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## KLINICZNA MEDYCINA

**Bilous I.I., Pavlovykh L.B., Bytsko N.I.**

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### **COCARNIT IN THE MULTIMODALITY TREATMENT OF DIABETIC POLYNEUROPATHY**

**Summary:** The work is dedicated to researching of the effect of cocarnit on the functional state of the peripheral nerves based on the findings of stimulation electro-neuromyography in multimodality treatment of diabetic polyneuropathy. The most positive influence on the amplitude of M-response of the nerves of the upper and lower extremities has been detected in case of use of cocarnit in comparison with the basic treatment.

**Introduction.** Diabetic neuropathy (DPN) is a set of clinical and sub clinical syndromes, each of which is characterized by diffuse or focal lesions of peripheral and/ or autonomic nervous fibers as a result of diabetes mellitus (DM). This is one of the most common chronic complications of diabetes that is diagnosed in almost half of patients. The clinical manifestations of DPN are very diverse and occur in practice of specialists in various specialties. It is known that diabetic polyneuropathy increases the danger of amputation by 1.7 times, the danger of feet deformation increases by 12 times, and the danger of feet ulcers increases by 39 times.

A significant prevalence of this pathology determines the importance of practical and theoretical perspectives. The most informative method of diagnosing lesions of the peripheral nervous system in patients with DPN is electroneuromyography. It is registration of oscillations of electric potentials in skeletal muscles that allows examining the state of peripheral lesions of neuromotor apparatus effectively.

Thus, when using this method, lesions detection frequency of functions of peripheral nerves increases up to 70-90%.

**Purpose and objectives of the research.** Prove the expediency of application of cocarnit (CDF) in treatment of patients with DPN, depending on the duration of diabetes by studying the functional state of peripheral nerves according to finding of stimulation electroneuromyography.

**Research objectives.** Examine the indicators of stimulation electroneuromyography in patients with DPN, depending on the duration of diabetes mellitus before and after treatment.

**Materials and methods.** We explored 86 patients with type II diabetes mellitus who were hospitalized in Chernivtsy Regional Clinical Endocrinological Dispensary. Among the patients there were 36 women and 50 men; the age of the patients ranged from 36 to 65 years. Diabetes mellitus (DM) of moderate severity was observed in 82

patients, 4 patients were in a critical state; 12 patients were in position to compensate for the disease, 74 patients had subcompensation. Patients were divided into 3 groups: Gr.1 – patients who had diabetes up to 1 year (29 patients);

Gr.2- patients with diabetes up to 10 years (30 patients); Gr.3 – patients with diabetes for over 10 years (27 patients). Additionally patients were divided into two subgroups. Subgroup I – patients who have received basic therapy that included Diet number 9, maninil to 5 mg twice daily or insulin (2/3 of daily dose in the morning and 1/3 of dose in the evening, the rate of 0.7 – 1.0 U / kg body weight), pentoxifylline intravenously 5 ml per 250 ml isotonic sodium chloride, vitamin B (42 patients). Subgroup II – patients that along with basic treatment received CDF (1 ampoule intramuscularly 1 time per day for two weeks) (44 patients). The control group consisted of 20 healthy individuals. The study of the functional state of peripheral nerves was performed by stimulation electroneuromyography (ENMG) on the apparatus Neuro-refraction-4 (Neurosoft, Russia).

### **Discussion of research results**

Determine the amplitude of M-response of peripheral nerves of upper extremities through stimulation ENMG.

While assessing the dynamics of the M-response amplitude n. medianus it was found out that group 1 patients with diabetes duration up to 1 year M-response amplitude n. medianus tended to decrease by 24.3% compared with the control. Amplitude decreases with increasing of disease duration. Thus, in the second group of patients, M- response amplitude decreased by 28.1%, and the patients who had diabetes for over 10 years showed decrease of M- response amplitude n. medianus by 32% compared to the control ( $p < 0.05$ ), indicating the axonal lesions of peripheral nerves. Patients of group 1 manifested increase of M- response amplitude after basic treatment by 7%; after additional prescription of CDF along with the basic therapy M-response amplitude n. medianus significantly increased by 20.5%. In the second group, M-response amplitude n. medianus almost did not change after basic treatment (by 0.82%); after additional prescription of CDF there was a tendency to increase by 17.1% ( $p > 0.05$ ). In the third group of patients, a slight increase in the amplitude of M-response by 3.4% ( $p > 0.05$ ) was noted after basic treatment; after the additional appointments of CDF M-response amplitude increased by 20.2% ( $p > 0.05$ ).

We investigated the indicators of M-response amplitude n. ulnaris (m. abductor digiti minimi) before and after the conducted treatment in diabetic patients with DPN. In group 1 patients with diabetes up to 1 year, decrease in M-response amplitude n. ulnaris by 18.1% was noted compared to the control ( $p > 0.05$ ). Amplitude decreases with increasing of disease duration. Thus, in the second group of patients M-response amplitude decreased by 26.3% ( $p > 0.05$ ), and patients with diabetes over 10 years showed likely decrease in the M-response amplitude n. medianus by 29.2% compared with the control. Thus, even in patients with diabetes up to 1 year decrease in the amplitude of M-response was noted, indicating a predominantly axonal lesion of peripheral nerves. M-response amplitude decreases depending on the duration of diabetes.

When conducting ENMG research in the dynamics it was found out that group 1 patients had an increase in the amplitude of M-response after basic treatment by

crease by 7.98% ( $p > 0.05$ ) in the amplitude of M-response after basic treatment was noted; after the additional prescription of CDF – by 30.7% ( $p < 0.05$ ). Patients with diabetes duration of more than 10 years manifested a marginal increase of the amplitude of M-response after basic treatment by 3.4% ( $p > 0.05$ ); after the addition of CDF- by 20.2% ( $p > 0.05$ ). Thus, patients of the first and the second groups, who in addition to background of the basic treatment received CDF, had a considerable increase in the amplitude of M-response n. peroneus.

### **Conclusions**

1. Reduction of the amplitude of the M-response of nerves of upper and lower extremities is observed in the majority of patients of I, II groups and all patients of III group.

2. Under the influence of basic treatment M-response amplitude increases insignificantly. After the addition of Cocarnit a considerable increase in the amplitude of M-response in patients I and II groups was noted.

Thus, as a result of instrumental studies it has been found out those even patients with diabetes at early stage manifest significant changes of neuromotor peripheral apparatus. They are shown by a decrease in the amplitude of M-response. The severity and nature of these changes characterize the severity of the pathological process. This demonstrates a high diagnostic value of ENMG and the need to include it in a complex examination of patients with DPN. Severity detected is largely determined by the initial state of the neuromotor system depending on the duration and severity of diabetes. All this suggests the need for medical activities at an earlier stage of disease, before the development of severe structural changes in the peripheral nerves.

Further research in this area will significantly improve the treatment of patients with diabetes complicated by polyneuropathy, taking into account the duration of the underlying disease.

### Literature.

1. Balabolkin MI, Klebanov, EM, VM Kaminska Treatment of diabetes and its complications: a guide for physicians. / Balabolkin MI, Klebanov, EM, VM Kreminskaya – M.: Medicine, 2005. – 512 p.

2. Burchinsky SG Features of the antioxidant drug therapy in neurological practice / SG Burchinsky – Ukrainsky nevrologichny magazine. – 2007. – №2. – S. 68-73.

3. Burchinsky SG Neuroprotective Pharmacotherapy in Geriatrics from his protection and for what / SG Burchinsky – Health Protection of Ukraine. – 2006. – №8. – S.42-43.

4. Galstyan GR The lesions of the lower extremities in patients with diabetes mellitus / Galstyan GR – Consilium medicus. – 2006. – V.8, №9. – S.4-8.

**Аннотация:** Стаття посвящена изучению влияния кокарнита на функцию периферических нервов по данным стимуляционной электронейромиографии в комплексном лечении этой патологии. Наибольший положительный эффект на амплитуду М-ответа нервов верхних и нижних конечностей выявлено при использовании кокарнита по сравнению с базисным лечением.