

No Cognitive Deficits in Preeclamptics on MgSO₄

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VIENNA — Preeclamptic women on magnesium sulfate treatment do not appear to be at increased risk for cognitive deficits, Judith Hibbard, M.D., reported at the 14th World Congress of the International Society for the Study of Hypertension in Pregnancy.

In fact, women who are being treated with magnesium sulfate (MgSO₄) for preeclampsia appear to have better attention and working memory capacity than do normotensive laboring women, said Dr. Hibbard, who is professor of ob.gyn. at the University of Illinois at Chicago.

Dr. Hibbard presented the paper for Sarosh Rana, M.D., of the University of Chicago.

These preliminary findings come from a study that was prompted by a news re-

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port of a nanny from Mexico who delivered and abandoned her baby on a Florida beach. She was arrested, but all charges were dropped when the physician at a local hospital stated that the mother had preeclampsia, and that associated mental

changes could have prompted her temporary irrational behavior.

An initial literature search yielded a small amount of data suggesting that mild cognitive deficits may occur during normal pregnancy, as well as a few anecdotal reports of psychosis, but no previous formal studies looking specifically at cognition in preeclampsia.

Thus, the current study was initiated in which a battery of neurocognitive tests were administered twice to three groups of women: 15 with preeclampsia who were treated with MgSO₄, 15 women in preterm labor who received tocolytic MgSO₄, and 15 normal laboring women.

Tests assessing intelligence (IQ), auditory comprehension, attention, memory, pain, and distress were first performed prior to delivery (at least 2 hours after initiation of MgSO₄ in the preeclamptic and preterm groups and shortly after admission in the controls), and again after delivery (at least 12 hours after discontinuation of MgSO₄ in the two treatment groups).

Prior to delivery, there were no apparent differences in age, parity, IQ, education, auditory comprehension, or fatigue level among the three groups. Distress was greater among the preeclamptics, whereas pain was higher in the normal controls, Dr. Hibbard noted.

Immediate verbal memory was similar before and after delivery within the three groups. Delayed verbal memory, on the other hand, improved in all three groups

following delivery, and significantly so in both the preeclamptics and preterm patients.

Digit span scores, which assess attention, did not differ significantly before and after delivery in any group, but were significantly better at both time points in the preeclamptic patients on MgSO₄ than they were in the other two groups. Out of a possible 30, the preeclamptics scored 18.8 post delivery, compared with 16.86 among the normal laboring women and

14.8 among the preterm patients, she said.

Similarly, whereas all three groups improved modestly post delivery on letter-number sequencing, which assesses attention and working memory, the preeclamptics also did better at both end points than did the other two groups.

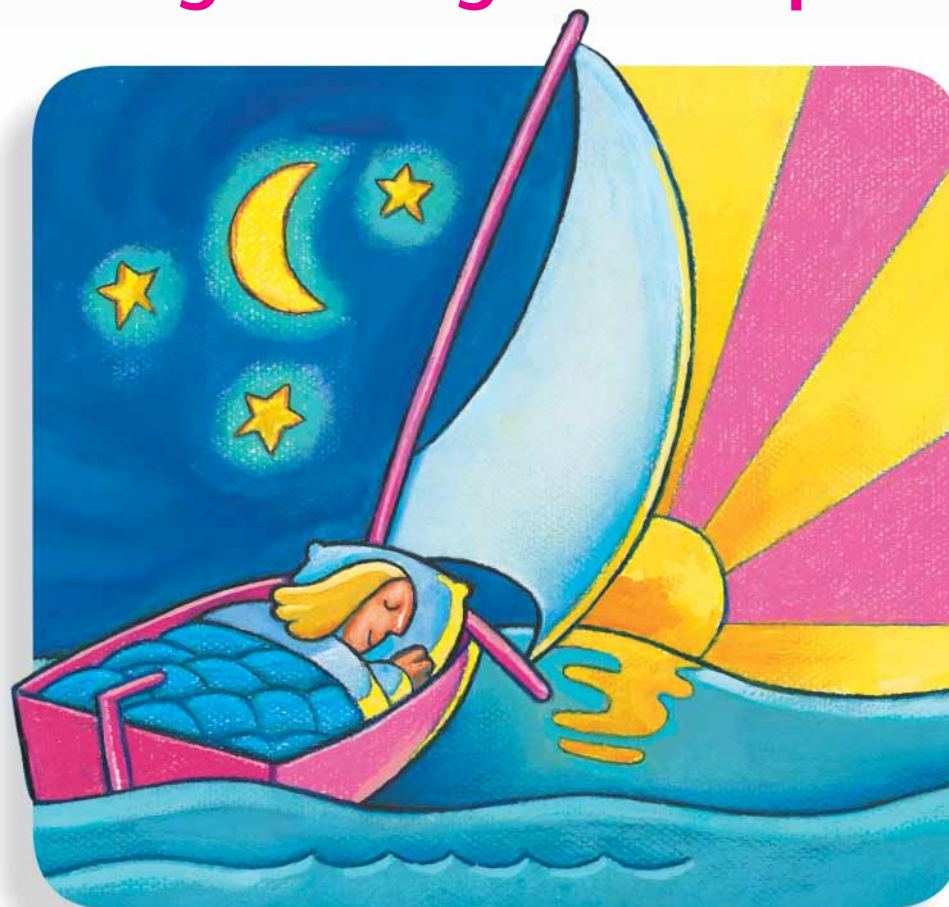
Magnesium has been shown to have neuroprotective actions in cerebral ischemia and is a cerebral vasodilator for the ischemic—but not for the normally per-

fused—brain. This difference might explain the adverse cognitive effects of MgSO₄ on women in preterm labor and the absence of those effects in the preeclamptics in this study, Dr. Hibbard noted.

These preliminary results are part of a larger study that is looking at cognition among women with preeclampsia prior to the administration of magnesium, as well as among nonpregnant women, she said. ■

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