ABSTRACT

The aim of the study was to establish reference resistive index values for preeclampsia and gestational hypertension as there are no reference RI values for the diagnosis of preeclampsia and gestational hypertension for pregnant, black African Zimbabwean woman.A prospective study comprising of 50 hypertensive pregnant woman (24-36 weeks) from February -May 2017 was conducted at United Bulawayo Hospital (UBH) located in Bulawayo, Zimbabwe. Ultrasound scans were used to record umbilical artery resistive index measurements when patients reported for routine antenatal visits and clinical data like BP and amount of protein in the urine were collected from patient's records, this data was compared and then analysed graphically using Microsoft Excel (2013) and SPSS (version 22).A majority of the patients 68.4 % were referred from the outskirts (rural, farms and mines) and 31.6 % were from surrounding locations in Bulawayo. RI values tend to increase with advancing gestational age for patients with preeclampsia. The RI readings ranged from 0.70 to 0.90 exhibiting a mean of 0.7869 and a standard deviation of +/- 0.05468. Also RI values tend to increase with advancing gestational age for patients with Gestational Hypertension ,they ranged from 0.60 to 0.76 exhibiting a mean of 0.67 and a standard deviation of +/- 0.04404.RI values for preeclampsia participants were found to be statistically higher than those for gestational hypertension cases across the gestational spectrum.The study concluded that Doppler ultrasound can be used as a guide for the diagnoses of preeclampsia and gestational hypertension using umbilical artery resistive index. The study recommends that second and third trimester pregnant woman should have foetal umbilical artery resistive index done routinely as part of ultrasound Doppler assessment in order to facilitate early detection of the type of hypertension affecting the pregnant woman