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RESULTS OF HYPOTENSIVE THERAPY IN PATIENTS WITH VESTIBULAR DYSFUNCTION

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ABSTRACT

In addition to affecting the receptors of the inner ear, betahistine has an effect on the H₃ receptors of the vestibular nuclei located in the medulla oblongata. Experimental work on animals has shown an increase in the level of serotonin in the medulla oblongata. This leads to a decrease in the activity of the vestibular nuclei, a decrease in their excitability and the cessation of dizziness. Thus, a vestibulodepressive effect is manifested.

KEYWORDS

betahistine, receptors, serotonin.

INTRODUCTION

The wide prevalence of arterial hypertension [AH], the life-threatening nature of its organ complications, especially in the brain, make this problem one of the most urgent in clinical medicine [1,5,7,8]. At the same time, it should be noted that most studies on cerebral complications of hypertension refer to strokes. As for pre-stroke cerebrovascular disorders (DCVR) against the background of AH, they are much less covered. The existing literature reflecting vestibular disorders in patients with HD is presented mainly on the basis of prescription, stage of HD, but without taking into account cerebrovascular disorders. As for the information about in-depth otoneurological studies in patients with HD with CVD, including the reflection of their dynamics against the background of the use of modern antihypertensive drugs, they are extremely few [4,9].

Given the above, the purpose of this work was to study the vestibular function of hypertensive patients (AH) before and after treatment with modern antihypertensive drugs.

MATERIAL AND RESEARCH METHODS

Under our supervision there were 79 patients with GB with DCVR. Among the sick men were 71, women - 8, their age ranged from 23 to 70 years. The duration of the disease varied from 1 to 15 years. According to the structure of the LCVR, the patients were distributed as follows: with initial manifestations of inferiority of the cerebral blood supply (NPNKM) - 20 patients, with hypertensive encephalopathy (HE) - stage I. - 20, with GE-IIst. - 20 patients. In 19 patients with HE, episodes of transient cerebrovascular accidents (TIMC) were noted. Patients underwent an examination of the general somatic (cardiological), neurological and ENT status according to standard methods. The study of

vestibular function, in addition to the clinical method, included caloric tests and electronystagmography according to the method of N.S. Blagoveshchenskaya (1990).

In addition, patients underwent echoencephalography (EchoES), rheoencephalography (REG) and electroencephalography (EEG) according to generally accepted methods to verify the diagnosis of LCVR.

Of the 79 patients, 40 were prescribed ACE inhibitors (mainly Vasotec at a dose of 5-10 mg/day) and 39 patients were prescribed calcium antagonists (AC); Norvasc (up to 10 mg/day) or Corinfar (up to 30 mg/day). The duration of treatment was 21-30 days. The results obtained between intervention groups were not statistically significant, and therefore are presented in a generalized form.

RESULTS AND DISCUSSION

An analysis of patients' complaints after treatment showed that if 51 out of 79 patients complained of dizziness before treatment, after treatment 32 of them noted a decrease in intensity, frequency, and even complete disappearance of dizziness. Moreover, the positive dynamics in patients with NPCM was much higher (up to 100%) than in patients with HE-I (85%) and HE-II (60%). The smallest dynamics of vertigo was noted in HE with MIMC (less than 40%).

The dynamics of objective symptoms was somewhat different. In particular, spontaneous nystagmus was persistently retained only in one patient out of three cases of HE with PNMK.

The instability was more firmly held in the Romberg position. So, in patients with NPLMC, instability in the simple Romberg position after treatment persisted in 1

of 3 patients, in sensitized in 2 of 6 patients, flank gait disturbance persisted in 1 of 3 examined. With GE-I Art. instability in the simple Romberg position after treatment remained in 3 out of 6 patients, in sensitized in 5 out of 9 examined. Violation of the flank gait remained in 3 out of 6 patients. In patients with GE-II Art. instability in the simple Romberg position continued to remain in 5 out of 8 examined patients, and in the sensitized position in 6 out of 8 patients. In patients with HE with PNMK, instability after treatment remained in 6 out of 8, and in sensitized patients in 7 out of 12 patients.

The results of the study of the excitability of the vestibular analyzer according to the caloric test showed its positive dynamics in 2/3 of the examined, regardless of the nature of the pathology. So, in 26 (out of 65) patients with positive dynamics, initially 6 had increased excitability, 7 had decreased excitability, 4 patients had no responses, and 9 had asymmetric reactions. In 39 patients, there was a tendency to improve the state of excitability of the vestibular analyzer, but it was statistically unreliable. The percentage of positive dynamics also depended on the severity of LCVR. So, in cases with NPNKM, excitability recovered to normal in 64.3% of patients, with GE-I st. - in 50%, GE-II st. - in 33.3%, and in HE with PNMK - in 21.1% of patients ($P>0.05$).

The dependence of the dynamics of LCVR on the degree of its severity was also confirmed by the data of neurophysiological studies. In particular, by the end of the course of treatment, the normalization of the tone of the cerebral vessels according to the REG occurred in 22.5% to 37% of cases, depending on the severity of the CVR. At the same time, in the group as a whole, the pulse blood filling of the cerebral vessels according to the rheographic index (RI) increased by an average of 13-15% ($P<0.05$). So, if this indicator (RI) in patients with

NPNKM improved by 13%, then in patients with GE-II st. by 8% ($P<0.01$).

According to EchoES, pronounced signs of intracranial pressure (ICP) that occurred in 15.5-20% of patients moved to other (moderate, mild) gradations. The number of patients with normal ICP doubled (from 30 to 60%). All indicators were statistically significant ($P<0.05$).

The dynamics of EEG changes was less noticeable and was expressed mainly by a decrease in the severity of cerebral changes. Normalization of the EEG was noted in less than 10% of patients, which must be taken for granted, because. normalization of EEG parameters is a long process (from 1 to 6 months or more).

Thus, it can be concluded that ACE inhibitors and calcium antagonists have, along with a high hypotensive and a certain, mediated cerebrovasoactive effect, which confirms the literature (2,3,5,6,8) and our previous information (7). This process is also reflected in the manifestation of the dynamics of otoneurological symptoms of CVD in GB. At the same time, in our opinion, the normalization of excitability in the group of patients with increased excitability is apparently due to the restoration of the balance of cortical processes and, accordingly, the normalization of its inhibitory function to the labyrinth.

In individuals with a decrease in reactivity, the restoration of normal excitability depends not only on the restoration of the balance of cortical processes, but also on improving the nutrition of the labyrinth receptors and the pathways of the vestibular analyzer.

We believe that in order to achieve better results, antihypertensive therapy should be long-term and combined with periodic courses of neurometabolic and antioxidant therapy.

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