Abstract


Plasma vitamin C concentration in pregnant women with pre-eclampsia in Mulago hospital, Kampala, Uganda.


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BACKGROUND: Oxidative stress plays a role in the aetiology of pre-eclampsia and vitamin C may prevent pre-eclampsia.

OBJECTIVE: To determine the association between plasma vitamin C and pre-eclampsia in Mulago Hospital, Kampala, Uganda.

METHODS: This case-control study was conducted at Mulago Hospital from 1(st) May 2008 to 1(st) May 2009; 207 women were the cases and 352 women were the controls. Plasma vitamin C was assayed in the women using a colorimetric method. An independent t test was used to find the difference in the means of plasma vitamin C and logistic regression was used to find the association between plasma vitamin C and pre-eclampsia.

RESULTS: The mean plasma vitamin C was 1.7(SD=0.7) × 10(3) µg/L in women with pre-eclampsia and 1.9(SD=0.7) × 10(3) µg/L in women with normal pregnancy (P=0.005). Women with low plasma vitamin C were at an increased risk of pre-eclampsia (OR 2.91, 95% CI: 1.56-5.44).

CONCLUSION: There was a strong association between low plasma vitamin C, and pre-eclampsia in women attending antenatal clinics at Mulago Hospital, Kampala. Health workers need to advise women at risk in the antenatal period about diet, especially foods which are rich in vitamin C to probably reduce pre-eclampsia.

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