



2ND GENDER ISSUES IN EPILEPSY MEETING

august 28th - 29th 2014 /// norway

Editorial

Gender issues in epilepsy – Difference in management of epilepsy



While epidemiological studies do not indicate any differences in the incidence of epilepsy in males and females, there may be significant differences in the impact and effect the condition may have between males and females across all ages. Epilepsy is a condition that can affect each person differently than the next. Gender can be a factor in how epilepsy will affect the particular person. Care also needs to consider gender-related differences in epilepsy, other health considerations, hormonal changes, and social function. In many ways, epilepsy is different for a woman than a man. The differences arise because of biological differences between women and men, and also because of the different social roles of each gender. These differences may not only be due to possible differences in antiepileptic drug (AED) efficacy, AED drug–drug interactions due to hormonal differences, and possible teratogenic effects in women of child bearing age, but also differences in the social impact of the condition.

After a first Symposium on Gender Issues in Epilepsy seven years ago, researchers and clinicians have become increasingly aware that epilepsy has different implications for life and well-being in men and women due to complex interactions between antiepileptic drugs, endocrine function and the epilepsy itself (all papers from the first Gender Issues in Epilepsy Meeting published in *Seizure*, 2008; 17: 99–209). Moreover, the fact that epilepsy not only affects the patient but also the family due to teratogenic effects of antiepileptic drugs, psychiatric comorbidity and socio-economic challenges are reaching physicians and the patient community. There is now also an increased understanding of gender differences in the epidemiology of epilepsy and of specific epilepsy syndromes. Various published studies indicate that females have a marginally lower incidence of epilepsy and unprovoked seizures than males. Although reviews of this gender 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 antiepileptic drug treatment affect sexual development, menstrual cycle, aspects of contraception, fertility and reproduction.

The second Symposium on Gender Issues in Epilepsy was held on August 28th–29th 2014 again in Oslo, 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. The symposium was designed to encourage discussion, interest and further future research in this rapidly growing field of epilepsy.

This special issue of *Seizure* provides reviews and late breaking news on various topics in the diagnosis and management of epilepsy patients in reproductive age and face a unique set of both female and male reproductive issues, ranging from descriptions of disorders of reproduction in epilepsy and its causes, to catamenial epilepsy, to contraception, and to the many aspects of epilepsy and pregnancy.

Epilepsy affects sexual development, menstrual cycle, can influence choice of contraception, and may affect pregnancy outcomes. These factors will have an impact of the choice of an AED in patients with epilepsy, due to differences in the efficacy and safety of each drug, and also on the patient's acceptability of the drug.

As has been seen from this gender issue meeting, differing effects of sex hormones can lead to significant differences between men and women in prognosis, treatment and social impact of persons with epilepsy. These differences could range from the incidence of various types of seizures, decreased birth rates in females, pregnancy-related complications, and social impact and quality of life. Gender also has an impact on the treatment of epilepsy, selection of antiepileptic drugs and incidence of comorbidities.

The information on the comparative teratogenicity of AEDs in humans is still conflicting, mainly due to inadequate sample size and methodological differences between previous studies. The teratogenic potential of newer AEDs is even less known, a situation that prevents a rational approach to AED treatment in women of childbearing potential. Obstetrical complications, the impact of seizures on pregnancy and delivery, psychological implications of pregnancy in epilepsy, the children exposed to antiepileptic drugs in utero – effect, different malformations in offspring of women with epilepsy and breastfeeding have been discussed at this

meeting, as well as interactions between hormonal anticonception and antiepileptic drugs, changes in seizure frequency with hormonal contraception and the choice of contraceptive methods for people with epilepsy. Sex differences in cognition in epilepsy patients and does antiepileptic drugs result in cognitive decline were also a theme at this meeting.

The Editor's aim is to offer a thorough assessment of the current state of reproductive and sexual disorders based on the independent understanding of 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.

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 clinicians as well as their patients and family members about clinical decisions that influence care.

To date, however, the focus on gender issues in epilepsy has been mostly on females, with few studies being carried out in males. Indeed, guidelines for the management of women with epilepsy have been available for many years. Yet, despite these guidelines, studies have indicated that their implementation needs to be improved, with much more information being given to patients in an interdisciplinary care approach. A third Gender issues Meeting is already to be planned.

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