570$). Prematurity, birth asphyxia, Neonatal Intensive Care Unit admissions, perinatal deaths and Caesarean delivery were higher among pre-eclamptic subjects. There was no significant difference in the serum magnesium levels of pre-eclamptic and healthy normotensive pregnant women.

Keywords: pre-eclampsia, serum magnesium, pregnant women, proteinuria, birth asphyxia, normotensive.