

Abstract

The present study was designed with the objective of studying the incidence and some epidemiological features of pregnancy induced hypertension (PIH) in the district of Gampaha and to study the pattern of blood pressure changes throughout the period of pregnancy.

The study design was a population based prospective study that recruited the women in to the study between seven to ten weeks of gestation and followed through up to six weeks post partum. One thousand fifty women were selected for the study using a multistage stratified cluster sampling technique. Thirty clusters comprising of thirty five individuals in each cluster were selected probability proportional to size of the population of selected Medical Officer of Health areas. Information was collected on socio demographic characteristics and risk factors for pregnancy induced hypertension by using interviewer administered, pre coded structured questionnaires. Thereafter they were followed up at predetermined intervals and clinical findings during these visits including blood pressure were recorded using a specially designed form. Information on their post partum characteristics and post partum blood pressure recordings were entered into a separate form. Each mother in the sample was tested for micro albuminuria at twenty weeks gestation using a micral urinary dipstick which is a gold labeled optically read immunoassay (GLORIA) which has a sensitivity of 96.7% and specificity at detecting an albumin level of 20mg/l.

During the course of study fifty eight mothers were identified as having developed pre eclampsia according to the criteria used in the study and the estimated incidence rate was 56.8 per thousand pregnancies and 58.5 per 1000 live births. Risk factors that were identified as being associated with PIH using Cox regression analysis were primipara, RR 13.6, CI (8.4 – 22.2), pregnancy interval over five years, RR 3.19, CI (1.24 – 3.19), change of paternity since last birth, RR, 29.94, CI, (13.27 – 50.70), PIH during an earlier pregnancy, RR 29.94, CI (13.27 – 50.70), family history either on woman or spouse's

side RR 101.38, (CI 52.71 – 194.87), family history of hypertension, RR 2.40 CI (1.46 – 5.77) and family history of both hypertension and diabetes RR 3.04, CI (1.75 – 3.28).

The study showed that the presence of microalbuminurea at 20 weeks was predictive of pre eclampsia. The sensitivity of 91.6%, specificity of 72.8%, positive predictive value of 0.17, negative predictive value of 0.99, a likelihood ratio of 3.25 and a Youden's index of 0.64 indicating that it is good test that could be used as a predictor of pre eclampsia.

This study highlighted the importance of early enrollment of women for antenatal care so as to establish baseline blood pressure in order to recognize an increase in blood pressure. It also identified that nearly 22% of women who had PIH were diagnosed as hypertensive by 25th week of gestation. Early referral of these mothers to tertiary care centers resulted in preventing the mothers into developing the more severe form of this condition which is eclampsia.

Nine percent of still births and early neonatal deaths occurred in mothers with PIH and 81% of babies born to mothers with PIH. The study estimated that 14% of LBW in the population could be attributed to PIH.

Based on the evidence obtained from the study it is recommended that all health care personnel providing antenatal care be made aware of the risk factors for PIH and that these be included in a revised mothers' record so that they are elicited for every mother. It is also worthwhile examining the cost effectiveness of screening for microalbuminurea at 18-20 weeks POA to routine antenatal care to be used as a predictor of PIH.