

Interests in knowledge and assistance of epilepsy

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Abstract

Background: Many problems with differential treatment of epilepsy require further clarification. As far as we are concerned, we have developed therapeutic recommendations which, in our opinion, demonstrated to be effective in certain cases, supporting the results of the treatment of epilepsy at its various stages known in the literature: from premonitory forms to status variants. The main element in the choice of anticonvulsant remedies, besides the clinical markings, was the dynamically derived EEG data as well as the subjective pharmacological response of the patients. The preferential associations of anticonvulsant remedies for various topographies of the epileptic outbreak and oscillation of nicotine paroxysms of sleep-wake cycle were given in the formula and strictly individual dosing. Remarkable advances in the field of perturbation in the last decades of the twentieth century, as well as active research in the uninterrupted process, have made epilepsy now called unequivocally a “hopeful affection”.

Conclusions: Normal and abnormal neuronal cells are involved in pathological discharges, the exact genesis of this phenomenon is known to be vague and means the involvement of many factors of cellular, vascular and metabolic disorders. Rehabilitation of patients with epilepsy should be gradual, using compliance between drug treatment, psychosocial rehabilitation depending on the dynamics of the disease and the patients' reaction to their own condition. The uptake of concepts and rehabilitation programs introduced into many countries' systems, the formation of the assisted care system, will increase the effectiveness of ambulatory rehabilitation.

Key words: epilepsy, assistance, rehabilitation.

Introduction

Contemporary society imposes an accelerated pace of everyday activity and a need for rapid adaptation to the environment in which the person satisfies his own needs and desires. For quick adaptation, a person needs to have certain abilities to contact with society and to actually carry out his own work [1].

The priorities of contemporary psychiatry are focused on medical-social rehabilitation and the reintegration into society of patients who lost due to the disease some adaptive abilities, but also the education of society to avoid stigmatizing people with psychiatric diagnostics, among which the diagnosis of epilepsy. Considering that most patients with epilepsy are treated as outpatients and many of them are fit to work, the issue of discrimination and social stigmatization is a current problem. Rehabilitation of the epileptic patient includes certain stages, and the success of adaptation depends on many factors, such as: concrete manifestations of epilepsy, social and psychological adaptation skills to different daily circumstances of the patient, his level of intellectual development, work skills, psychological disturbance. Equally important is the condition of the patient and how he resigns his own diagnosis. Such a problem can arise as negativity, isolation from society, denial or resignation with his own illness, fear that the epileptic crisis, social reaction, stigmatization will emerge in the next moment. These issues limit the social activity of the sick and do not allow them to work professionally [1, 2].

This work is in itself a detailed description of the stages of rehabilitation of patients with epilepsy, proposing certain

criteria for the conduct of the medical treatment, as well as its adjustment depending on the type of therapy: stationary or ambulatory, description of the unique features of the diagnosis of epilepsy. It is the study of genesis and neuro-anatomical manifestations of epilepsy, particularities of rehabilitation and reintegration of the epileptic patient and proposals for solving problems that arise during the rehabilitation [3]. Presentation of studies and conclusions based on past experience of these issues as well as the assessment of progress made in recent years are considered in this work [1].

Classifications and conceptions of the epilepsy

Most classifications and assumptions made in an attempt to explain the causes of epilepsy are targeted towards deciphering the circumstances generating seizures as convulsions, and finding propensity seizures was indicative of predisposition to developing epilepsy [4].

Sustained efforts that were made over time by clinicians focused on pragmatic objectives: defining clinical variant, determining the frequency and severity of seizures, which are the criteria for therapeutic interventions for physical and psychological rehabilitation of patients with epilepsy and a number of other social aspects of epilepsy.

Classical conception of the central nervous system is based on the teaching of I. Pavlov, the subsequent elaborations of his many disciples and successors about higher nervous activity which remain valuable perennial including neurophysiology and modern medicine [4, 5].

I. Pavlov interpreted neurodynamic character of epileptic crisis, considering the value of decisive factor discrepancies between excitation and response inhibition. Moreover, says

the scientist, "all variations of the disease are defined by the proportioning". But the essence of the focal character is persistent and morbid hypertonic, which is a pathological inertia. And the nature of illness – chronic, latent or explosive – is totally disproportionate, determined by the intensity of the excitation and inhibition, reveals that there are still many unknowns and uncertainties [6].

Several decades ago by the modern concept of epilepsy J. Jackson hypothesized that this condition is caused by "gray matter downloads, fast and local, intermittent, sudden and excessive" and that when brain tissue participates in the normal focus initiated by abnormal, generalized seizures occur. Over time, Jackson's concepts have remained almost unchanged and have been confirmed in medical practice. The experimental research noted that convulsive seizures can be caused easily by chemical and electrical stimulation of the brain tissue, and therefore, the equipment must be an inhibition of the upright body, to prevent the normal neuronal activity of the brain to unleash bursts [6, 7].

Therefore, convulsive seizures may occur when, for various reasons, the normal balance between excitation and inhibition is disturbed in such a way that the ratio exceeds unity. Furthermore, brain excitability is regulated in large areas of inhibitory pathways operating Scab extracortical. In this way brain possesses mechanisms of self-regulating excitability.

Numerous researches have been conducted to elucidate the nature of the epileptogenic furnace, which is usually taken as a group of neurons in pathological change, which discharge excessively in normal circumstances of the neuronal request. It is possible that the focus of normal brain cells consists of the excessive discharging due to reduced vascular supply or due to some other abnormality. It is quite possible that the outbreak is an area previously affected, as some explorers announced, in neurons a portion of dendritic spines have been destroyed and it would create a stable region over-active inhibitory absent of its internal mechanisms [8, 9].

Such a stable outbreak suppresses the need to create abnormal neuronal requests or pathological changes of each neuron as a cause of access and is consistent with the clinical experience that many epileptic patients continue to have accesses for years without signs of progressive neurological lesions. But when an epileptogenic outbreak is discharged, the spread of seizure activity as a secondary outcome may comprise normal brain cells. If the irradiation is sufficiently extensive, the brain is fully activated and as a result there is a tonic-clonic access associated with a state of unconsciousness. When access convulsive action is localized seizures produce objective and subjective signs characteristic to anatomical area [10, 11].

Other areas and centers can be drawn indirectly without participating themselves in the production of convulsive discharges access, such regions will not exhibit another depressed state.

Since the brain injuries causing seizures are present constantly, while seizures are intermittent, and because the lesions can exist without causing seizures, were conducted many studies of physiological factors, inhibitors and activators that can influence the activity of an epileptogenic outbreak.

These factors announce blood glucose level, blood gas concentrations, pH of the plasma, the total osmotic pressure of the extracellular fluid and electrolyte composition, endocrine disorders, nutritional deficiencies, etc. These trigger factors intervene, influencing predisposition of brain to damage or inherited defects to exhibit seizure activity, therefore, it should not confuse clinicians when patients with seemingly identical types of convulsive seizures often respond differently to drug treatment [12, 13, 14].

Rehabilitation of patients with epilepsy: principles and controversy

Medical opinion in the contemporary world seems to have crystallized certain idea about community attitudes that should be reconsidered in relation to the status of patients with epilepsy, for which there are sufficient only to cover costs of drug therapy. It requires the development of specific reforms that are oriented for reinstatement of this group of sufferers, although the company does not deprive it of its obligations to these citizens. Civil society and various voluntary associations have to intervene more and more frequently to support as many people as possible with marginalized psychosomatic disabilities, who suffer either through the indifference of the responsible officials or through the imperfection of legislation, but most often through the lack of financial subsidies [1, 15].

The problem of rehabilitation of patients with epilepsy, which is a particular issue, but it is the indispensable part of the issues concerned with the general rehabilitation of patients and disabled, has become particularly acute over the past few decades, when due to various social cataclysms and many other adversities of the human psyche cases of affliction through psychological suffering, are continuously increasing. As most patients with epilepsy are marked by different physical disabilities, their recovery is based on the same spectrum of tasks adopted for social reinsertion of mental patients. Many existing centers in countries with potent economies, and a series of health forums and bodies with powers in this area held meetings devoted to the topic in question, the agenda of them aimed at psychologically specific patients with epilepsy that occurs not only through aggressive disease that affects matter of the brain, but also by the reaction of the patient with epilepsy to unusual and scaring manifestation of his own disease that can create the secondary psychic changes. These psychic changes were classified by specialists as: a) responding to an epileptic disease (character depression, hysteria, etc.); b) responding to crises in social entourage (the patients with epilepsy hide their disease); c) responding to restriction in professional activity (different phobias, including preconceived attitude of society towards sickness) [16, 17].

These circumstances define the extremely complex mental profile and often very distorted in relation to the social activity in which the patients tend to work on full rights, when in fact they have different emotional reactions, dysphoria, conflicts, that are serious impediments to their employment in the sphere of production [18].

All experts agreed on several principles absolutely indis-

pensable for rehabilitation of patients with epilepsy: timely diagnosis and accurate clinical and evolutionary characteristics of the disease; to adopt and implement appropriate anti-epileptic therapy and to start immediately after the onset of the disease; the third principle of recovery of patients with epilepsy is psychological diagnosis, to capture early changes of personality, defining their evaluation in terms of quantity and quality, and according to the inferred to design exactly the plan for restoration actions to be taken in each case; the fourth principle is that of joint efforts involving various stakeholders (the activity of the treating physician, the psychiatrist, the patient with epilepsy himself, the relatives, the family and other third parties in the social environment), the fifth principle is to strive for cohesion measures of biological activity and psychosocial considering that we do not approach a patient mentality but epileptic pathology with a mentally specific defect parallel with bouts, therefore, and recuperation program must be adequate to disease diagnosis parameters [17].

Although only 20% of all patients with epilepsy end up experiencing psychiatric disorders and the frequency and type of seizures do not act as maladaptive on the patient with epilepsy and generally do not disfigure the person too manifest, however, all patients who have been diagnosed of epilepsy fall under the scope of the classical socio-professional restrictions addressed to this contingent of persons [19, 20].

At present, there is a growing need to relate the psychosocial adaptation measures to the positive dynamics of the epileptic process under the effects of drug therapy or psychological recovery measures, and these increase the possibilities for socio-professional training of patients with epilepsy [21].

To sum up, we can talk about three distinct stages of palliative recovery of patients with epilepsy – rehabilitation therapy, which is essential for the future and the chances of rehabilitation or overall rehabilitation of the patient with epilepsy. This stage begins in a stationary or epileptic center, which has a stationary service within its structure. Stationary assistance is of prime value, because for patients with epilepsy there is an indispensable rule: each patient with epilepsy at onset of the disease should be examined multilaterally in the somatic plane (tumors and other cerebral organic processes) [22].

The second stage – rehabilitation or adaptation – in the situation of patients with epilepsy is practiced under outpatient conditions under the control of specialists from the offices of the family physicians or the special services; the second stage of the rehabilitation process would be rehabilitation (if speaking about young people who did not have any special anatomy), that develops under the control of physicians at the clinic, neurological clinic or epidemiological center.

The primary objective pursued in the rehabilitation of patients with epilepsy is to maintain the socio-professional status to illness or to adapt it to life and social utility activity in extra-hospital conditions, because the return of the patient with epilepsy to the family very often involves exposing to many exogenous factors that have a negative influence on the evolution of the disease. At this stage is recommended biological therapy, which includes according to various authors any measures that optimize the effect of antiepileptic

therapy: psycho-correction, which often supports the reorientation of the patient with epilepsy to another profession, the psychotherapeutic and instructive activity with patients and relatives, which is of great utility if they help patients to reconsider their attitude to illness, work, social entourage and curative process; if they suggest how to solve some cardinal problems such as marriage, conception of a child, which will be decided individually and according to the psychological parameters of the person with epilepsy [18, 22].

Rehabilitation of patients with epilepsy in ambulatory conditions

The fascinating advances of medical science in the twentieth century have revolutionized not only the diagnostic and curative approaches to epilepsy patients, but the attitude of modern society to the social status and psycho-biological reductions of people who go through the terrible drama of epileptic seizures, which continuously and ruthlessly demolishes the intellect and the human nature [21, 23].

Both in West-European countries with reputed traditions in plenary recovery treatment of people with diseases that damage the health of the human psyche, such as Austria, Switzerland, Germany, etc., and in the new world represented by the US, governments and civil society activate and excel in the field of human psyche protection. In these states there are systems that have demonstrated the usefulness and effectiveness of supervising appropriate assistance of diseases with destructive potential over supreme brain functions.

In former Soviet countries, the observation of patients with epilepsy at the stage of post-treatment care, as well as the treatment required, was the responsibility of neuropathic physicians at the polyclinics or the psychiatrist from the psycho-neurological dispensary. It cannot be said that there was indeed an articulated and orderly service network concerned with the continuous and staged assisting of psycho-neurologic patients, especially the dramatic situation of persons with psychological effects, which in any case in our country could not hope for rehabilitative treatment of volume and quality sufficient to maintain or even return to pre-mental social status [21, 24].

On the other hand, the rehabilitation of the patient with epilepsy in ambulatory conditions is inconceivable without puncturing and solving the problems of organizing epileptologic assistance, post-pharmacological supervision, supportive therapy and socio-psychological insertion measures of epilepsy, which are performed at the level of services of ambulatory [1].

In Switzerland, the tradition of recovery assistance for patients with epilepsy is of the remarkable history, and specialized centers in this field have been organized in the twentieth century, the services of the country gaining evocative experience. Currently there are 4 large centers with one thousand beds, 200 of them are for children and one of the supportive tasks of these services is the treatment and social adaptation of patients and in other countries have been inaugurated antiepileptic centers. Moreover, in Norway, specialized assistance extends not only to urban centers but also to polar areas with extreme climatic conditions and no railway communi-

cations. In these epileptological centers patients' employment problems are examined and solved, there are special instructors here and two-week courses take place for mothers whose children make epileptic paroxysms [25, 26].

The experience of these centers, which is heading towards gradually and rehabilitation system for patients with epilepsy, have demonstrated the opportunity to take it on a wide scale, namely as a principle of deploying national networks, which are calculated numerically according to the global population, the incidence of the disease is defined by epidemiological research. Some of the first data was presented by I. Reid, who has made some raw calculations stating that the need for such centers in Great Britain would be 5-6 epileptic centers that would provide permanent curative and rehabilitative care [27]. Many scholars, as well as researches on disease and socio-prophylactic issues, have demonstrated that only these centers, though endowed, cannot solve all the social aspects of this major problem. Particularly difficult is the situation of patients with epilepsy who cannot return to society and find no occupation to provide them with means of subsistence [16, 25].

The agenda of rehabilitation in epilepsy is a key issue of the recovery of patients with epilepsy. Scientists and experts representing competent services of these countries outlined concrete steps for action: a) organizing centers to combat epilepsy, including planning and zoning; b) development and improvement of rehabilitation medical premises; c) the settlement agreement of rehabilitation issues, involving not just health workers but social organizations, territorial executives etc.; preparation and presentation the spectrum list of professions and occupations that can be recommended for patients with epilepsy at the stage of social reinsertion, considering the possibility of local employment; involving various civil associations, voluntary social services officials in solving problems confronting the person with epilepsy being remedied or serious sequelae left by it [21, 28, 29].

More difficult is the problem of issuing the verdict of healing session; most doctors are reluctant when it comes time to announce the conclusion of recovery. Their reservations are justified because when there are no known mechanisms of the primary occurrence of epilepsy, they failed to issue a response to the question as to why epileptic seizures occur. All statements about fighting disease are at least empirical and no one can predict the future absolutely clearly of a patient who had once clear signs of epilepsy of the encephalus.

Despite some relevant reluctance to the healing of patients with epilepsy, we have to deal with this act of healing. However, we can talk about a sustainable remedy, based on generally accepted medical principles: symptomatic disappearance of the disease, biological and psychological compensation; winding mechanisms defining pathological disease; recovery of the social status of the person concerned [21, 25, 29, 30].

We can talk about the abolition of antiepileptic therapy of a former patient with epilepsy if the following prerequisites are met:

The first criterion is the absence of any form of seizures over the past 3-5 years. This is required stating that the time

slot for crises monotype is 3-4 years without such events, if the patient with epilepsy manifested mixed paroxysms for which improvement were needed high doses of anticonvulsant remedies – the duration of the remission of the seizures should be 4-5 years.

The second essential criterion is the regression of epileptic phenomena characteristic of the EEG (paroxysmal activity, dysrhythmia, etc.). If normalization of EEG (during at least one year) is found, patients who no longer have seizures for the last 3-5 years now are taking low dose anticonvulsant remedies, often a monotherapy supervises that if specific events occur they can also be progressively reduced.

The third criterion of healing evolution is the lack of personality changes and mood variations (dystrophy), except for moderate changes, such as those caused by some deficiencies in the intellectual sphere – the slight decrease of memory, etc.

The patient with epilepsy which has evolved thus will be actively observed another year without medication and if during this period out of therapy suspicious events haven't occurred, one can deduce that the patient with epilepsy is practically cured and only periodically (2-3 years) will have to be examined EEG [13, 26, 31].

Patients with long-term remission should be observed with the utmost caution, especially those who developed epilepsy on the background of substantial cerebro-organic changes or sustained functional relapse (infantile brain paralysis, etc.), because remission can be achieved in these patients, but it is not possible to speak in full terms about complete remission, since changes in the brain were not surgically extracted, the outbreak being a potential generator of future epileptic seizures. For them, only the optimal dose of therapy can be defined to support the curative outcome achieved at a given time [17].

For those patients who have completed their antiepileptic therapy it is recommended to consume episodically specific anticonvulsant remedies better tolerated if possibly exposed to unfavorable factors in prolonged psychogenic situations of long sleep deprivation for various reasons, with fever prolonged due to other diseases, etc. [17, 28].

Social reforms taking place for over a decade in Eastern Europe have mobilized medical associations in Moldova; many specialists are engaged actively in an inspired movement to safeguard disabled people with psychosomatic problems, involving civil society more strongly. Moldovan National League against Epilepsy is involved in rendering unconditional support services to socially excluded patients because of their different physical and intellectual disadvantages. Moldovan Psycho-Social Philanthropy Center is another NGO service that provides psychotherapy and social rehabilitation of patients with mental disabilities.

Anticonvulsant therapeutics traditions and innovative interventions in epilepsy

At least theoretically, antiepileptic drugs may act to prevent seizures accesses, influencing on:

1. Extra neuronal damage;
2. Pathologically modified neurons, in terms of decreasing or preventing their excessive decay;

3. Normal neurons, as preventing alteration of their tone by excessive downloads coming from elsewhere.

In the first category are substances that can alter blood irrigation of abnormal epileptogenic foci. For example, one can mention that the atropine and antihistamine substances have been tested clinically in epilepsy.

The second category allows that selective anticonvulsants neurons can influence the hyperactive, without changing the function of normal brain cells. This is attractive and there is some evidence to support it, but has not been proven in practice [28, 32].

In the third category, which is most important, there are drugs that prevent the dissemination of access convulsively; and all substances used in clinical antiepileptic property change the brain to respond to various stimuli provoking convulsive seizures. It remains to be established exactly how it is accomplished, although a number of authors have reported a slight increase of the threshold of synaptic long chain system reverberant inhibiting the transformation of the excitation chains and other mechanisms. These points should be considered by the teams concerned about ordering antiepileptic programs.

Choosing the best possible product or optimal combination of drugs is sometimes difficult. Perfect antiepileptic substances must be long acting, non-sedating, well tolerated, and highly active against different types of convulsive seizures and lack adverse effects on organs' vital functions. In addition, it should be used for patients with different types of convulsive seizures, must be active in treating seizures and able to restore electroencephalogram of convulsive seizures in its normal form. Finally, it must have positive psychological effects.

It is still questionable whether such a drug will ever be discovered, and especially one that would cure all types of epilepsy. The extent, to which each of the antiepileptic drugs routinely approaches this perfection, is presented with the description of the respective pharmacological properties [25, 33].

Due to the fact that patients vary considerably with regard to their clinical response to treatment, anticonvulsants known as the opportunities associated with drugs, have been investigated only superficially, the search for new substances and new combinations to be of higher efficiency continues.

Since there is a large number of patients with epilepsy and public costs for assisting them are hardly supported by the state budget, the deficient epilepsy treatment should be the problem with many facets of social and other care. The condition, due partially to ignorance and misunderstanding of its nature, produces a lot of unhappiness, personal family tragedies, psychological and social maladjustment and economic losses. So, it is the duty of the medical practitioner who has not only the obligation to treat each patient with epilepsy right away, but to disseminate and correct information about the disease, attitude towards it, preventing stigmatization when the word «epilepsy» is heard, and once the correct diagnosis has been made, the treatment objectives are: complete healing of the seizures and obtaining for the patients the possibility of living a normal life.

We have to make every possible effort to approach the

achievement of these goals as much as possible. Drug treatment occupies the central position among the measures used to prevent seizures accesses. Development concepts, which obviously originated in the process of epilepsy patients medication were dependent on the level of quality of investigation methods and diagnostics, but also reflected the clinical thinking of the doctor who performed the observation of patients along their way to recovery [9, 19].

Often it takes care, patience and verification tests to find the best combination of drugs and exact dosing schedule to avoid the phenomena of maximal effects that have almost all possible anticonvulsive remedies used by epileptologists. Sometimes metabolic measures are necessary adjuncts, such as a ketogenic diet and water reduction.

Development and improvement of treatment methods of epilepsy showed that drug therapy should be started early to yoke or re-channel the process to benign evolution. The elective treatment outcomes depend on adequate preparation in various evolutionary types of epilepsy [34]. However, the drug is chosen to match better access with patient's profile, usually a standard line of treatment is being selected for the anticonvulsant therapy.

The principles of epileptic therapy have been developed in the context of basic research and involve joint efforts of many generations of scientists. Ultimately, it was announced that in most cases, there was required continuous, individual and differentiated therapy for various forms of epilepsy. An obstacle for the implementation of these principles is the identification of adverse effects. The choice of the more appropriate formulation of the case, according to the recent literature, devoted to problems raised by epilepsy therapy, indicates that even when a wide spectrum of anticonvulsants is administered, it is possible to control their plasma concentrations precisely by monitoring physiobiological parameters of the medically treated patients [19, 35].

We highlight the contribution of local scientists, for example academician Stanislav Groppa and the author of the current paper, to the formation of the doctors in the field of neurology and psychiatry, elaboration and selection of the most operative treatment guidelines. Recently, under the auspices of the National League Against Epilepsy – a body that focused on the management of antiepileptic care and the research that has been developed in this regard – a series of conferences took place and several published materials appeared on the topic, some of which are extremely useful and easy to use in choosing the remedy with the dose appropriate to the forms of epilepsy onset, and evolution [7].

The authors of this scientific-practical study recommend for all generalized epilepsy with absences the elective preparation Valproate (VPA) with serum levels between 60 and 100 mg/ml, 20-30 mg / kg body mass. The preparation has the quality of not affecting the patient's cognitive functions, or the digestive signs apparent at the initiation of therapy. The same authors suggest that other anticonvulsant remedies from this recent series, for example Ethosuximide (ESM), an equivalent of Valproate, may also be used; both can be combined [36]. Also in the opinion of some authors in a number of cases the therapeutic effect can substantially

improve epilepsy with nocturnal seizures by intensifying the hypothermic inhibition (deepening of sleep) with Amobarbital sodium [36].

All specialists opt for monotherapy, or at least direct doctors to aim at such an objective. The objective of any anti-epileptic medication is the complete suppression of seizures, and the progression and reduction in frequency and severity of seizures, which are associated with a relatively calm EEG trace, are considered to be successful [12,21,37]. The complete disappearance of seizures must be confirmed by a clean EEG route. In the last few decades, considerable results have been obtained in the treatment of epilepsy. It started from the fact that more and more specialists have begun to reject phenobarbital as a medical remedy for the treatment of paroxysms. The latter was accused of cumulative properties with following degradation in the cerebrospinal fluid 2-3 hours after administration. It was rejected for its long-term removal from the body, its traces also being detected 7-12 days after administration. So, luminal accumulates, creates habit, and also causes adverse phenomena [17, 35].

It has been found, for example, that luminal, although reducing seizures precipitates the formation of epileptic personality. These conclusions were reconfirmed by other researchers.

The idea that the application of barbiturates in the treatment of epilepsy, especially of its benign forms, is irrational has been mentioned in various studies reported at different times. Some clinicians recommend that Luminal be given in combination with Caffeine, Phenamine, Sidnocarb, Tryptophan, to neutralize the soporific effects and inhibition of the drug remedy [12, 38].

Analysis of literary sources with reference to the treatment of epilepsy has shown that this issue is still questionable. The etiological, pathogenetic and symptomatic principles of the described medication programs were not based on principles of pathogenicity, etiocausality and conformation to symptomatology [17, 30].

Others argued that an important factor in epilepsy onset is arachnoidite or meninges inflammation and neurosurgical treatment of scarring processes in meninges. It should be noted that the latest study reported that the normalization of meninges is the resorption function, combating hypertension with CSF hypersecretion, all of which were obtained from X-therapy [33, 39, 40].

The physician's conduct in the treatment of epilepsy has been reported in many authoritative studies. Most cited scientists mention that a well-adopted behavior can provide positive results to the majority of patients with appropriate epilepsy. We could not derive from these studies that there would be a systematized attitude based on the efficacy criteria specified in relation to epilepsy therapy.

Another important issue, which remains controversial and with many uncertainties, would be the association of anticonvulsants with neuroleptics so, polytherapy in epileptic medication. This curative way becomes imperative in disinhibition syndrome, in anatomies with frequent affective reactions, in *petit mal* type, in paroxysms that do not respond to therapy.

Some authors studying the vitamin metabolism concluded that epilepsy patients consistently suffer from vitamin deficiency, especially from the B group. These complexes of vitamins are useful in all clinical forms of epilepsy.

Folic acid deficiency often occurs due to long-term treatments with phenobarbital, pyrimidine (in 25-92% of patients with epilepsy). Carbamazepin treatment can also cause folic acid deficiency. Epilepsy causes not only the paroxysms, but also the psychic changes, the characteristic deviations of epilepsy sufferers. Many scientific sources underline that the vicissitudes of position and social status are of particular importance in triggering epileptiform phenomena and largely decide the chances of plenary curative recovery.

In the past few years, epilepsy treatment has been substantially revised and benefited from a more pragmatic and more concrete approach. Here we quote the works of a number of authors. Thus, besides the fact that many medication programs have been modeled and imagined in relation to the most diverse types of epilepsy, it has been promulgated that in a rather small number of patients with epilepsy surgery may prove useful and can lead from a considerable decrease in convulsions to their disappearance. This may be the case with patients with discrete focal lesions, which can be removed by surgical resection and in some cases of psychomotor epilepsy, caused by a temporal lobe dysfunction [41, 42].

Recent literature on epilepsy-related issues shows that using a wide spectrum of anticonvulsant remedies, precise plasma concentrations can be performed, monitoring paraclinically the dynamics of medication patients, but the evolution of the conceptions regarding the medication of patients with epilepsy reflects the level of the methods of investigation and diagnosis, of the clinical thinking of the physician, of observing the patients in the treatment process. The development and improvement of methods to monitor subcurative epilepsy evolution have demonstrated that drug therapy should be started as early as possible not to juggle the process or re-analyze it to benign development, thus the results of the treatment depend on the proper choice of the preparation in various evolutionary types of epilepsy [15, 38].

In cases where the application of an anticonvulsant at the maximum therapeutic dose is impacted by the occurrence of adverse events, it is reasonable to slightly reduce the dose and to associate other anticonvulsants. In such cases, it is basically a summary of the effects of anticonvulsant remedies. Thus their conjugate action became known in various complex mixtures, including the original one. Also, it is known that additive blend is proven to be highly effective, developing a broad spectrum of effects, with minimal toxicity even in long-term application. Combined prescribing of preparations requires a thorough, dynamic control of the functional status of the kidneys, the liver, and the blood vessels [13, 14].

Conclusions

1. Normal and abnormal neuronal cells are involved in pathological discharges; the exact genesis of this phenomenon is known to be vague and means the involvement of many factors of cellular, vascular and metabolic disorders.

2. Rehabilitation of patients with epilepsy should be gradual, using compliance between drug treatment, psychosocial rehabilitation depending on the dynamics of the disease and the patients' reaction to their own condition.

3. The uptake of concepts and rehabilitation programs introduced into many countries' systems, the formation of the assisted care system, will increase the effectiveness of ambulatory rehabilitation.

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