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Efficiency of Using Modern Technologies antiepileptic Drugs for Pregnant Women

M. A. Artykova, U. I. Kuchkorov, S. R. Zoirov
Bukhara State Medical Institute, Bukhara, Uzbekistan

ABSTRACT: The article presents comparative data on the effectiveness of lamotrigine and convulex used in the treatment of epilepsy in pregnant women.The study group consisted of 88 pregnantewomens with epilepsy, в agedeот 20 to 40 years. Patientswith e weredivided into two groups. The first groupof patients included 42 patients, who were prescribed lamotrigine. There were 46 pregnant women with epilepsy in the top group E and they were prescribedconvulsions. We observed patients during the prenatal period and 30 days in the postpartum period. It isshown that the optimal condition for the treatment of epilepsy during pregnancy is monotherapy with a minimum dose of anticonvulsants.

KEYWORD: epilepsy, pregnancy, malformations.

Relevance. Epilepsy is one of the most common neuropsychiatric diseases, occupying the third place among organic diseases of the brain. Epilepsy is registered with a frequency of 1% in the population, and 25-40% of patients are women of childbearing age. In 10-13% of women, epilepsy debuts during pregnancy, and 5% have increased seizures during and after childbirth [2, 3, 5].According to P. N.'s data.About 0.3-0.4% of newborns are born to mothers with epilepsy. Physiological pregnancy in 20-25% of cases leads to an increase in seizures during pregnancy and in 30-35% - to an increase in seizures in the first trimester. During pregnancy, the risk of such a life-threatening condition as epileptic status is high, the frequency of which reaches 3%. At puberty and before the age of 30, the prevalence of epilepsy is significantly higher in women. Epilepsy in women is characterized by a number of additional problems related to reproductive function: menstrual cycle, sexual development, fertility, contraception, as well as pregnancy, childbirth, lactation, and menopause [8, 10, and 11]. As aresult of epilepsyand exposure to antiepileptic drugs (AEDs) itreduces fertility in women, and it also они causes various endocrine disorders[12,22,26].

There are various opinions about the course of epilepsy in pregnant women and the impact of pregnancy on the clinic of epilepsy, methods of pregnancy management, and methods of delivery. Some authors note an improvement in the course of the underlying disease during pregnancy [12,25,30], while others express the opposite opinion, considering that pregnancy adversely affects the course of the epileptic process, causing its exacerbation or manifestation [9,19,20]. The range of issues that the attending physician has to solve during pregnancy in patients with epilepsy is extremely wide: what will be the mutual influence of epilepsy and pregnancy, features of labor management, the prognosis of the birth of a healthy child, the probability of developing epilepsy [6, 7, and 12]. The data of a number of authors are relatively different; the issue of the combination of epilepsy and pregnancy is covered in the literature somewhat one-sidedly. Despite the frequent

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combination of epilepsy and pregnancy, the discussion of this problem and questions related to pregnancy management arise constantly. However, there is not enough work devoted to these issues, which calls for further research.[12,13,15]

Purpose of the study. Comparative analysis and safety assessment of antiepileptic drugs during pregnancy.

Research objectives. To study the clinical and dynamic features of epilepsy in pregnant women. To develop recommendations for choosing the optimal antiepileptic therapy for this category of women.

Material and methods of research. The study involved 88women aged 20-40 years with epilepsy. Pregnant women were observed in the maternity complex, They were given a clinical diagnosis, amedical history of the disease (length of service, frequency of seizures, type of therapy, treatment plan) and other medical data related to the course of pregnancy, childbirth, and the developmentofcancer. Patients underwent electroencephalography and ultrasound (US) to assess the condition of the mother and fetus during pregnancy.

Discussion of the presearchoresults. The study analyzed data on pregnant patients with epilepsy who received immunotherapy and were diagnosed with developmental abnormalities. Immunotherapy was understood as cases of taking only one drug (PEP) of an antiepileptic drug from the first trimester or in subsequent trimesters. Epileptic seizures pose a significant risk to the health and even life of the mother, having a great impact on her quality of life. Therefore, most women who get rid of seizures, when planning pregnancy, are reluctant to think about the cancellation of therapy and the likelihood of their recurrence.

A survey of women revealed the reasonss for refusing therapy PEP during pregnancy is the fear of harming the unborn child. When collecting anamnesis data, it was foundthat20 (22.7,7%) women hadepileptic seizures during pregnancy. The postpartum period for women suffering from epilepsy is vulnerable due to changes in the pharmacokinetics of PEP, impaired quality and duration of night sleep, problems with breastfeeding and postpartum depression, which can lead to an increase in epileptic seizures.

78 (88.6%) women who had PE in the first trimester8,6%) gave birth to completely healthy children. 82 (93.2%) women who had PEP in the first trimester) gave birth to completely healthy children. Malformations were registered y in 6 (6.88%) newborns and fetuses treated with convulex and in 7 (8%) infants treated with lamotrigine.

Table 1 Severity of epilepsy symptoms in the treatment of PEP

Symptoms	Lamotrigine (n=42)		Convexity (n=46)	
	Abs.	%	Abs.	%
Ataxia	12	28.6	17	37.0
Vertigo	14	33.3	15	32.6
Dermatitis	16	38.1	16	34.8
Diplopia	11	26.2	18	39.1
Cardiac arrhythmias	15	35.7	10	21.7
Drowsiness	14	33.3	11	23.9
Encephalopathy	10	23.8	13	28.3

Themost frequently reported cases were headaches, dizziness, diplopia, cardiac arrhythmias, drowsiness, cognitive impairment, increased seizures, and encephalopathy.

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In the study, an increase in seizures was registered in 31 (35.22%) patients, which can be explained by non-compliance with the regimen, sleep deprivation, psycho emotional overstrain, and impaired compliance with therapy in 25 (28.4%) of them.

If there was a positive clinicalo-electroencephalographic dynamics during treatment and there were no adverse reactions, the dosesy of convulexwere reduced by 25 %.On the part of the psycho-emotional spherey зарегистрированы, emotional disorders and depression, irritability, aggression and disobedience were registered in patients.

Table 2 Severity of epilepsy symptoms in pregnant women

Symptoms	(n=88)	
	Abs.	%
ЭEmotional disorders	28 31.8	31,8
Depression	26	29.5
Panxiety	38	43.2
Anddepression	22	25.0
Disobedience	24	27.3
Anxiety	39	44.3

Early reports of the effects of lamotrigine on breast-fed infants indicated that most full-term infants have little problem with breastfeeding, but careful monitoring of toxicity is recommended, especially in hypotrophic or premature infants (Lander C. M., 2008). In more recent studies, lamotrigine has also been classified as a safe PEP for breast-feeding women with rare and usually moderate side effects among newborns exposed to high concentrations of the drug and its metabolites in milk (Dalili H. etal., 2015). The literature shows that convulex served as the only drug in monotherapy with a low risk of seizures during pregnancy. Accordingtoscientists, 20-30% areresistanttoPEP.

To simplify the analysis, pregnancy outcomes with PEP were classified into two groups, the group without malformations and the group with malformations. All fetal disorders were classified as malformations.

Table3 Распределение Distribution of developmental paroxysms depending on the type of AEDs used during pregnancy

Title PEP	Number of women(n)	Numberofmalformations (abs)	ПDevelopment indicators (%) (%)
Lamotrigine	42	1	7.1
Convulsionsfrom	46	5	19,5

Note: - significantly compared withpatients who took convulex P<0.001.

The frequency of registered developmental paroxysms in the s. It is important to remember that malformations can occur in the long-term period after birth, but these data are very difficult to collect and analyze. The study found that a total of 96% of children born to mothers who took lamotrigine during pregnancy did not have malformations. In comparison with lamotand convulex, lamotritjin was statistically safer in terms of the development. of paroxysms (Table 3).

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Table 4 the number of seizures in each trimester when using AEDs during pregnancy as immunotherapy.

Medication	First trimester	Second trimester	Third trimester	Total number of seizures
Lamotrigine	1	2	3	6
Convulse	1	1	1	3

The incidence of developmental paroxysms associated with lamotrigine in some cases is comparable to that of healthy mothers. The experience of using new AEDs during pregnancy is not fully understood, so large epidemiological studies are required to assess the safety of these drugs. When choosing a PET for any patient, as a rule, such factors as the effectiveness of the drug, its tolerability, safety and ease of use are taken into account. Despite the fact that the quality of life of patients with epilepsy is determined by the control of seizures, there is no doubt about the priority of achieving complete control over them.

Table5 Psychopathological disorders before and after birth with the use of PEP as immunotherapy

Symptoms	**Days Treatment days**	**Group of patients**											
		1 groupLamotrigine (n=42)						**Group 2Convexity (n=46)**					
		1 point		2 points		3 points		1 point		2 points		3 points	
		abs	%	abs	%	abs	%	abs	%	abs	%	abs	%
Asthenia	Before birthbirth	12	28,6	14	33,3	5	11,9	13	28,2	15	32,6	6	13,0
	Afterbirth	8	19,1	6	14,3	7	16,7	8	17,4	7	15,2	5	10,9
Dysphoria	Before birthbirth	20	47,6	14	33,3	4	9,5	19	41,3	15	32,6	6	13,0
	Afterbirth	12	28,6	7	16,7	2	4,8	10	21,7	5	10,9	2	4,3
Anxiety	Before birthbirth	14	33,3	12	28,6	8	19,1	18	39,1	14	30,4	7	15,2
	Afterbirth	10	23,8	7	16,7	3	7,1	9	19,6	6	13,0	4	8,7
Sleep disorders	Before birthbirth	15	35,7	10	23,8	5	11,9	17	36,9	12	26,1	7	15,2
	Afterbirth	11	26,2	7	16,7	1	2,4	8	17,4	7	15,2	1	2,2
Reduced mood	Before birthbirth	14	33,3	9	21,4	3	7,1	15	32,6	10	21,7	5	10,9
	Afterbirth	8	19,1	5	11,9	1	2,4	8	17,4	9	19,6	3	6,5
General discomfort	Before birthbirth	12	28,6	10	23,8	7	16,7	13	28,3	11	23,9	8	17,4
	Afterbirth	9	21,4	6	14,3	2	4,8	7	15,2	5	10,9	3	6,5

Note: 1 point - mild severity of the symptom, 2 points-moderate severity of the symptom, 3 points-severe severity of the symptom.

In 18 out of 88 cases, pregnant women were delivered by elective caesarean section on the recommendation of a neurologist and psychiatrist due to the presence of pronounced changes in the EEG.Refusal to breastfeed a newborn is completely unjustified, since during pregnancy, the penetration of PEP into the child's blood is usually higher than with mother's milk. Breast-feeding should be carried out in a supine position in order to avoid injury in the event of a seizure.Organizing your sleep and wake patterns and avoiding reducing the length of your night's sleep are important steps to prevent epileptic seizures. The patient's relatives can take care of the baby at night, including

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feeding it. All women who gave birth had an uncomplicated course of the postpartum period, were discharged home in satisfactory condition,and breast-feeding was performed in 90.9,9% of cases.

Conclusions. Women of reproductive age не should not refuse antiepileptic drugs, excluding severe forms of the disease. It is always advisable to aim for a minimum dose ofmonotherapy. УFewer seizures during pregnancy can be achieved with convulse or lamotrigine. A study of the treatment of pregnant womenих with epilepsy shows that neonatal development rates were higher in patients whoreceived convulex than in patients who received lamotrigineo. Summarizing they above, we can say that one of the safest drugs for the treatment of epilepsy in women is lamotrigine.

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