Many Epileptic Women Face Sexual Issues

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

Sexual dysfunction is quite common in women with epilepsy, just as ignoring the problem is quite common among their physicians, experts say.

Naturally, said Dr. Romila Mushtaq, an epileptologist at the University of Wisconsin, Milwaukee, the first concern of the neurologist in epilepsy is controlling seizures. The issue of sexual well-being can become a low priority. But studies repeatedly show that 30% or more of women with epilepsy—even well-controlled epilepsy—experience troubles with libido, arousal, orgasm, genital lubrication, and dyspareunia.

Often, just a few simple questions can uncover a cascade of troublesome issues. “It’s humbling how many women will spend most of their appointment time questioning me about their sexual health, because no one has ever talked to them before, and they were shy or never even thought to bring it up,” Dr. Mushtaq said in an interview.

Her own recent study, presented at the annual meeting of the American Academy of Neurology, clearly illustrated the scope of the problem. Dr. Mushtaq reported on 105 women with epilepsy who completed a comprehensive health questionnaire. The assessment included questions about decreased libido, pain during intercourse, difficulty becoming aroused, and difficulty or inability reaching orgasm.

Women with diagnosed depression were excluded. Almost 40% of the respondents reported at least one symptom of sexual dysfunction, Dr. Mushtaq said. The most commonly reported problems were decreased libido and difficulty obtaining orgasm.

Some antiepileptic drugs—particularly the older medications—interfere with sexual response because they affect the hypothalamic-pituitary-adenal axis and induce hepatic enzymes (Psychiatry 2007;6:111-4). But Dr. Mushtaq’s study found no association between sexual problems and the type of antiepileptic medication, although patients on polytherapy were more likely to express symptoms than those on monotherapy.

It might be easy to conclude that some sexual problems are physiological, she said. The depression and anxiety of having a chronic disease can manifest as sexual dysfunction. But multiple studies show a complex link between epilepsy (a disorder of the brain) and sexual response (a function of the brain). That’s why the reasons for epilepsy-related sexual problems are varied and complicated. Antiepileptic drugs, disruption of the hypothalamic-pituitary-ovarian axis, hormonal fluctuations, and even seizure locus can all affect the way women experience their sexuality.

Arousal issues may be related to decreased blood flow to the genitals. Dr. Mushtaq said. A 1994 study explored this area with a group of 36 subjects: nine women and eight men with temporal lobe epilepsy (Neurology 1994;44:243-7).

The subjects watched both sexually neutral and erotic videotapes while undergoing digital pulse and genital blood flow readings. Despite similar pulse rates, both male and female patients experienced significantly less genital blood flow response than did controls (184% vs. 660% for males, and 117% vs. 161% for females).

The effect of epilepsy on hormones plays a large part in sexuality, she said. “Problems with orgasm are probably related to a lack of testosterone. Epilepsy can disrupt the pulsatile release of follicle-stimulating hormone,” a precursor of testosterone production. This disruption can also occur in men with epilepsy, but it isn’t always profound enough to cause erectile dysfunction. “But in women, even a slight change can affect arousal, libido, and orgasm,” she said. Epilepsy and hormones present a chicken-or-egg scenario. While seizures can disrupt hormonal balance, neurons in the epileptic brain can also become hypersensitive to hormones, a force that seems to drive both catamenial epilepsy (a pattern of seizures that peaks near the time of menstruation) and the high prevalence of premenstrual dysphoric disorder (PMDD) in this population.

Dr. Andrew Herzog, a neurologist and director of the neuroendocrine unit at Beth Israel Deaconess Medical Center, Boston, has published extensively on the relationship between hormones and epilepsy. At the AAN meeting, he also presented an observational study on premenstrual dysphoric disorder in women with epilepsy. His study examined the rate of PMDD in 250 women with refractory epilepsy. The rate was 32%, which is three times higher than the 10% rate seen in the general population.

The cyclical fluctuations of estrogen and progesterone probably drive this association, Dr. Herzog said. Estrogen enhances hypothalamic temperature sensitivity, whereas progesterone decreases excitability and raises the seizure threshold. Normally, these effects stabilize one another, balancing neuronal excitability. “In brains that are sensitized due to injury, congenital factors, or epilepsy, however, these responses may be heightened. When estrogen levels at midcycle, it can produce highly excitatory, agitated, irritable behaviors. When progesterone declines close to menstruation, its antianxiety effect is rapidly withdrawn and this can also drive excitation.”

These effects can be further heightened in women whose seizures arise in a brain region related to emotion, such as the temporal lobe, he added.

Seizure locus also seems to be related to the type of sexual dysfunction a woman may experience, Dr. Herzog said. In 2003, he examined this relationship in a group of 111 women with right or left temporal lobe epilepsy and 12 controls. All of the women completed the Arizona Sexual Experience Scale (ASEX). They also received continuous EEG recordings for 8 hours, during which 3-cc blood samples were drawn every 10 minutes.

The ASEX scores were significantly higher (worse) in women with right temporal lobe epilepsy (RTLE) than those with left TLE. A significant number of women with epilepsy also had subnormal gonadal steroid levels. Women with RTLE tended to have low levels of bioactive testosterone, whereas those with LTE were more likely to have low estradiol.

“The association of sexual dysfunction and laterality of seizure locus supports a biologic brain-based mechanism,” Dr. Herzog wrote. “There is increasing evidence to support the existence of lateralized brain asymmetries in the regulation of neuroendocrine, reproductive, and sexual functions” in animal studies. For instance, he noted, female rat brains contain up to 100% more gonadotropin-releasing hormone content in the right side of the hypothalamus than in the left.

The finding of more sexual dysfunction with RTLE may reflect a similar lateralized asymmetry in areas of the human hypothalamus that influence sexual function, he wrote, especially because unilateral epileptiform discharges tend to affect the hypothalamus ipsilaterally.

The understanding of epilepsy’s influence on hormones and sexuality is still in its infancy, Dr. Mushtaq said. “As research continues to unfold, we are likely to discover that this is also the factor behind the fertility problems women with epilepsy can experience.”

In the meantime, clinicians should be vigilant about screening these women for sexual difficulties, and referring them to specialists. “When do (neurologists) ever ask questions about their sex life, or about their premenstrual emotional problems? she asked. “It’s a topic that has been almost taboo.”

Close to 40% of women with epilepsy reported at least one symptom of sexual dysfunction, Dr. Romila Mushtaq says.