

Preeclampsia



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Preeclampsia Preeclampsia is a complication in pregnancy which is clinically defined by hypertension and proteinuria. It occurs 20 weeks after gestation and is a disorder of widespread vascular endothelial malfunction and vasospasm. It is the third leading pregnancy-related cause of death. It can cause ischemic encephalopathy, growth retardation and premature birth to the baby. In the mother, preeclampsia can lead to tissue and organ ischemia, seizures, strokes, brain hemorrhage, acute tubular necrosis, coagulopathies, and placental abruption (Erogul, Emedicine).

It occurs more frequently in women less than 20 years of age and more than 35 years of age. Other risk factors include primigravida, hydatidiform mole, multiple pregnancy, urinary tract infection, black race, nulliparity, presence of chronic diseases like diabetes, obesity, chronic hypertension and renal disease, and positive family history of preeclampsia (Erogul, Emedicine).

Hypertension means a systolic blood pressure (BP) greater than 140 mm Hg and a diastolic BP greater than 90 mm Hg on 2 successive measurements 4-6 hours apart. Proteinuria means 300 mg or more of protein in a 24-hour urine sample or a urine protein-to-creatinine ratio of 0.19 or greater (Erogul, Emedicine).

The pathophysiology of preeclampsia is not well established. However, most researchers believe that placental hypoperfusion is the inciting event resulting in abnormal formation of uteroplacental spiral arterioles. These arterioles are highly sensitive to vasoconstriction. Placental hypoperfusion causes release of systemic vasoactive compounds which cause exaggerated inflammatory response, vasoconstriction, endothelial damage, capillary leak, hypercoagulability, and platelet dysfunction (Erogul, Emedicine).

Mild-to-moderate preeclampsia may be asymptomatic. Most of the cases are

detected through routine prenatal testing. Infact symptoms are mostly seen when end-organs are affected. Some of the symptoms which can be attributed to preeclampsia are headache, visual disturbances, dysnea, malaise and edema. Along with increased blood pressure, physical examination may reveal altered mental status, decreased vision, papilledema, hyperreflexia, seizures and focal neurodeficit (Erogul, Emedicine).

Preclampsia should be managed by controlling blood pressure with antihypertensive agents. The goal should be to maintain diastolic blood pressure between 90 and 100 mm Hg and systolic pressure between 140 and 155 mm Hg. In case the patient develops seizures, the patient should be admitted to emergency care and treated with intravenous magnesium sulphate and proper fluid and electrolytes. When on magnesium sulphate, magnesium levels, respiratory rate, reflexes, and urine output must be monitored to detect magnesium toxicity. Seizures refractory to magnesium sulphate therapy should be managed with benzodiazepines and/or phenytoin. Prophylactic treatment with magnesium sulfata is indicated for all patients with severe preeclampsia.

Patients with mild preeclampsia should be induced after 37 weeks and those with severe eclampsia should be induced after 34 weeks.

Works Cited

Erogul, Mert. Pregnancy, Preeclampsia. 12 May 2008. Emedicine from WebMD. 23 May 2008.