Hypertensive disorders in pregnancies Conference at practicum Maternal and Child

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They are generally classified into 3 type: chronic or pre-existing hypertension ,gestational hypertension and pre-eclampsia (PET). Pre-eclampsia, the most significant of hypertensive disorder in pregnancy , contributes to increased maternal and perinatal mobility and mortality. Much of antenatal care in the second and third trimester centres on the early detection of this unique complication of pregnancy .The physiological changes of pregnancy cause the blood pressure (BP) to drop in early pregnancy until around 18 weeks gestation and then to slowly rise to wards term. Obtaining a baseline blood pressure reading in the first trimester aids management.

A reading of 140/90 mmHg is regarded as the upper limit of normal.

Definition for ranges of hypertension.

Mild hypertension Diastolic 90-99 mmHg, systolic 140-149 mmHg

Moderate hypertension Diastolic 100-109 mmHg , systolic 150-159 mmHg

Severe hypertension Diastolic $^{>}$- 110 mmHg , systolic $^{>}$-160 mmHg

Antihypertensive medication in pregnancy

Magnesium sulphate : although magnesium sulphate is primarily an anticonvulsive , it also has a strong hypotensive effect and further antihypertensive medication may not be necessary. It is recommended as first-line treatment of eclampsia and to prevent eclampsia in those at high risk

Depending on the severity of the disease and gestational age, doctors may recommend women with preeclampsia come in more often for outpatient prenatal visits, or possibly be admitted to the hospital. They'll likely perform more frequent blood and urine tests. They may also prescribe:

medications to lower blood pressure

corticosteroids to help mature the baby's lungs and improve the mother's health

In severe cases of preeclampsia, doctors often recommend antiseizure medications, such as magnesium sulfate. Magnesium sulfate is a mineral that reduces seizure risks in women with preeclampsia. A healthcare provider will give the medication intravenously.

Sometimes, it's also used to prolong pregnancy for up to two days. This allows time for corticosteroid drugs to improve the baby's lung function.

Magnesium sulfate usually takes effect immediately. It's normally given until about 24 hours after delivery of the baby. Women receiving magnesium sulfate are hospitalized for close monitoring of the treatment.

Side effects

Magnesium sulfate can be beneficial to some with preeclampsia. But there's a risk of magnesium overdose, called magnesium toxicity. Taking too much magnesium can be life-threatening to both mother and child. In women, the most common symptoms include:

nausea, diarrhea, or vomiting

large drops in blood pressure ,slow or irregular heart rate ,breathing problems

deficiencies in minerals other than magnesium, especially calcium

confusion or fogginess ,coma ,heart attack ,kidney damage

In a baby, magnesium toxicity can cause low muscle tone. This is caused by poor muscle control and low bone density. These conditions can put a baby at greater risk for injuries, such as bone fractures, and even death.

Doctors treat magnesium toxicity with: giving an antidote , fluids ,breathing support ,dialysis

To prevent magnesium toxicity from happening in the first place, your doctor should closely monitor your intake. They may also ask how you're feeling, monitor your breathing, and check your reflexes often.

The risk of toxicity from magnesium sulfate is low if you're dosed appropriately and have normal kidney function.

Pre-existing (chronic) hypertension

It is recognized as either a high BP identified before 20 weeks gestational or if the women has a normal BP but has been taking antihypertensive medication before pregnancy .arises from a combination in black women ,and the incident increase with age ,raised BMI ,increase salt intake and physical inactivity. Secondary hypertension is pre-existing hypertension ,arising as a consequence of disorder such as renal disease ,cardiac disease ,thyroid or adrenal gland abnormalities .The fetus is at risk because the placental circulation may be poor ,hence ,fetal hypoxia ,intra-uterine growth restriction and placental abruption may occur. Postnatally ,women will require monitoring of their BP and will general continue on their antenatal medication for the first 2 weeks .At the point , a review of longer-term antihypertensive medication will be made with further follow-up at 6 weeks after birth.

Gestational Hypertension

Gestational Hypertension know as pregnancy induced hypertension (PIH) is new hypertension, presenting after 20 weeks gestation without significant proteinuria or any other of PET. Women who acquire hypertension in the second half of pregnancy may go on to develop pre-eclampsia. A third of women who have gestational hypertension before 34 weeks go on to develop PET over the next 5 weeks ,whereas only 7% of those who develop hypertension for the first time in the last weeks gestational.

Risk factors for PET

-First pregnancy ,Pre-eclampsia in a previous pregnancy

-Age 40 years or more ,BMI of 35 or more

-Family history of pre-eclampsia (in mother or sister)

-Booking proteinuria of 1 + or more , on more than one occasion , or quantified at >0.3 g/24 hr in the absence of infection ,multiple pregnancy

-Underlying pre-existing medical conditions such as diabetes , hypertension, renal disease

Admission to hospital is indicate if BP exceeds 160/110 mmHg. Antihypertensive medication that aims to keep BP within safe limits may be prescribed. IOL may be indicated to improve maternal and fetal well-being

Pre-eclampsia

Hypertension developing after 20 weeks gestation and the co-existence of one or more of the following gestational new onset conditions : proteinuria ,other maternal organ dysfunction (renal ,liver, neurological, hematological complications)or uteroplacental dysfunction

Symptoms

-Headache -severe ,persistent, not resolved by mild analgesic medication

-Visual disturbances -may include dim or blurred vision ,difficult reading ,sport or flashes of fight

-Rapid increase in swelling of the face ,hands and feet

-Severe pain just below the ribs

Signs

-Hypertension , Proteinuria ,Rapidly progressing edema

-Liver involvement , Neurological complication ,including eclampsia ,stroke

-renal insufficiency , oliguria , DIC

-Fetal growth restriction ,Placental abruption