

PERSPECTIVES IN HYPERTENSION

Post-natal care for mothers with pre-eclampsia

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Hypertension in pregnancy and pre-eclampsia are the leading causes of maternal deaths, worldwide.¹ Traditionally, it has been taught that these conditions resolve with the end of pregnancy but, more recently, this teaching has been called into doubt. There is now evidence that hypertension in pregnancy is associated with an exaggerated risk for the development of early onset hypertension, higher risk for cardiovascular disease and as much as a six times increased risk of developing end stage kidney disease.^{2,3}

We noticed that when women were discussed for our dialysis and transplantation programme, a large proportion of young mothers had reported hypertension in pregnancy. On auditing these discussions, 17% of women who had end stage kidney disease had a history of hypertension during their pregnancy. Their mean age was 10 years younger (average 34 years) than the women who had not had hypertension in a pregnancy.⁴

However, there is very little information about the long-term outcomes of hypertension in pregnancy, in Africa.^{5,6} To improve care and better understand long-term consequences in Africa, a colleague and I have developed a follow-up service for these mothers. This service started in 2020 and, despite the interruption from the COVID-19 pandemic, we have followed up 214 mothers who had pre-eclampsia.

In the mothers who have followed up within our service, 46% had acute kidney at the time of delivery. About one third had haemolysis, elevated liver enzymes, low platelets (HELLP) syndrome and abruptio complicated 10% of pregnancies. Pulmonary oedema was seen in 7% of mothers

but, fortunately, seizures were only present in 4%. The median gestational age at the time of delivery was 30 weeks and two thirds of mothers were delivered by cesarean section. The median weight for the infants was 1755 grams but, sadly, 22% of mothers delivered stillbirths.

While the details from delivery are concerning, the follow-up data are equally perturbing. At the first visit after delivery (around 3 months later), hypertension was detected in 55% of women. This is far over the estimated prevalence for women with an average age of 30 years. Many mothers had extremely high blood pressures at their first visit [**Figure 1A**]. Unfortunately, the high prevalence of hypertension was coupled with an excess of impaired kidney function (24% had an eGFR <90ml/min/m²) and persistent albuminuria was detected in 56% of mothers [**Figure 1B**] at 1 year.

One positive for our follow-up service is the improvement in proportion of women with hypertension taking antihypertensives: at 3 months 83% were taking treatment but by 1 year, 96% were on antihypertensives. The benefits of antihypertensive use are demonstrated with a high proportion of women achieving target blood pressures: 55% at 3 months rising to 67% by one year after delivery.

Unfortunately, there has been an overwhelming loss to follow-up. We have had close to 2000 mothers referred to us who have received a date to attend our clinic. Sadly, only 214 have arrived. Despite attempts to mitigate the loss to follow-up we have had little success in improving uptake. Even after arriving for their first appointment there has

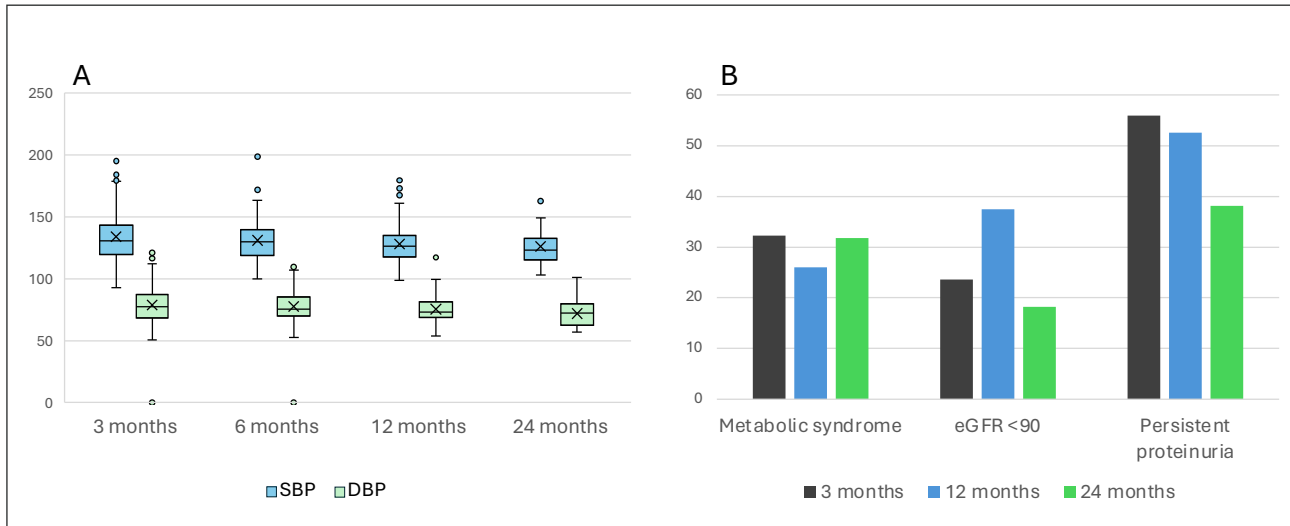


Figure 1: Cardiorenal risk factors in the first two years after delivery; A) Blood pressure at the post-partum visits and B) Proportion of mothers with metabolic syndrome, impaired kidney function and persistent proteinuria.

been considerable drop off on mothers returning for later appointments. Without monitoring, the concern is that long-term cardiovascular and renal outcomes will be missed with considerable socioeconomic impact.

Loss to follow-up has been a recurring issue in the post-natal period,^{7, 8} with disengagement as high as 90% in people with HIV.⁹ The need to address post-natal care and follow-up has become more apparent, particularly in the cardiovascular setting, as cardiovascular disease is a leading cause of death for women. Targeting high risk populations makes socioeconomic sense.

References

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