

USE OF MAGNESIUM SULPHATE IN ECLAMPSIA

Policy Brief for Professional Organizations

Saving Mother's Life: Addressing Barriers to the Use of Magnesium Sulphate



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**REVISION OF CURRICULA FOR NURSES AND DOCTORS ON
USE OF MAGNESIUM SULPHATE FOR THE PREVENTION
AND TREATMENT OF ECLAMPSIA**

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Revision of Curricula for Nurses and Doctors on Use of Magnesium Sulphate for the Prevention and Treatment of Eclampsia

Summary:

In Pakistan, the complications of pregnancy and childbirth are the leading causes of death amongst women of reproductive age. The maternal mortality ratio (MMR) is 276 deaths per 100,000 live births in Pakistan versus 16 per 100,000 in developed countries. Eclampsia and severe Pre-Eclampsia are the third most common causes of maternal mortality in Pakistani. Evidence from the Cochrane review and collaborative Eclampsia trial, strongly recommends magnesium sulphate as the first line treatment to prevent fits in these life threatening conditionsⁱⁱ. Despite compelling evidence, magnesium sulphate use in Pakistan is negligible. The barriers include lack of demand, interrupted availability, training gaps, cumbersome dosage calculation and policy obstaclesⁱⁱⁱ.

This policy brief is a call to action for policymakers and health professionals to optimize the use of magnesium sulphate in Eclampsia by revision of curricula for Nurses and Doctors.

Policy Recommendations

- Preparation of specific guidelines or methodology for teaching and training
- All health personnel need to be skilled in the art of managing an eclamptic fit.
- The treatment regimens need to be clearly outlined for each level of health facility.

INTRODUCTION

Every 10th maternal death is due to
Eclampsia in Pakistan
PDHS -2007

Fits with high blood pressure in pregnancy (Eclampsia) is among the five leading causes of maternal deaths worldwide. The risk of dying from Eclampsia is approximately 14 times higher in a developing country compared to a developed country^{iv}.

Magnesium sulphate is recommended by the World Health Organization (WHO) as the most effective, safe, and low-cost treatment available for severe Pre-Eclampsia and Eclampsia and has been on the WHO's essential medicines list since 1996. A significant portion of the maternal deaths from Eclampsia reported from many developing countries are among women who had multiple seizures while reaching the tertiary care hospital^v. After a randomized placebo controlled trial (Magpie trial) in 33 countries on over 10,000 eligible women, magnesium sulphate is now considered as standard of care to prevent convulsions in severe Pre-Eclampsia and Eclampsia^{vi}.

With the introduction of magnesium sulphate, a significant reduction in maternal mortality was observed^{vii}, for example in Dhaka, maternal deaths fell from 16% to 8%^{viii}.

**APPROXIMATELY 2,000 MATERNAL DEATHS CAN BE
PREVENTED BY USING MAGNESIUM SULPHATE IN
PAKISTAN**

Various studies in Pakistan have identified the non-availability of magnesium sulphate in the public health facilities^{ix}. The barriers to the use of magnesium sulphate in Pakistan include:

- Lack of clear policy guidelines for various levels of health care professionals
- Lack of proper education and training
- Lack of demand by the provider mainly because of fear of use
- Difficulty in preparing the intravenous dosage.

Optimizing the use of magnesium sulphate in severe Pre-Eclampsia and Eclampsia will considerably reduce maternal deaths in Pakistan and will help achieve the Millennium Development Goals through the revision of curricula for nurses and doctors.

Policy option(s)

A. Preparation of specific guidelines or methodology for teaching and training

Specific guidelines or methodology for teaching and training for management of a case of Eclampsia or severe Pre-Eclampsia should be added to the curriculum. These guidelines need to be updated and awareness needs to be created by training of doctors, nurses and midwives.

B. Health personnel need to be skilled in the art of managing an eclamptic fit

All health personnel need to be skilled in the art of managing an Eclamptic fit and should be well versed with administration of magnesium sulphate intravenously or intramuscularly depending upon the level of facility and be able to monitor magnesium sulphate therapy in accordance with the safety guidelines.

C. The treatment regimens are clearly outlined for each level of health facility

The treatment regimens need to be clearly outlined for each level of health facility. This is not widely available in the local context nor is it uniformly implemented in the teaching or training, or healthcare facilities. One way of saving mother's life from Eclampsia and reducing the morbidity and mortality rates in Pakistan is to take this to the relevant stakeholders and stress upon implementation in order to achieve MDG 5.

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