



EDITORIAL

Gender issues in epilepsy—The science of why it is special

Epilepsy is recognized as one of the most common serious neurological disorders in the world. During the last years, one has become increasingly aware that epilepsy has different implications for life and well-being in men and women. People with epilepsy experience several gender-related physical and social problems and the last decade has seen a focus on gender issues in epilepsy. Being a woman with epilepsy is not the same as being a man with epilepsy. Epilepsy is a common neurological condition with gender-related management implications. Although reviews of this topic often focus on pregnancy-related issues for women with epilepsy, specific health concerns for women and men with epilepsy are present throughout all phases of reproductive life. Epilepsy and anti-epileptic drug treatment affect sexual development, menstrual cycle, aspects of contraception, fertility and reproduction.

The first Nordic Symposium on Gender Issues in Epilepsy was held on Wednesday 12 September to Thursday 13 September 2007 near Oslo in Norway. The goals of this meeting were to highlight the available evidence as well as the lack of data for the clinical care of epilepsy patients. Gender issues and the reciprocal relationship between epilepsy and female and male physiology, sexuality and fertility in different stages of life have been discussed for women and men with epilepsy.

This issue of *Seizure* provides reviews and late breaking news on various topics in the diagnosis and management of epilepsy patients in reproductive age and faces a unique set of both female and male reproductive issues, ranging from descriptions of disorders of reproduction in epilepsy and its causes, to contraception, pregnancy, sexuality, menopause and osteoporosis. Conditions and diseases that specifically affect women and those that affect women and men differently are discussed. The role of hormones across the life cycle; addressing endogen-

ous and exogenous hormones and their effects on drug interactions, drug metabolism, and therapeutic outcomes are described.

People with epilepsy appear to have a higher incidence of sexual dysfunction than persons with other chronic neurological illnesses. Studies indicate that problems with reduced sexual desire and/or sexual arousal may affect a quarter to a third of people with epilepsy. This is multifactorial in cause and appears to be related to decrease in levels of biologically active testosterone. Epilepsies and anti-epileptic drugs affect sexual behaviour in several ways: alterations in hormone metabolism and binding, and direct effects on cortical function. AEDs are associated with elevations in prolactin and gonadotropin levels, hormones which may suppress sexual behaviour. AEDs that induce liver cytochrome P450 enzymes increase the metabolism and binding of steroid hormones, which decreases brain interactions. AEDs that reduce cytochrome P450 enzyme activity increase levels of androgens and perhaps other steroid hormones as well.

This issue of *Seizure* is a review of modern approaches to reproductive and sexual disturbances in men and women with epilepsy. It comprises 15 articles prepared by leading authorities from around the world who have made significant contributions in the field of epileptology generally, as well as in their own subspecialties. In addition, 3 papers from the late breaking news session presenting new data are included. It is the aim of the guest editors to offer a thorough assessment of the current state of reproductive and sexual disorders based on the independent understanding of world experts gained through practice, research, and literature review. Therefore, this is not a consensus document. However, despite some diversity of opinions, there is apparently unanimous agreement on such important aspects of epilepsy and hormonal changes.

We hope this issue of *Seizure* provides the reader with current evidence about a spectrum of clinically relevant topics in epilepsy. Clinical care requires that we take these imperfect data and apply them to individual patients. Understanding the limits and controversies that surround these data can assist in clinicians as well as their patients and family members about clinical decisions that influence care.

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