

Research on Valiant to Preeclampsia During Pregnancy: It's Treatment and Precautions

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ABSTRACT: Preeclampsia is a pregnancy complication caused by high blood pressure and it can damage the another organ system, most often the liver and kidneys. Preeclampsia usually begins after 20 weeks of pregnancy in women whose blood pressure had been normal. Preeclampsia and eclampsia are serious conditions unique to pregnancy and the post-partum period, most often characterized by a rapid rise in blood pressure. If not diagnosed and treated promptly, they can lead to seizure, stroke, organ failure, and death of the mother and/or baby. In the developed world, maternal death from preeclampsia and eclampsia is rare; however, they are leading causes of maternal and infant death globally, resulting in 40,000–80,000 deaths worldwide each year. It is disorder due to sudden increase in blood pressure of pregnant woman. In this report I am giving the precautions, treatment and control measures of preeclampsia. There is no big deal to be afraid of preeclampsia and eclampsia. The proper treatment and proper precautions can control the preeclampsia.

Keywords: Preeclampsia, eclampsia, pregnancy, treatment, blood pressure.

I. INTRODUCTION:

1.1 Symptoms: Preeclampsia sometimes develops without any symptoms. High blood pressure may develop slowly, or it may have a sudden onset. Monitoring your blood pressure is an important part of prenatal care because the first sign of preeclampsia is commonly a rise in blood pressure. Blood pressure that exceeds 140/90 millimeters of mercury (mm Hg) or greater documented on two occasions, at least four hours apart is abnormal.

The symptoms may be noted shortly as follows:

1. High blood pressure above normal.
2. Sudden weight gains.
3. Protein in urine.
4. Blurred vision, headache and irritability.
5. Swollen face, hands and feet.
6. Abdominal pain.
7. Seizures and Coma.
8. Muscle twitching.

9. Pitting edema.

1.2 Causes: It may include of:

- Insufficient blood flow to the uterus
- Damage to the blood vessels
- A problem with the immune system
- Certain genes.

II. METHODOLOGY:

2.1. Treatment: The most effective treatment for preeclampsia is delivery. You're at increased risk of seizures, placental abruption, stroke and possibly severe bleeding until your blood pressure decreases. Of course, if it's too early in your pregnancy, delivery may not be the best thing for your baby. If you're diagnosed with preeclampsia, your doctor will let you know how often you'll need to come in for prenatal visits likely more frequently than what's typically recommended for pregnancy. You'll also need more frequent blood tests, ultrasounds and non-stress tests than would be expected in an uncomplicated pregnancy.

Possible treatment for preeclampsia may include:

- **Medications to lower blood pressure:** These medications, called antihypertensives, are used to lower your blood pressure if it's dangerously high. Blood pressure in the 140/90 millimeters of mercury (mm Hg) range generally isn't treated. Although there are many different types of antihypertensive medications, a number of them aren't safe to use during pregnancy. Discuss with your doctor whether you need to use an antihypertensive medicine in your situation to control your blood pressure.

- **Corticosteroids:** If you have severe preeclampsia or HELLP syndrome, corticosteroid medications can temporarily improve liver and platelet function to help prolong your pregnancy. Corticosteroids can also help your baby's lungs become more mature in as little as 48 hours — an important step in preparing a premature baby for life outside the womb.

- **Anticonvulsant medications:** If your preeclampsia is severe, your doctor may prescribe

an anticonvulsant medication, such as magnesium sulfate, to prevent a first seizure.

2.2. Recommended Management Options For Treating Hypertension In Pregnancy:

Drug Treatment	Dose	FDA Class	Safety	Side Effects	Breast feeding
First line agents					
Methyldopa (F), (I-A) Drug of choice according to all groups	0.5–3 gm/day in 2 divided doses	B	Proven safety and efficacy	Some concern with depression, hepatic disturbances, hemolytic anemia -may not lower BP adequately	Compatible with breast milk
Labetalol (M), (I-A)	200–1200 mg/day p.o. in 2–3 divided doses 20–40mg iv (max 220mg total)	C	Safety similar to methyldopa may be more efficacious than methyldopa;	May be associated with fetal growth restriction. Neonatal hypoglycemia with larger doses	Usually compatible with breast milk
Second-line agents					
Nifedipine Long-acting (Ra), (I-A)	10–30 mg p.o.	C	widely used	May inhibit labor; Rarely, profound hypotension if short-acting agent is used with magnesium	Usually compatible with breast milk
Verapamil	80mg tds p.o.	C	Similar efficacy to other oral agents	Risk of interaction with magnesium – bradycardia	Usually compatible with breast milk
Clonidine Alternative option	0.1–0.6 mg/day in 2 divided doses	C	Safety similar to methyldopa Limited data regarding fetalsafety	Efficacy similar to methyldopa	Possible breast milk effects
Hydrochlorothiazide Useful in chronic hypertension	12.5–25 mg/day	B		Volume contraction, electrolyte abnormalities – rare with small doses	May reduce breast milk production

Hydralazine (F, Re) Not recommended by ESH	50–300 mg/d in 2–4 divided	D	Efficacious intravenous agent	Possible maternal polyneuropathy, drug-induced lupus, neonatal lupus and thrombocytopenia; Tachyphylaxis	Usually compatible with breast milk
Atenolol	(Atenolol not recommended) (I–D) Atenolol has risk of growth restriction when started in first or second trimester and is not recommended if breast feeding				
Diazoxide	30–50 mg iv every 5–15 min; iv bolus for acute BP lowering in severe hypertension				
Prazosin	0.5–5mg tds; consider as a second line agent Associated with postural hypotension and palpitations				
Oxprenolol (beta blocker with ISA)	20–160mg tds; a first line agent Contraindicated in heart block				
Nitroprusside	Only considered for life-threatening severe hypertension Cyanide and thiocyanate toxicity, must be carefully monitored. Also risk of cardio-neurogenic syncope				
Contraindicated	ACE inhibitors, angiotensin II receptor blockers (Pr, Re), (II-2E), FDA Class D				
	Direct renin inhibitors				
	Spironolactone not recommended due to potential foetal antiandrogen effects				
Other Management Strategies					
Low dose aspirin	Use advised in women at high risk Used prophylactically in women with a history of preeclampsia at <28 Weeks				
Fish oil supplementation	Not recommended				
Calcium supplementation	May have role in decreasing incidence of preeclampsia Role in low calcium intake populations				
Vitamin C and E	Not recommended				
Steroid therapy	Only for fetal lung maturation				

2.3. Precautions for Pregnant Woman:



- 1) Consume adequate salt & electrolytes
- 2) Eat a lower-carb, low-glycemic diet.
- 3) Consume adequate amounts of protein, especially glycine- rich sources of protein.
- 4) Consider supplementing with magnesium.
- 5) Ensure you consume enough choline.

III. CONCLUSION:

- ❖ From this project we come to know that, preeclampsia and eclampsia can be cured before it harms to mother's and children's life.
- ❖ Preeclampsia can be prevented by taking proper precautions during pregnancy.
- ❖ The proper treatments on preeclampsia and eclampsia are available in hospitals.
- ❖ Interventions such as rest, exercise, reduced salt intake, garlic, marine oil, antioxidants, progesterone, diuretics, and nitric oxide showed insufficient evidence to be recommended as preventive measurements.
- ❖ On the other hand, low-dose aspirin especially when initiated before 16 weeks in high-risk group, and calcium especially in low-intake populations show promise in the prevention of preeclampsia.

- ❖ The results of large clinical trials in high-risk populations selected during the first trimester of pregnancy are keenly awaited.

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I hereby declare that this Article entitled "Report on Valiant to Preeclampsia During Pregnancy: It's Treatment and Precautions" is a bonafide and genuine research work carried out by me under the guidance of Prof. Akhare T. P. Department of Pharmacology at Aditya Pharmacy College, Beed.

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