Reliability Key to Contraception for Epileptic Women

NEW ORLEANS — The best contraceptive choices for women on antiepileptic medications are probably a progesterone-eluting intrauterine device or intramuscular medroxyprogesterone, with the higher doses of oral contraceptives running in second place, Anne Davis, M.D., said at the annual meeting of the American Epilepsy Society.

Some antiepileptic drugs—carbamazepine, oxcarbazepine, phenobarbital, primidone, and topiramate—enhance the P450 cytochrome enzyme system. "This potentially decreases the effectiveness of hormonal methods of contraception," said Dr. Davis of Columbia University, New York.

The intrauterine device (IUD) and the depot medroxyprogesterone acetate (Depo-Provera) injection are not as prone to these drug interactions. The progesterone-eluting IUD thickness cervical mucus, impairs sperm movement, suppresses endometrial development, and has a slight anovulatory effect. The depot medroxyprogesterone acetate (DMPA) suppresses ovulation, and its progesterone content protects its effect from alterations in the enzyme system, Dr. Davis said.

In addition, the high progestosterone content might have anti-seizure properties. "This is a little bit of a teaser, something that's out there in the literature. Progesterone increases seizure frequency in animal models, and DMPA decreased seizure frequency in women with intractable epilepsy," she said.

The second choice for women on the CYP450-enhancing drugs would be higher-dose oral contraceptives. No OC on the market is "high dose." "What we're really talking about is differentiating between medium dose, low dose, and very low dose," Dr. Davis said. "Extensive studies have shown that oral contraceptives containing 50 mcg estrogen are probably the most effective for these women, "but there are no real data to back that up," Dr. Davis said. The contraceptive patch and vaginal ring are comparable in estrogen dose with the 50-mcg pill. The lower-dose pills are much more prone to failure in women who are progesterone-only pills. Neither the six rod implant currently available nor the soon-to-be-approved single rod implant (Implanon) are good choices for this population, as they are both progesterone-only methods.

Some women may want to consider a new method, since this alleviates the concern of failure due to drug interaction. However, the failure rates of barrier methods are so much higher than those of hormonal methods that the chance of pregnancy is vastly increased, even taking into consideration drug interaction failures. Even women taking medications that don't increase contraceptive failure may have special contraceptive considerations, Dr. Davis said.

Numerous studies point to valproate's teratogenicity. Women on this drug who want to conceive may consider switching to another effective drug. If pregnancy is not in the cards for them, sterilization may be a viable alternative. Women with catamenial epilepsy should use a form of birth control that reliably suppresses ovulation. DMPA is a good choice for this population. "Unlike the amenorrhea produced by the progesterone IUD, where they are still ovulating, the DPMA shot reliably suppresses ovulation," Dr. Davis said. "This is an important consideration for seizure frequency that's responsive to fluctuations in the menstrual cycle."

All women of childbearing age—including those with epilepsy—should be offered a prescription for emergency contraception.

Children With Myoclonic-Astatic Epilepsy Appear Highly Responsive to Ketogenic Diet

NEW ORLEANS — The ketogenic diet appears to be especially effective in reducing seizures in children with myoclonic-astatic epilepsy of Doose, Linda C. Laux, M.D., reported in a poster at the annual meeting of the American Epilepsy Society.

"The diet is a particularly efficacious treatment modality for this particular epilepsy syndrome," said Dr. Laux of Northwestern University, Chicago. "It should be considered early in the course of therapy for children with myoclonic-astatic epilepsy."

These seizures are often difficult to control, and cognitive outcome is variable. An EEG typically shows irregular fast spike-and-wave discharges with a monomorphic 4-7/Hz parietal rhythm.

Six of 10 children became free of seizures after an average of 12 months on the ketogenic diet.

Dr. Laux presented the results of a retrospective chart study of 28 pediatric patients who were placed on the ketogenic diet over a 2-year period. Of the group, 10 had both a clinical and an EEG-aided diagnosis of MAE, 2 had cryptographic localized epilepsy, and 16 had symptomatic generalized epilepsy (including Lennox-Gastaut syndrome).

Patients were put off by the idea that BHB potentiates the production of the neurotransmitter -aminobutyric acid. At 3 months, the group that changed to the ketogenic diet, there was no significant difference in seizure reduction between the two groups. In the standard induction group, 58% of patients had a seizure reduction of greater than 50%, and 21% were seizure free. In the gradual induction group, 67% of patients had a seizure reduction of greater than 50% at 3 months, and 23% were seizure free. Dr. Bergqvist is still evaluating the adverse events but did say that hypoglycemia, nausea, vomiting, diarrhea, and lethargy were less frequent and less severe with gradual induction.

"Because these side effects can be pretty significant for some children, everybody has to start the diet as an inpatient, and usually only large university medical centers can offer it," she said. "But based on the results of this study, it's possible that we could adjust the protocol, and if the side effects were less severe, maybe the diet could be more widely offered."