

Hypertensive disorders: Common yet complex

Hypertensive disorders are the most common medical problems in pregnancy and account for a significant proportion – between 12 and 20 per cent – of maternal deaths worldwide. They affect women in every region, causing nearly 10 per cent of maternal deaths in Africa and Asia, over 16 per cent in industrialized countries, and more than one quarter in Latin America and the Caribbean. Hypertension in pregnancy can result in a range of conditions, from elevated blood pressure, the least severe, to cerebral haemorrhage, which is fatal. It can result in fetal death, preterm delivery and low birthweight in newborns.

The causes of hypertension are still not fully understood, but research suggests that obesity, high salt intake and genetic predisposition are factors. Some forms of hypertension in pregnancy may arise from the biology of pregnancy itself. Pre-eclampsia, which develops after the first 20 weeks of pregnancy, is defined as pregnancy-induced hypertension accompanied by excess protein in the urine, and brings the greatest risk to maternal and fetal health, particularly when it accompanies chronic hypertension. It is a leading cause of premature births.

Several risk factors predispose mothers to these disorders, including first pregnancy, multiple pregnancy, history of chronic hypertension, maternal age over 35, gestational diabetes, obesity and fetal malformation. One study showed that intervals of 59 months or longer between pregnancies were also associated with higher rates of pre-eclampsia and eclampsia. Researchers have also proposed that hormonal imbalances, calcium deficiency and insulin resistance are possible causes.

Calcium supplementation has been shown to be an effective intervention in developing countries where pregnant women may be calcium deficient, reducing the incidence of pre-eclampsia by 48 per cent. If this intervention has a similar effect on maternal deaths from hypertensive disorders, calcium supplementation could prevent some 21,500 maternal deaths. The Magpie Trial, the largest trial for hypertensive disorders of pregnancy, conducted in 1998–2002 in

both industrialized and developing countries, and follow-up studies have produced strong evidence that magnesium sulfate given to women in the pre-eclampsia stage can reduce their risk of progression to eclampsia. Subsequent studies have strengthened the evidence base for this critical and cost-effective intervention.

Ideally, care should begin before conception, so that a reproductive woman's medical history can be tracked and her options for managing chronic hypertension known. Hypertensive women also need information about their risks in pregnancy and changes in their lifestyle that illness may require. Bed rest is a common recommendation for hypertensive pregnant women. Regular examinations by skilled health personnel are required to monitor the onset and development of pre-eclampsia and other hypertensive conditions.

Hypertension in pregnancy has long been understood as an obstetric condition, with interventions focusing mostly on outcomes for the pregnancy and less on long- and short-term effects on the mother. New research has shown, however, that hypertension in pregnancy can also affect the post-natal health of a mother, increasing her risks of developing chronic hypertension and cardiovascular disease. With high maternal mortality and morbidity resulting from these disorders, further research is warranted. Treatment or management of these conditions will have great significance for the continuum of care model of maternal and newborn health care.

See References, page 109.