

ABSTRACT**Antioxidant Status in Jamaican Pre-eclamptic Women****Margaret P. Stewart**

Pre-eclampsia is a disorder of pregnancy in which there is hypertension, albuminuria, oedema and excessive weight gain. Pre-eclampsia falls in the category of hypertensive disorders of pregnancy which is the commonest cause of maternal deaths in Jamaica.

Cellular components require oxygen for normal metabolic reactions. Oxygen in its free-radical state, may react with cellular components resulting in degradation or activation of important biological molecules. The exposure of cell membranes to oxygen radicals stimulates the process of lipid peroxidation. In pre-eclampsia, the placenta is the primary target organ for vascular damage. The mechanisms are unknown. However, free-radicals produced during reperfusion of ischaemic placenta might contribute to the endothelial damage. These free radicals cause tissue damage by peroxidizing lipids in cell membranes. Antioxidants are molecules that make up part of the protective mechanism against free radicals. Antioxidants act by scavenging of free-radicals and reduction or detoxification of resulting hydroperoxides.

Antioxidants such as glutathione and Vitamin E, as well as enzymes involved in glutathione peroxidase and glutathione-S-transferase, counter the effects of the free radicals. The aim

of this study was to determine whether Jamaican pre-eclamptic women have an impaired antioxidant status.

It was hypothesized that oxidative stress increases during pre-eclampsia, causing an increase utilization of the antioxidant system.

The conclusion of this study was that, there was no impairment in the antioxidant status in pre-eclampsia. However pre-eclamptics had a higher concentration of glutathione compared to normal pregnancies.