

Prevention of preeclampsia: The need of the hour

Preeclampsia is the second most important contributor for the maternal deaths in the developing world. The risk that a woman will die of preeclampsia or eclampsia in a developing country is 300 times more than that a woman in a developed country.¹ Also the adverse perinatal outcome makes it an important disorder to be prevented. The National Eclampsia Registry (FOGSI – ICOG initiative) reports a prevalence of eclampsia at 1.9% among the registry patients.² The numbers of cases of eclampsia were found to be greater than severe preeclampsia points out to the fact that opportunities were lost in the prevention of eclampsia. One popular hypothesis about the cause of preeclampsia is immune maladaptation. The long term sperm exposure causes mucosal alloimmunisation. Limited sperm exposure is the most likely explanation for the high incidence of preeclampsia in teenagers.³ A very significant finding of the National Eclampsia Registry is that 17% of the preeclampsia actually happens in the adolescent age group, where early age of marriage and early exposure to coitus are responsible factors.² These findings are very significant, both clinically and statistically. We can prevent preeclampsia, eclampsia by preventing the teenage marriages and raising the age of marriage.

Antenatal care has been identified as the single most important intervention which could reduce the prevalence of preeclampsia and eclampsia.³ According to National Family Health Survey 3 (NFHS-3), 25% percent of mothers had 1-2 antenatal care visits and 52 % had three or more visits. As per the survey around 44% mothers had their first antenatal care visit in the first trimester of pregnancy, whereas 22 % had their first visit during their fourth or fifth month of pregnancy and 10% of women had their first antenatal care when they were six or more months pregnant.⁴

Preeclampsia is a disease of the second part of the pregnancy and the majority of the cases convulsion occurs mainly after 20th weeks gestation. Majority of the times (76.78%), convulsions occur during antenatal period. The time spent between the first convulsion and access to medical care is 1-4 hours, shows the need of trained paramedical personnel in early referral. Post admission convulsions occur in the majority of cases (76.6%) which indicates the lack of standardized care protocol for eclampsia. In India, even though there are favorable policies for

the use of MgSO₄ for the treatment of eclampsia, the availability and use of MgSO₄ treatment in the public health system is not up to the mark. A facility-based survey of secondary and tertiary healthcare facilities in a selected district of Maharashtra was conducted by Chaturvedi et al, revealed that no treatment for eclampsia was provided in the last 3 months at 73% facilities. Although public and private care providers were aware of MgSO₄ it was unclear if they knew of its use to treat severe preeclampsia. The private care providers were routinely using MgSO₄ for eclampsia treatment, while the public care providers seemed to be hesitant to use because of the risks of complications.⁵ The updated clinical classification as early onset preeclampsia (before 34 weeks of gestation) (EOPET) and late onset preeclampsia (after 34 weeks of gestation)(LOPET) which are two distinct entities also helps us in devising preventive strategies. Most of the interventions are simple, which can be done by an ANM, staff nurse, paramedic, basic doctor.

Preeclampsia remains one of the significant obstetrical problems in India. The causes of these conditions are multifactorial and needs effective prevention at primary, secondary and tertiary levels.

Key Recommendations

- Prevention of teenage pregnancies by increasing the age of marriages to 20-25 years.
- Early booking of Antenatal case and regular follow up.
- Careful monitoring of elderly primigravida / gravida > 35 years with clinical / investigative parameters and early referral to tertiary centers.
- Prevention of pre-pregnancy obesity by lifestyle modification and counseling.
- Reducing job stress by appropriate counseling.
- Cessation of smoking.
- Increased fiber intake, proteins, garlic, fish oil and decreased sodium intake, calcium supplement. Supplementation of antioxidants like vitamin C and vitamin E.
- Low dose aspirin (LDA) from 6-9 week of gestation for high risk cases, Low molecular weight heparin (LMWH) for Antiphospholipid antibodies and acquired thrombophilia started early in pregnancy.

- Training of multipurpose workers to improve the screening and early detection of preeclampsia and improving the referral mechanism.
- Screening for chronic hypertension, renal disorders, gestational diabetes, congenital /acquired thrombophilia, cardiovascular disease, family history of preeclampsia and women born as SFGA.
- Regular blood pressure monitoring by the mercury sphygmomanometer.
- Use of tests like Doppler flow studies in uterine artery for prediction for preeclampsia.
- Effective monitoring of adherence of standard protocol for the management of preeclampsia/eclampsia at all levels.

Achanta Vivekanand,

Professor, Department of Obstetrics and Gynecology, Prathima Institute of Medical Sciences, Karimnagar, A.P., India.

Email : achanta.vivekanand@gmail.com

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