Magnesium sulfate is an unfit anticonvulsant in eclampsia

To the Editors: I read with great interest the article of Sibai (Sibai BM. Magnesium sulfate is the ideal anticonvulsant in preeclampsia-eclampsia. Am J Obstet Gynecol 1990;162:1141-5). As Sibai pointed out, magnesium sulfate has been recommended in the treatment of eclampsia; however, comprehensive data regarding its reliance and safety are lacking. I believe that patients will not be injured by the drug if the principles of treatment are followed.

There are multiple actions of magnesium sulfate that may be useful or nonhelpful to the fetus and mother. Effects on fetal heart variability and associated low Apgar scores, respiratory depression, hyporeflexia, and hypocalcemia have been reported in the neonates of mothers receiving intravenous magnesium sulfate. These effects were reported in premature infants in association with fetal growth retardation. Such complications may be present in these infants whether magnesium sulfate is or is not used. The perinatal mortality rate was reported to be as much as 17.1%[1] and 45%[2] when magnesium sulfate was used. Our hospital has not used magnesium sulfate, and the perinatal mortality rate is 2.78% (3/108).[3] In contrast, the maternal mortality rate in other large series of patients with eclampsia ranged between 3.3% and 14.4%, and the incidence of intracerebral hemorrhage was as high as 10.7% (Sibai's article). Dr. Sibai's patient was resuscitated and her seizures were controlled with magnesium sulfate. In our hospital taking care of patients with eclampsia without the use of magnesium sulfate has resulted in a maternal mortality of zero (0/106).[3]

Parenteral magnesium sulfate is the drug of choice to prevent convulsions in cases of eclampsia, but it is not suitable as an anticonvulsant in eclampsia. Magnesium sulfate controls convulsions of eclampsia but seriously endangers the health of both the mother and her fetus. We consider magnesium sulfate to be dangerous in our hospital; hence, it is not used.

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2. Ke Y, Lin Q, Wang S, et al. Pathology of obstetrics. ed 2. Beijing: People's Hygienical Publication Society, 1959:73.
3. Luan J. Treatment of eclampsia by early interruption of pregnancy: a 15-year review. Asia Oceania J Obstet Gynecol 1989;15:33-5.

Reply

To the Editors: I do appreciate the interest of Dr. Luan in the subject of eclampsia and magnesium sulfate. Dr. Luan cites some statements from *my* manuscript without indicating the purpose or reason for including them, which makes it difficult to respond to his letter. He then cites a perinatal mortality rate of 2.78% in his experience with eclampsia as an indication not to use magnesium sulfate. He compares it to previous perinatal mortality reported in 1959 (his reference 2) and in 1979 (his reference 1). Again, I fail to see the association since he does not explain what is meant by perinatal mortality. Did he include patients who had stillbirths or neonatal deaths before arrival to the hospital? What are the gestational ages? Did he include patients with gestational ages <28 weeks? Currently, neonatal survival for infants >28 weeks' gestation is almost 100% in Memphis. This has nothing to do with magnesium sulfate. In addition, neonatal survival for preterm babies in Memphis is definitely superior to that in China. He also mentions maternal mortality without use of magnesium sulfate. Again, he does not mention the condition of the patient on admission and how many were excluded before admission.

Finally, he concludes that magnesium sulfate is an unfit anticonvulsant in eclampsia. It is surprising for someone who has never used the drug to make such a statement. In addition, he does not report what drug he uses. It is ridiculous to make such statements without data to support them.

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The issue of animal rights and human rights

To the Editors: I agree with much of what Mister Maharry (Maharry TM. The issue of animal rights and human rights. Am J Obstet Gynecol 1991;164:1543-8) says about medical research being dependent on animal experimentation. I support the use of animals in appropriately screened experiments. I am also a member of the Physicians Committee for Responsible Medicine, and I believe that there are substantial experiments going on in this country that use animals. A number of these experiments are superfluous or do not particularly further the cause of medical knowledge. I believe this type of experiment still needs to be weeded out. Although some animal activist groups have been violent, I believe that in general the cause for protection against cruelty to animals has been advanced. We have all become more sensitive to the injustices that humans have dealt the animal world.

I cannot deny that violence is not an appropriate response, but as an animal rights advocate I believe closer scrutiny of the use of animals in experimentation and closer scrutiny of the usefulness of the experiments themselves is an appropriate response. Do not lump all animal rights activists with the few violent ones. We need to take a close look at our respect for the animal kingdom. Many species have been destroyed through