видной железе, в зависимости от ее функциональной активности и наличия аутоиммунного тиреоидита.

Интенсивность перекисного окисления липидов изучали по концентрации диеновых конъюгатов и малоновогодиальдегида, активность антиоксидантной системы – по уровню каталазы, супероксиддисмутазы, глутатионпероксидазы, глутатионредуктазы эритроцитов.

Установлено, что уровень активности системы перекисного окисления липидов и активность ферментов антиоксидантной защиты характеризовались особенностями при различных функциональных состояниях щитовидной железы, а также от наличия или отсутствия аутоиммунного компонента в структуре тиреоидной патологии.

Все изменения, происходящие у больных с данной патологией на фоне гормонального дисбаланса и аутоиммунного тиреоидита, приводят к развитию хронической неспецифической метаболической эндогенной интоксикации.

რეზიუმე

ოქსიდაციური სტრესის მაჩვენებლების დინამიკა ავადმყოფებში ფარისებრ ჯირკვალზე
ჩატარებული ოპერაციის შემდეგ მის ფუნქციურ აქტივობაზე დამოკიდებულებით

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ხარკოვის ეროვნული სამედიცინო უნივერსიტეტი;
ხარკოვის დიპლომისშემდგომი განათლების სამედიცინო აკადემია, უკრაინა

კვლევის მიზანს შეადგენდა ოქსიდაციური სტრესის მდგომარეობის შეფასება ფარისებრ ჯირკვალზე ნაოპერაციებ ავადმყოფებში ჯირკვლის ფუნქციური მდგომარეობის და აუტოიმუნური თირეოიდიტის არსებობის გათვალისწინებით.

ლიპიდების ზეჟანგური ჟანგვის ინტენსივობა შესწავლილია დიენური კონიუგატების და მალონური დიელდეჰიდის კონცენტრაციით, ანტიოქსდაციური სისტემისა კი – კატალაზას, სუპეროქსიდდისმუტაზას, გლუტათიონპეროქსიდაზას, გლუტათიონრედუქტაზას დონის მიხედვით.

დადგენილია, რომ ლიპიდების ზეჟანგური ჟანგვის სისტემის აქტივობის დონე და ანტიოქსდაციური დაცვის ფერმენტების აქტივობა დამოკიდებულია ფარისებრი ჯირკვლის ფუნქციურ მდგომარეობაზე, ასევე, თირეოიდური პათოლოგიის სტრუქტურაში აუტოიმუნური კომპონენტის არსებობასა ან არარსებობაზე.

ყველა ცვლილება, რომელიც ამ პათოლოგიის მქონე ავადმყოფებში ჰორმონული დისბალანსის და აუტოიმუნური თირეოიდიტის ფონზე ვითარდება, განაპირობებს ქრონიკული არასპეციფიკური მეტაბოლური ენდოგენური ინტოქსიკაციის განვითარებას.

DYNAMICS OF THE FUNCTIONAL STATE OF THE VEGETATIVE NERVOUS SYSTEM IN INTERACTION WITH THE CHANGES OF ADRENOCORTICOTROPIC AND SOMATOTROPIC HORMONES IN PATIENTS WITH SERIOUS MENINIGITIS

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Serous meningitis of viral etiology is a current issue of modern health care due to the high frequency of severe forms, high lethality, the expansion of the etiopathogenesis spectrum, high percentage of etiologically unexplained serous meningitis due to the difficulties of laboratory decoding, the absence of specific treatment, with the exception of herpetic meningitis [1]. According to the European Federation of Neurological Associations, the incidence of meningitis in European countries varies from 2 to 5 per 100,000 people, and the mortality rate in recent years has almost not changed [2]. Particular attention deserves the functional consequences after meningitis in 35-70% of reconvalescents in the form of chronic fatigue, depression, sleep disturbance, asthenoneurotic or cerebro-asthenic syndrome, which indicates that the ideas about pathogenetic mechanisms of damage to nerve cells demand a deeper understanding [3].

In the course of neuroinfections in particular, a significant role is played by the state of adaptation processes, the reduction of which leads to metabolic disorders, gaining its own pathogenetic value. A key role in the depletion of regulatory and disruption of adaptation mechanisms, and the appearance of a pathological disintegration reaction has a disturbance in the balance between the sympathetic and parasympathetic parts of the autonomic nervous system [4]. The leading role of the neuroendocrine system in the urgent adaptation to stress influences is also known, when the process of balancing the action of stress-activating and stress-limiting hormones is constantly taking place, the optimal ratio of which depends on the course of the disease [5]. There are studies on the role of autonomic disorders in neuroinfections, which are one of the main factors for the preservation of residual effects and limitation of adaptive capacity of the organism [6]. The neuro-endocrine abnormalities in patients with serous meningitis in different periods of the disease stay unclarified. In our opinion, in future the deepening of the perceptions of the above pathogenetic disorders will make it possible to determine the most appropriate medical correction.

The goal is to analyze the dynamics of indicators of the functional state of the autonomic nervous system in correlation with the changes of adrenocorticotropic and somatotropic hormones in patients with serous meningitis.

Material and methods. We examined 64 patients with serous meningitis (age 18-67) who were treated in the Department No 1 of the Zaporizhzhia Regional Infectious Diseases Clinical Hospital. Participants: 38 men, 26 women. Etiological decomposition of serous meningitis was performed on 25% (16 out of 64) patients: the polymerase chain reaction in the liquor revealed the nucleic acids of the Epstein-Barr virus (3), herpes simplex type 2 (1), adenovirus (1), Coxsackie enterovirus B_5 (2), simultaneous detection of Epstein-Barr and Coxsackie B_5 viruses (2); the immune enzyme method detected immunoglobulins G to the West Nile viral fever and their avidity (7).

The presence of manifestations of autonomic dysfunction in patients with serous meningitis was revealed using the Wein's questionnaire [7]. The functional state of the autonomic nervous system was assessed by computer cardiointervalometry, and specifically analyzed the spectral parameters of heart rate variability (HRV) according to standards developed by the working group of the European Society of Cardiology and the North American Society for Pacing and Electrophysiology [8]. The research was conducted using the electrocardiographic diagnostic system CardioLab-2000 according to the standard method. Determined: Total power, ms^2 dispersion of R-R intervals throughout the segment 0.000-0.400 Hz, total power of the spectrum of neurohumoral regulation, characterizing the general effect of all spectral components on the sinus rhythm; VLF, ms^2 — power in the very low frequency range 0.003-0.040 Hz, very low frequency component of the spectrum, which reflects the influence of humoral factors on the sinus node; LF, ms^2 — power in the range of low frequencies 0.040-0.150 Hz, low frequency component of the spectrum, reflecting sympathetic activity; HF, ms^2 — power in the range of high frequencies 0.150-0.400 Hz, high frequency component of the spectrum, reflects the activity of the parasympathetic nervous system; LF norm, HF norm, % are relative indices that reflect the contribution of each spectral component to the spectrum of neurohumoral regulation; LF/HF - autonomic balance index.

The content of adrenocorticotropic (ACTH) and somatotropic (STH) hormones was determined by the method of immunoassay analysis using the DigiScan-400 device (Austria) in blood serum according to the methods suggested by the manufacturers (BIOMERICA, USA and DBC, Canada). All special researches were conducted at the Educational Medical Laboratory Center of ZSMU (the head — DMSc, Professor Abramov).

The examination of patients with serous meningitis was carried out during hospitalization, after a week of treatment and on discharge. All patients with serous meningitis in the course of inpatient treatment received a common therapy. Serous meningitis was predominantly moderate in severity (57-89.1%), severe course was observed in 7 (10.9%) patients. The absence of a statistical difference ($p>0,05$) in the parameters of HRV and the content of the investigated hormones, depending on the severity of the disease, allowed to combine patients with varying severity of the disease.

The data obtained were statistically processed in STATISTICA for Windows 6.0 (StatSoft Inc., № AXXR712D833214FAN5). In order to assess the validity of the differences between the quantitative features in the independent groups, the Mann-Whitney criterion was used, between the qualitative criteria χ^2; in dependent groups, the Wilcoxon criterion, the Spearman criterion was used for correlation analysis.

Results and their discussion. According to the results of the researches, it was found that when patients with serous meningitis were admitted to an infectious hospital, on average (3.5±0.3) days of sickness, the general toxicosis, cerebrospinal, meningeal and vestibular-ataxic syndromes were dominant. The fever with a predominance of body temperature rise to febrile digits (23-35.9%) or hyperthermia (23-35.9%) was accompanied by a general weakness (51-79.7 %) and decreased appetite (41-64.1 %). In all patients, cerebral symptoms were characterized by pronounced cephalgia with predominant localization in the frontotemporal lobe. Nausea was noted in 39 (60.9%) patients, onetime or repeated vomiting, which did not relieve, — 27 (42.2%) patients, 35 (54.7 %) patients complained of pain in movement or palpation of eyeballs and photophobia. The vestibular-ataxic syndrome of patients with serous meningitis was characterized by dizziness (28-43.8%), horizontal nystagmus (56-87. %), ataxia of varying degrees of severity during the Romberg's test (33-51.6%), one or two sides miss during the coordination finger-nose test (16-25.0%).

The presence of positive meningeal symptoms in 54 (84.4%) patients with serous meningitis did not raise doubts, however 34 (53.1%) patients had their dissociation, in 5 (7.8%) patients these symptoms were questionable. It should be noted that 5 (7.8%) patients' meningeal symptoms were negative; in these cases, only persistent cephalgia combined with a fever gave an opportunity to substantiate the necessity of lumbar puncture. All the patients had lymphocytic pleocytosis up to 154.5 (59.5; 287) cl/μl, protein content in 59 (92.2%) patients did not exceed the norm, in 6 (7.8%) patients the protein was elevated from 0,49 g/l to 1.65 g/l, in all patients, glucose and chloride in liquor did not exceed the norm.

Investigation of HRV indexes in patients with serous meningitis during hospitalization showed a decrease, compared to healthy people, of total power of the spectrum of HRV Total power by 38.2% ($p<0.05$), the power of the spectrum of influence of humoral systems (VLF) by 53,7% ($p<0.01$), as well as the power of the low-frequency oscillation (LF) spectrum by 63.8% ($p<0.01$) and the power of the high-frequency oscillation (HF) spectrum by 47.3% ($p<0.05$), which reflect, respectively, the activity of the sympathetic and parasympathetic parts of the autonomic nervous system. The autonomic imbalance in the direction of parasympathicotonia was manifested by an increase of 25.0% ($p<0.05$) of parasympathetic effects (HF norm) and a decrease of 15.8% ($p<0.05$) of the share of sympathetic effects (LF norm) in the general spectrum of vegetative regulation and the index of vegetative balance by 34.4% ($p<0.01$), compared with the corresponding parameters of healthy individuals (Table 1).

The detected changes in HRV indexes in patients with serous meningitis at the time of hospitalization were combined with a decrease in serum concentrations by almost 2-fold ($p < 0.01$) and a 22.9% increase in blood serum concentrations in the blood serum ($p < 0.01$), compared with healthy people (Table 2).

During the first week of treatment there was a certain regression of clinical symptoms due to the disappearance of vomiting during the first day, normalization of body temperature in 57 (89.1%) patients with (2.7±0.2) day, the disappearance of pain in motion or palpation of the eye apples and photophobia for two days, disappearance of the expressed general weakness on (5.7±0.2) day, cephalgia on (5.2±0.2) day, appetite restoration on (3.6±0.3) day. A review of patients showed that after a week of treatment, the incidence of meningeal symptoms decreased to 54.7% (35 out of 64, $p<0.01$), nystagmus to 40.6% (26 out of 64, $p<0.01$), instability during the Romberg's test up to 32.8% (21 out of 64, $p<0.01$), dizziness up to 18.8% (12 out of 64, $p<0.01$), duration of violations in performing finger throat test was (4.4±0.4) days.

Table 1. Dynamics of spectral parameters of HRV in patients with serous meningitis Me (Q_{25}; Q_{75})

Indicator	Healthy people (n=30)	Patients with serous meningitis (n=64)		
		at hospitalization	after a week of treatment	at the discharge
Total power, мс^2	1952.3 (1394.8; 2671.5)	1207.0 [1] (641.6; 2205)	1407 [1] (360.3; 2221)	1842.6 [2] (1243.2; 2380.4)
VLF, мс^2	868.6 (665.1; 1594.7)	402.1 [1] (266; 870)	355.9 [1] (148.5; 681.9)	521.4 [1,3] (328.5; 666.4)
LF, мс^2	847.1 (563.7; 1289)	307.6 [1] (170; 609.6)	358.6 [1] (107.7; 606.6)	581,3 [1] (219.4; 773.5)
LF norm, %	61.2 (52.9; 69.2)	51,5 1 (35.8; 66.9)	52,7 [1] (32.6; 63.9)	52.5 [1] (43.0; 60.6)
HF, мс^2	681 (417.9; 889)	359.4 [1] (84.4; 790.1)	362.4 [1] (72; 717.9)	527,6 (325.1; 795.6)
HF norm, %	38.8 (30.9; 50.3)	48.5 [1] (33.1; 64.2)	47.3 [1] (36.1; 64.7)	47.5 [1] (39.4; 57.0)
LF/HF	1.6 (1; 2.3)	1.05 (0.6; 2) [1]	1.1 (0.5; 2.3) [1]	1.1 (0.8; 1.5) [1]

notes: [1] — the difference is reliable compared to healthy persons (p<0.04-0.001); [2] — compared to indicators at hospitalization (p<0.05-0.001); [3] — compared to the second week of treatment (p<0.03-0.001)

Table 2. Dynamics of the content of ACTH and STH in the serum of serum meningitis Me (Q_{25}; Q_{75})

Indicator	Healthy people (n=30)	Patients with serous meningitis (n=64)		
		at hospitalization	after a week of treatment	at the discharge
ACTH, pg/ml	6.95 (5.33; 7.64)	8.54 [1] (7.67; 9.34)	10.75 [1,2] (9.54; 13.21)	8.67 [1,3] (7.77; 9.76)
STH, pg/ml	4.15 (3.6; 5.28)	2.08 [1] (1.64; 2.57)	1.43 [1,2] (0.84; 2.07)	2.87 [1,3] (1.44; 3.81)

notes: [1] — the difference is reliable compared to healthy persons (p<0.04-0.001);
[2] — compared to indicators at hospitalization (p<0.05-0.001); [3] — compared to the second week of treatment (p<0.03-0.001)

However, it should be noted that during this period of observation there was a predominance of both subjective and objective signs of autonomic dysfunction in most patients (57-89.1%), which appeared to be fatigued predominantly in the second half of the day (46-71.9%), periodic cephalic syndrome and meteosensitivity (32-50.0%), sleep disorders (24-37.5%), and 44 (68.8%) of patients had palatal tremor of the eyelids, upper limbs and tongue. The presence of autonomic dysfunction is confirmed by the sum of points (25.5±0.6) by the Wein's questionnaire, which exceeded the reference value by 70%.

Analysis of the studied parameters in one week of treatment showed an progression in the imbalance of neuroendocrine regulation due to the continuing increase (p<0.05) of the content of ACTH and the decrease (p<0.05) of the content of STH in serum (Table 2) with statistically unchanged, compared to hospitalization, HRV indicators (Table 1).

According to the results of control lumbar puncture, which was performed on (12.5±1.2) day of treatment, decrease (p<0.01) of lymphocytic pleozytosis was noted to 29.0 (14.0; 75.0) cl/μl and the normalization of protein content in all patients. The incidence of clinical manifestations of autonomic dysfunction in the period of convalescence decreased (p<0.05), however, at the time of discharge, a part of the reconvalescents (15-23.4%) remained fatigue (10-15.6%), cephalgia and meteosensitivity (9-14.1%), postural tremor of the eyelids and upper limbs (9-14.1%), sleep disturbances (7-10.9%). During this period, the reconvalescents score according to the Wein's questionnaire decreased (p<0.01), compared to the previous observation period, but remained at 16 % below the reference value.

An analysis of the dynamics of the spectral indexes of the HRV noted some positive changes at the time of the discharge, namely, an increase in the total power of the total power spectrum (p<0.05) and the spectrum of high frequency oscillations (HF), which during this period did not differ from the indicators of healthy individuals (p>0.05). However, the power of the spectrum of the influence of the humoral systems (VLF) and the low-frequency oscillation spectrum (LF) remained lower (p<0.01) than in healthy people. These disorders caused stable maintenance of the signs of autonomic dysfunction with manifestations of parasympatheticononia, which was confirmed by the lower (p<0.05) share of sympathetic effects (LF norm), increased (p<0.05) parasympathetic influences (HF norm) in the general spectrum of vegetative regulation and correspondingly a decrease in the index of vegetative balance (p<0.05), compared to the parameters of healthy individuals (Table 1). These changes were combined with the preservation of endocrine disorders. Despite the statistically significant (p<0.05) dynamics of the restoration of the content of ACTH and STH in the blood serum at the time of discharge, compared to the previous observation period, these indicators did not normalize during the reconvalescence period (Table 2).

Functional connections between parameters of neuro-endocrine regulation in patients with serous meningitis confirmed feedbacks found between the contents of serum ACTH and performance power of general spectrum of autonomic regulation (r=-0.42, p<0.05) indicator LF norm (r=-0.32, p<0.05) and autonomic regulation index (r=-0.38, p<0.05) as well as a direct link between ACTH content and HF norm measure (r=0.27, p<0.05).

Rate of STH content in blood serum also had a correlative relationships with HRV parameters, namely direct relations with metrics LF norm ($r=0.34$, $p<0.05$) and autonomic regulation index ($r=0.36$, $p<0.05$), as well as feedback with HF norm ($r=-0.32$, $p<0.05$).

Modern views on the pathogenesis of meningitis indicate the involvement of a large number of pathogenetic mechanisms in their development. Most of these mechanisms are associated with violations of neurotrophic processes, stressful effects on the body of infectious agents, hypoxic-ischemic lesions of the nervous tissue, which both directly and indirectly lead to damage to neurons, resulting in the development of severe complications and even irreversible changes in the central nervous system [6,9]. Data from modern scientific literature show that in meningitis patients' development of autonomic dysfunction, behavioral and emotional-volitional disorders, convulsions and motor disorders are characteristic, which are one of the main factors of reducing the quality of life and limiting the adaptive capacity of the organism to the environment [10]. According to the data obtained in our study, patients with serous meningitis during the hospitalization were dominated by general toxicosis, cerebrospinal, meningeal and vestibular-ataxic syndromes in the clinical picture, but changes in the spectral parameters of HRV and hormones of ACTH and STH indicated that there was a marked imbalance with a change in the functional activity of the vegetative nervous system towards vagotonia. Conducting of treatment contributed to certain positive changes in the parameters of neuro-endocrine regulation, however, at the time of the discharge stored as indicated changes in parameters, as well as clinical manifestations of autonomic dysfunction in every fifth reconvalescent. The data of modern literature also indicates that more than half of the reconvalescents of neuroinfections are formed by various residual phenomena due to the long persistence of pathogens and immunopathological reactions in the central nervous system [11]. The most common symptoms are cerebrospinal, astenovegetative, hypertensive and diencephalic syndromes, which are one of the major factors in reducing the quality of life and limiting the adaptive capacity of the organism to the environment [12].

The formation of neuro-endocrine disregulation in patients with serous meningitis has certain pathogenetic explanations. It has been established that hypoxia and inflammatory processes in the central nervous system, which are one of the main pathognomonic links in meningitis, lead to symptoms of loss of the function of the sympathetic department of the autonomic nervous system, as well as the lack of vegetative secretion [13]. In this case, the parasympathicotonia, which develops against the background of pathological vegetative reactivity, in modern physiology is considered a pathological form of psycho-vegetative syndrome, a reaction of disintegration [14]. Under the conditions of the stressors, the process of balancing the action of the STH and ACTH, which depends on the optimal ratio of which the course of neuroinfection depends on the optimum balance, constantly leads to the development of neuro-immuno-endocrine disorientation [15]. The aforementioned causes the prospect of further research in this direction and the search for the most optimal ways of correction of neuroendocrine disorders in patients with serous meningitis.

Conclusions.

1. At hospitalization, general toxicosis, cerebrospinal, meningeal and vestibular atactic syndromes dominated in the clinical picture of serous meningitis, however, changes in the spectral parameters of HRV indicated that there was a marked imbalance with a shift in the functional activity of the autonomic nervous system toward vagotonia. These changes were combined with a lower content of STH (2 times, $p<0.01$) and a higher content of ACTH (22.9 %, $p<0.01$) in serum, compared with healthy people.

2. In patients with serous meningitis from the second week of treatment, against the backdrop of the regression of intoxication and meningeal syndromes, clinical signs of autonomic dysfunction dominated with an increase in the mean score of 70% according to the Wein's questionnaire, progression of the imbalance of neuroendocrine regulation due to continued increase ($p<0.05$) of the ACTH content and a decrease ($p<0.05$) of the STH content in serum, with statistically unchanged, compared with hospitalization, of HRV parameters ($p>0.05$).

3. The period of reconvalescence of serous meningitis was characterized by the preservation of clinical signs of autonomic dysfunction in 20.7% of patients, preservation of vegetative imbalance toward vagotonia in combination with endocrine disorders, normalization of the total power of the HRV spectrum and the spectrum of high frequency oscillations (HF), indicating the expediency of further research to develop ways to correct these violations.

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SUMMARY

DYNAMICS OF THE FUNCTIONAL STATE OF THE VEGETATIVE NERVOUS SYSTEM IN INTERACTION WITH THE CHANGES OF ADRENOCORTICOTROPIC AND SOMATOTROPIC HORMONES IN PATIENTS WITH SERIOUS MENINIGITIS

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The study included 64 patients with serous meningitis, in which the heart rate variability (HRV) spectrum, the content of ACTH and STH in serum was studied in the course of the commonly accepted treatment. The purpose of the study was to analyze the dynamics of indicators of functional state of the autonomic nervous system in correlation with changes of adrenocorticotropic and somatotropic hormones in patients with serous meningitis. According to the results, serous meningitis were predominantly moderate in severity, with generalization in the clinical picture dominated through general toxicosis, general cerebral and meningeal syndromes, but changes in the spectral parameters of HRV showed a marked imbalance with a shift in the functional activity of the autonomic nervous system towards vagotonia in combination with an ACTH level increase and STH decrease in serum ($p<0.01$). The purpose of the study was to analyze the dynamics of indicators of functional state of the autonomic nervous system in correlation with changes of adrenocorticotropic and somatotropic hormones in patients with serous meningitis. According to the results, serous meningitis were predominantly moderate in severity, with generalization in the clinical picture dominated by general toxicosis, general cerebral and meningeal syndromes, but changes in the spectral parameters of HRV showed a marked imbalance with a shift in the functional activity of the autonomic nervous system towards vagotonia in combination with an ACTH level increase and STH decrease in serum ($p<0.01$).

Keywords: serous meningitis, heart rate variability, hormones.

РЕЗЮМЕ

ДИНАМИКА ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ ВЕГЕТАТИВНОЙ НЕРВНОЙ СИСТЕМЫ ВО ВЗАИМОСВЯЗИ С ИЗМЕНЕНИЯМИ АДРЕНОКОРТИКОТРОПНОГО И СОМАТОТРОПНОГО ГОРМОНОВ У БОЛЬНЫХ СЕРОЗНЫМИ МЕНИНГИТАМИ

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В исследование включены 64 больных серозными менингитами, которым в динамике общепринятого лечения исследовали спектральные показатели вариабельности сердечного ритма (ВРС), содержание адренокортикотропного (АКТГ) и соматотропного (СТГ) гормонов в сыворотке крови. Целью исследования явился анализ динамики показателей функционального состояния вегетативной нервной системы во взаимосвязи с изменениями адренокортикотропного и соматотропного гормонов у больных серозными менингитами. В результате установлено, что серозные менингиты имели, преимущественно, среднетяжелое течение, при госпитализации в клинической картине доминировали общеинтоксикационный, общемозговой и менингиальный синдромы, однако изменения спектральных параметров ВРС свидетельствовали о наличии выраженного дисбаланса со сдвигом функциональной активности вегетативной нервной системы в сторону ваготонии в сочетании с повышением уровня АКТГ и снижением СТГ в сыворотке крови ($p<0,01$). Проведение лечения способствовало определенным позитивным изменениям в параметрах нейро-эндокринной регуляции, однако на момент выписки сохранялись как указанные изменения параметров, так и клинические проявления вегетативной дисфункции у каждого пятого реконвалесцента. Полученные данные свидетельствуют о целесообразности дальнейших исследований для разработки способов коррекции этих нарушений.

რეზიუმე

ვეგეტატიური ნერვული სისტემის ფუნქციური მდგო-მარეობის დინამიკა სეროზული მენინგიტით დაავადებულ პაციანტთა ადრენოკორტიკოტროპული და სომატოტროპული ჰორმონის ცვლილებებთან ურთიერთკავშირში

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კვლევაში მონაწილეობდა სეროზული მენინგიტით დაავადებული 64 პაციენტი, რომელთაც სტანდარტული მკურნალობის დინამიკაში ჩაუტარდათ გულის რიტმის ვარიაბელობის (გრვ) სპექტრალური მაჩვენებლების კვლევა, სისხლის შრატში ადრენოკორტიკოტროპული (აკტჰ) და სომატოტროპული (სტჰ) ჰორმონების შემცველობის დადგენით. კვლევის მიზანს შეადგენდა სეროზული მენინგიტით დაავადებულ პაციენტებში ვეგეტატიური ნერვული სისტემის ფუნქციური მდგომარეობის დინამიკის ანალიზი

აკჭ-თა და სტჭ-თა ცვლილებებთან ურთიერთკავშირში. მიღებული შედეგების მიხედვით დადგინდა, რომ სეროზული მენინგიტები უპირატესად საშუალო სიმძიმით მიმდინარეობს, ჰოსპიტალიზაციის კლინიკურ სურათში დომინირებს ზოგადი ინტოქსიკაციის, ცერებრალური და მენინგიალური სინდრომები, თუმცა, გრვ-ს სპექტრალური პარამეტრების ცვლილებები მოწმობდნენ გამოხატული დისბალანსის არსებობაზე ვეგეტატიური ნერვული სისტემის ფუნქციური აქტივობის გადახრით ვაგოტონიის მიმართულებით,რომელიც შეხამებული იყო სისხლის შრატში აკჭის დონის გაზრდასა და სტჭის დონის შემცირებათან. ჩატარებული მკურნალობა ხელს უწყობს გარკვეულ პოზიტიურ ცვლილებებს, ნეირო-ენდოკრინული პარამეტრების რეგულირებაში, მაგრამ გამოწერის დროსაც აღინიშნებოდა, როგორც მოცემულ პარამეტრთა ცვლილებები, ასევე ვეგეტატიური დისფუნქციის კლინიკური გამოვლინებები ყოველ მეხუთე რეკოვალესცენტში. მიღებული მონაცემები მოწმობენ შემდგომი კვლევის მიზანშეწონილობას მოცემულ დარღვევათა კორექციის საშუალებათა შემუშავების მიზნით.

ОБОСНОВАНИЕ ВОЗМОЖНОЙ РОЛИ КЛЕЩЕВОЙ ИНВАЗИИ (DEMODEX FOLLICULORUM) В ПАТОГЕНЕЗЕ РОЗАЦЕА

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Этиология розацеа по сей день остается неизвестной. Согласно современной гипотезе, розацеа развивается вследствие совокупности аномалии структуры капилляров и нервных волокон кожи [6,8,9]. Хроническое воспаление является признаком розацеа и основой многих клинических признаков и симптомов заболевания. Патофизиологические механизмы формирования розацеа включают сосудистые нарушения, нейрососудистый компонент, воспаление с активацией врожденного иммунитета и Demodex folliculorum. [4,5].

К риск факторам развития розацеа относятся: нарушения деятельности желудочно - кишечного тракта, эндокринной и нервной системы, первичные патологические сосудистые реакции, роль компонентов калликреин-кининовой и свертывающей системы [7].

Результаты исследований о роли клеща противоречивы. Роль в развитии розацеа клеща , являющегося комменсалом кожной микробиоты, в настоящее время определяется как собственно клещевая инвазия, а также, что наиболее важно, иммунологически опосредованный дефект антипразитарных факторов защиты, включая дефицит CD4+, CD95+ лимфоцитов .Таким образом клещ может активировать иммунные механизмы у предрасположенных к розацеа больных, являясь тригерром формирования папулезного и/или пустулезного подтипа розацеа.

Несмотря на то, что данные последних исследований [10,11] подтверждают значение клеща как ключевого фактора по крайне мере при некоторых подтипах розацеа.

Однако папуло-пустулезная форма розацеа диагностируется и при нормальном количестве клещей, при этом предполагается роль пока не известных пусковых факторов.

Противоречивость данных о пусковой роли клеща в патогенезе различных форм розацеа стала причиной проведения данного исследования.

Целью исследования явилось определить зависимость плотности заселения клещей от некоторых параметров функционального состояния кожи лица, расположения кожного процесса и клинической формы дерматоза у больных розовыми угрями.

Материал и методы. Наблюдались 55 больных розацеа - 38 женщин и 17 мужчин в возрасте от 30 до 65 лет с длительностью заболевания от 6 до 10 лет, из них у 20 наблюдалась эритематозно-телеангиэктатическая форма (ЭТР), у 35 - папуло-пустулезная (ППР). Идентификацию клеща осуществляли с помощью микроскопирования. Методика его проведения состоит в следующем: соскоб кожи лица накладывается на предметное стекло, материал забирали одновременно с разных участков лица (лоб, щеки и подбородок), на него наносили 1 мл щелочи (KOH или NaOH) и фиксировали покровным стеклом. При микроскопии особое внимание уделялось количеству клещей в препарате. С целью большей объективизации акарологического диагноза ввели диагностический коэффициент: ОКС (общий клещевой счет).

ОКС = р. S см ^{2}, где р - плотность на 1 см ^{2}

При изучения функциональных особенностей кожи лица использован биоимпедансный анализатор (БИА) кожи. Функции кожного барьера лица (время определения 6 секунд) определялись по следующим параметра; содержание влаги влажность), содержание кожного сала (жирность), мягкость или сухость. Анализ кожи проводили спустя 15 -20 минут после ее очищения, так как считается, что именно в это время нет пота, пыли на коже и результат анализа наиболее соответствует реальности Изучение функциональных параметров кожи лица проводилось с учетом особенностей клинической формы и расположения кожного патологического процесса. Учитывая особенности расположения высыпных элементов, выделили несколько типов расположения эффлоресценций.

- центральный тип, при котором высыпания локализуются преимущественно в области Т-зоны (центральная часть лба, надпереносье, спинка и крылья носа, носогубная зона, центральная часть подбородка) - зоны наибольшей плотности сальных желез;

- медиальный тип - высыпания находятся преимущественно в области лобных бугров, центральной части щек и области подбородочного выступа;

- асимметричный тип - высыпания обнаруживаются только с одной стороны лица;

- латеральный тип, при котором высыпания располагаются в боковых областях лица-- тотальный тип -- высыпания расположены равномерно по всей поверхности