COLLEGE OF DENTISTRY
UNIVERSITY OF BAGHDAD IN
SHANGHAI RANKING

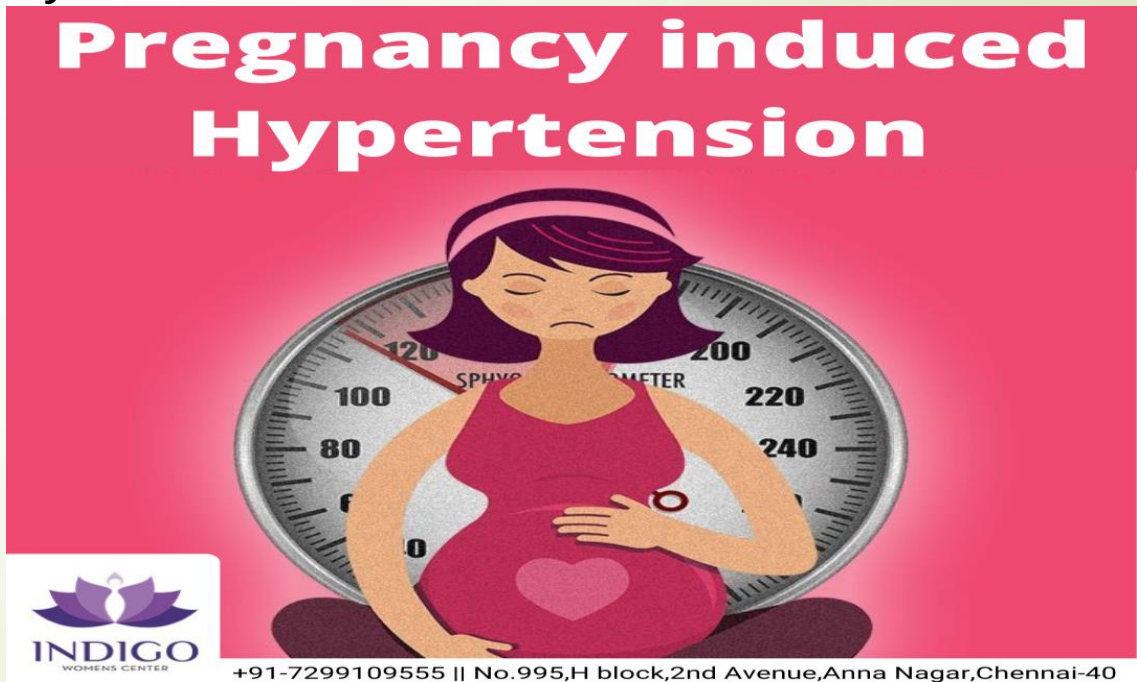
SHANGHAI RANKING

World
201-300

Global Ranking of Academic Subjects 2023

Hypertension in pregnancy

- Hypertensive disorders of pregnancy (HDP) remain one of the major causes of pregnancy-related maternal and fetal morbidity and mortality worldwide. Affected women are also at increased risk for cardiovascular disease later in life, independently of traditional cardiovascular disease risks.



- some symptoms that associated with this disorder (headache, epigastric pain, visual disturbances, dyspnea, edema in the face, hands, feet, or seizures).

- Elevated systolic BPs throughout pregnancy, even below the diagnostic threshold for hypertension, also are associated with increased risk of preterm delivery and infants who are small for gestational age and have low birth weight.

- Pregnant women with HDP are at risk of developing placental abruption, stroke, pulmonary edema, thromboembolic events, disseminated intravascular coagulation, and multiple organ failure. Neonates are at increased risk of preterm birth with low birthweight, prolonged high-level neonatal care, and postnatal death

There are 4 types of hypertension in pregnancy

- Hypertensive disorders during pregnancy are classified into 4 categories, as recommended by the National High Blood Pressure Education Program Working Group on High Blood Pressure in Pregnancy:

I. chronic hypertension

II. preeclampsia-eclampsia

III. preeclampsia superimposed on chronic hypertension

IV. gestational

- All types of high blood pressure can share the same symptoms, including:

- Dizziness
- Headaches
- Lightheadedness
- Pounding feeling in the head or chest

Physiological Changes in Blood Pressure During Pregnancy

- Due to vasodilation induced by local mediators such as prostacycline and nitric oxide, there is a fall in blood pressure (BP) early in the first trimester. This reduction in BP primarily affects diastolic BP (DBP), further followed by a gradual increase to pre-pregnancy values at week 36 This BP fluctuation is seen both in normotensive and hypertensive pregnant women. Women with pre-existing hypertension may have a greater BP decrease in early pregnancy and therefore the BP rise in the third trimester may be misdiagnosed as gestational hypertension.
- Blood pressure usually falls immediately after delivery and then progressively rises over the first five postnatal days peaking on days 3–6 after delivery. It should be emphasized that 10% of maternal deaths due to hypertensive disorders in pregnancy occur in the postpartum period.

Blood Pressure Measurement

- The initial BP measurement should be taken in both upper arms, with following measurements taken in the arm with the higher BP value, preferably in the sitting position or in the left lateral recumbent position during labor. A cuff of appropriate size should always be used with the arm being supported at heart level.

- The mercury sphygmomanometer is still considered the gold standard for BP measurement in pregnancy with Korotkoff V phase to be used for DBP. However, as the sale of mercury sphygmomanometers has been banned in Europe, other devices for standard sphygmomanometry or automatic/semiautomatic (usually oscillometric) BP devices, validated according to standardized protocols (specifically for pregnancy and pre-eclampsia) should be used.

It is important to note that not all automatic devices are validated for use in pregnancy and pre-eclampsia. Those that are not specifically validated for this condition showed a tendency to underestimate actual BP levels and are thus unreliable in severe pre-eclampsia. Wrist BP monitors are not recommended .

Preeclampsia

- High blood pressure during pregnancy is most often associated with preeclampsia, which is a serious pregnancy complication that causes elevated blood pressure. It can also cause damage to other organ systems, including the liver and kidneys.
- What separates preeclampsia from regular high blood pressure is the fact that it only happens during pregnancy, and people with otherwise normal blood pressure levels can be diagnosed with this condition. Plus, just like gestational high blood pressure, it normally goes away after the postpartum period.
- Preeclampsia typically occurs after 20 weeks of pregnancy. If untreated, it can lead to serious complications including stillbirth, preterm deliveries, and even death.

Risk Factors

- Risk factors that increase the odds of developing preeclampsia in pregnancy include any of the following:
- It's your first pregnancy
- You had preeclampsia in a previous pregnancy
- You had chronic hypertension before week 20
- You are Black
- You're carrying multiple fetuses
- You have obesity
- You have certain health conditions, including type 1 or type 2 diabetes, lupus, and chronic kidney disease
- You became pregnant using in vitro fertilization (IVF), egg donor, or donor insemination
- You are over 40

Symptoms

- In addition to developing high blood pressure after week 20, some of the more common signs of preeclampsia include:
- Abdominal pain, typically high on the right side of the belly
- Blurred vision, temporary loss of vision or light sensitivity
- Decreased urine output
- Difficulty breathing
- Excess protein in the urine
- Headaches that are severe, more frequent than normal, and/or don't go away
- Nausea or vomiting
- Sudden weight gain
- Swelling of the face and hands

The best management of hypertension

Your health care provider may recommend that you make lifestyle changes including:

1-Eating a heart-healthy diet with less salt.

2-Getting regular physical activity.

3-Maintaining a healthy weight or losing weig

4-Limiting alcohol.

5-Not smoking.

6-Getting 7 to 9 hours of sleep daily.

Conclusions

- HDPs complicate about 10% of pregnancies and are associated with increased risk of morbidity and mortality for the mother, fetus, and the newborn. Diagnosis of hypertension in pregnancy is based on BP values (SBP $\geq$ 140 mmHg and/or diastolic DBP $\geq$ 90 mmHg) measured in the office or in hospital, preferably on two separate occasions. Ambulatory BP monitoring should be used to rule out white coat hypertension to avoid unnecessary treatment.

- Calcium supplementation is recommended for the prevention of pre-eclampsia only in women with a low dietary intake of calcium (< 600 mg daily). Vitamin D is also suggested in the prevention of pre-eclampsia.

- Women with pre-existing hypertension should continue their salt-restricted diet, otherwise a normal diet without salt restriction is advised. Exercise of low to moderate intensity during pregnancy is effective in reducing the risk of developing gestational diabetes and gestational hypertension. Obese women are advised to avoid a weight gain of more than 6.8 kg.


Thank you!