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Strengthening the healthcare services to prevent severe Pre-eclampsia and Eclampsia

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Abstract:

Preeclampsia is a hypertensive, multi-system disorder of pregnancy whose etiology remains unknown. Although management is evidence-based, preventive measures/screening tools are lacking, treatment remains symptomatic, and delivery remains the only cure. As in the past, the current role of physicians and nurses in the management of pre-eclampsia-eclampsia continues to revolve around the protection of maternal/foetal wellbeing and optimization of positive health outcomes. Given that effective preventive measures and screening tools is presently lacking, routine assessment of the signs/symptoms indicative of pre-eclampsia/eclampsia remains critical to the detection, monitoring, and effective management of pre-eclampsia/eclampsia. Patient education and the provision of a supportive environment are also essential to the optimal management of pre-eclampsia/eclampsia. This article deals with the integration of health care services in preventing the complications of pre-eclampsia.

Key words: Health care services, Pre-eclampsia, Eclampsia

Introduction:

Most maternal deaths are avoidable, as the healthcare solutions to prevent or manage complications are well known. Improving access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth will reduce maternal deaths significantly[1]. Ninety-nine percent of maternal deaths occur in the developing world, and most of these deaths are preventable. Although reduction of maternal mortality was adopted by the global development community as one of the Millennium Development Goals and is a stated target of many countries and international institutions, pregnancy - related deaths have fallen little in most low resource developing countries over the past decades. One of the most common, yet treatable causes of maternal death world-wide is pre-eclampsia and eclampsia[2].

The World Health Organization (WHO) estimates that at least 16% of maternal deaths in low and middle-income countries result from hypertensive disorders of pregnancy, including severe pre-eclampsia and eclampsia (PE/E). Clinical indications of pre-eclampsia typically present as high blood pressure and protein in the urine after 20 weeks gestation. Eclampsia is diagnosed when a pregnant woman with pre-eclampsia develops convulsions[3].

Pre-eclampsia is a hypertensive, multi-system disorder of pregnancy whose etiology remains unknown. Although management is evidence-based, preventive measures/screening tools are lacking, treatment remains symptomatic, and delivery remains the only cure. As in the past, the current role of physicians and nurses in the management of pre-eclampsia/ eclampsia continues to revolve around the protection of maternal/foetal wellbeing and optimization of positive health outcomes. Given that effective preventive measures and screening tools are presently lacking, routine assessment of the signs/symptoms indicative of pre-eclampsia/eclampsia remains critical to the detection, monitoring, and effective management of pre-eclampsia/eclampsia. Patient education and the provision of a

supportive environment are also essential to the optimal management of pre-eclampsia/eclampsia.[4]

The cumulative risks from pre-eclampsia and eclampsia are many times higher for a woman in a developing country than for a woman in a developed country[2]. A woman in a developing country is seven times more likely to develop pre-eclampsia. If she develops pre-eclampsia, she is three times more likely to progress to eclampsia. Should she develop eclampsia, she is up to 14 times more likely to die of eclampsia even in hospital settings. The risk of dying due to pre-eclampsia and eclampsia is approximately 300 times higher for a woman in a developing country than for a woman in a developed country. Pre-eclampsia has remained a significant public health threat in both developed and developing countries contributing to maternal and perinatal morbidity and mortality globally. However, the impact of the disease is felt more severely in developing countries.[5]

Although there are known risk factors for hypertensive disorders of pregnancy, there is no clinically useful way to predict which women will develop pre-eclampsia based on clinical data or biochemical markers. However, high income countries have been able to reduce both the incidence of eclampsia and the case fatality rate associated with it by 90%, using a combination of early detection during Antenatal Care (ANC) and increased access to hospital care for women who develop severe pre-eclampsia and eclampsia.[4]

Challenges in detection and prevention of pre-eclampsia

Prevention of any disease process requires the availability of methods for prediction of those at high risk for the disorder. Although numerous clinical and biochemical tests have been proposed for prediction or early detection of pre-eclampsia, most remain unrealistic in most developing countries. At present, there is not a single reliable and cost-effective screening test for pre-eclampsia which can be recommended for use in most developing countries. Although some studies on uterine artery Doppler studies and first-trimester maternal serum markers for early detection of preeclampsia have shown promise, there is not enough evidence to suggest their routine use in clinical practice, more so in resource poor settings.

Aspirin therapy has been shown to be beneficial in terms of prophylaxis and in decreasing the occurrence of pre-eclampsia in specific populations. However, to recommend its widespread use in all patients is not judicious or evidence based. In the same vein, even though the review[5] has stated some benefit in calcium supplementation, particularly for those at greatest risk and those with low baseline calcium intake, the problem of selecting appropriate patients to be started on the therapy can be burdensome from a public health perspective. Similarly, findings of earlier studies which had indicated the benefits of vitamin supplementation have been refuted by a recent study[5] by the WHO particularly for vitamins C and E.

Challenges in the Management of Pre-eclampsia

It is evident that to tackle pre-eclampsia effectively in any population, functional health systems are imperative and so is access to healthcare.

Delay in the Decision to Seek Care: Delayed responses at the household level to obstetric emergencies often arise as a result of inadequate information on when to seek help and sometimes on where to seek help. This is worsened by lack of decision making power, poverty, and the rising cost of healthcare. Some socio-demographic (e.g., level of education and marital status) and cultural factors of

maternal health-seeking behaviour have also been documented.

Delay in Reaching the Health Facility: Lack of access to quality care has been said to be the main obstacle to reducing maternal mortality in low-income countries. These are due to the location, distance, and lack of transport to health facilities. The inequitable distribution of healthcare facilities which is in favour of urban communities is also contributory. Furthermore, the referral delays arising from the visits to other orthodox and alternative medical practitioners have been documented to account for 46.4% of all cases of eclampsia.

Delays in Health Service Provision: Delays which arise in health facilities have also been shown to prevent women from receiving the care they need before, during and after childbirth. The attitude of health service providers and perceived poor quality of care are also identified barriers.[5]

Measures to strengthen the health services in a low-resource setting.

1. Good quality focused antenatal care for all pregnant women in order to detect cases of severe pre-eclampsia and eclampsia.
2. Pregnant mothers diagnosed with mild pre-eclampsia should be made aware of danger signs such as high blood pressure, proteinuria, decreased urine output, headache, epigastric pain, changes in vision and sudden weight gain.
3. Since pre-eclampsia and eclampsia can occur during pregnancy, labour or postpartum, it is important that detection efforts begin in pregnancy and continue through labour and the postpartum period.
4. Skilled birth attendants at antenatal clinics and during births, with ready access to emergency obstetric and newborn care.
5. Managing eclampsia with anticonvulsants is one of the essential services that directly prevent and/or treat complications associated with maternal and newborn deaths. Magnesium sulphate ($MgSO_4$) is critical, because it is the drug of choice for preventing convulsions in pre-eclamptic women and for preventing recurrence of convulsions. Multi-center trials have demonstrated that this anticonvulsant., which is inexpensive and does not require special storage, is significantly more effective than diazepam or other drugs in reducing convulsions, preventing progression from severe pre-eclampsia to eclampsia. Studies have shown that magnesium sulphate was not routinely administered and use is often limited to teaching hospitals. Lack of availability of the drug and appropriate health personnel required for its administration as well as cost were the frequently raised obstacles.
6. Skilled personnel, supplies, and equipment needed to treat the condition and induce labour. Adequate and reliable supplies of equipment and drugs—to measure blood pressure, test for proteinuria, and treat pre-eclampsia and eclampsia at every level of the health system.
7. Routine screening for pre-eclampsia based on measurement of blood pressure among all pregnant women should be practised as recommended by the World Health Organization.
8. Urinalysis for protein should also be routinely done at every antenatal visit for pregnant women.
9. Raising awareness of the need for women to reach emergency care without delay if complications arise.
10. Use of case management protocols for obstetric emergencies at each level of care and by monitoring standards of practice.[5]

Conclusion:

With the target of the Millennium Development Goals in sight, pre-eclampsia/eclampsia needs to be identified as a priority area in reducing maternal mortality in developing countries; maternal safety must be made a priority health issue by the government and health workers. An

increased focus on quality and accountability is also needed to secure the trust of consumers.

References:

1. Wikipedia.com. Maternal death.[updated 2014 October 22; cited 2014 November 24]. Available from: http://en.wikipedia.org/wiki/Maternal_death.

2. www.engenderhealth.org. Balancing the scales. [Updated 2014 October 17; cited 2014 November 20]. Available from: http://www.engenderhealth.org/files/pubs/maternal-health/engenderhealth-eclampsia-report.pdf.

3. Kim YM , Ansari N, Kols A, Tappis H, Currie S, Zainullah P et al. Prevention and management of severe pre-eclampsia/eclampsia in Afghanistan. *BMC Pregnancy and Child birth* 2013; 13: 186. [doi:10.1186/1471-2393-13-186][cited on 2014 November 27]. Available from: http://www.biomedcentral.com/1471-2393/13/186 .

4. Bell MJ. A Historical Overview of Preeclampsia-Eclampsia. J Obstet Gynecol Neonatal Nurs 2010; 39(5): 510-18.

5. Osungbade KO, Ige OK. Public Health Perspectives of Preeclampsia in Developing Countries: Implication for Health System Strengthening. Journal of Pregnancy. [Article ID 481095]. 2011.[cited 2014 December 2];[about 6 pages]:Available from: http://www.hindawi.com/journals/jp/2011/481095/.

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