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Invasive and noninvasive methods of traditional medicine in bronchial asthma - comparative effectiveness, impact tolerance to seasonal weather factors

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SUMMARY

In studies of 94 patients with bronchial asthma (BA) during 1 year of controlled treatment, it was shown that the inclusion of acupuncture (IT) or a complex of non-invasive methods of traditional medicine (CLMTM) in the basic therapy of BA in a comparable degree improves the indicators of the clinical state of patients and reduces more than 2 times the number of episodes of the seasonal unstable course of the disease against the background of a decrease in the drug load. It has been shown that an increase in the body's tolerance to the effects of seasonal trigger factors and the achievement of the clinical effect of the applied non-drug methods can be associated in AD with the activation of adaptation mechanisms to stressful influences (correction of the blood cortisol level, indicators of the immune status, etc.).

Key words: bronchial asthma, acupuncture, non-invasive methods of traditional medicine, stress, adaptation.

RESUME

In study of 94 patients with bronchial asthma (BA) within 1 year of supervised treatment is shown that the inclusion of the base-BA acupuncture therapy (AP) or a set of noninvasive methods of traditional medicine (SNMTM) to a comparable extent improves the clinical condition of the patients and reduces more than 2 times the number of episodes of unstable seasonal course of the disease on the background of reducing medicament burden. It is shown that an increase in the body's tolerance to the effects of seasonal trigger factors and achieving clinical effects of non-pharmacological methods may be associated with activation of adaptation mechanisms to the stress influences (correction of the blood levels of cortisol, the immune status, and others).

Keywords: bronchial asthma, acupuncture, noninvasive methods of traditional medicine, stress, adaptation.

The development and implementation of non-drug methods (NM) for effective and safe correction of the course of common chronic diseases, which include bronchial asthma (BA), is one of the important tasks of modern medicine [1, 2]. According to research data, the use of NM in BA significantly reduces the frequency of exacerbations and increases the duration of remission of the disease [3-5]. One of the important mechanisms for achieving such an effect may be the formation, when exposed to NM, of an increase in the patient's tolerance to the effects of seasonal trigger factors, which have a significant negative effect on the course of many chronic diseases [6]. Modern research has established that the use of IT and its modifications is accompanied by the formation of pronounced adaptogenic, psycho-, vegetative-correcting and immunomodulatory effects, allows for the correction of regulatory and functional disorders, an increase in the body's tolerance to the effects of pathogenic and stress factors [7, 8]. At the same time, it is known that invasive methods of IT and its modifications with proven efficiency of application in accordance with the requirements for

conditions of their implementation are comparable to minor surgical interventions, which limits their widespread outpatient use [9]. In this regard, the development of scientifically grounded methods of non-invasive TM methods, comparable in efficiency with invasive methods, is an urgent and practically significant problem.

MATERIAL AND RESEARCH METHODS

The clinical efficacy of classical invasive acupuncture (IT) and a complex of non-invasive methods of traditional medicine (CLMTM) was studied during the treatment of 94 patients with persistent and moderate BA on an outpatient basis for 1 year.

Patients of the 1st - control group (n = 30) received basic pharmacotherapy, in the 2nd group - comparison (n = 30) against the background of basic pharmacotherapy, a course of IT treatment (course of 15 procedures) was carried out, and in the 3rd group - the main (n = 34) against the background of basic pharmacotherapy, treatment (also 15 procedures) was carried out using KNMTM. IT was carried out using classical acupuncture techniques. The complex of KNMTM procedures included the sequential use of sliding cupping massage, classic acupressure massage and non-contact heating of acupuncture points with wormwood cigars within the framework of each procedure, according to the treatment schemes similar to IT. During the year of observation, patients of all groups on an outpatient basis received basic anti-asthmatic pharmacotherapy, which was corrected in accordance with the clinical picture of the disease according to the recommendations of the "International Consensus of Pulmonologists" using a stepwise method. Patients of the 2nd and 3rd groups additionally underwent 2 repeated courses of IT and KNMTM.

In all groups, control tests of patients were carried out before the start of treatment, after 7 days and at the end of the 15-day course, after 1, 6 and 12 months of treatment. The studies included clinical examination and assessment of self-control diary data, where the number of asthma attacks, duration of night sleep, doses of pharmacological drugs, and daily peak flowmetry indicators were recorded daily, using individual devices "mini-Wright Peak Flow Meter" manufactured by Airmed (England). Functional tests included a study of ventilation using spirometry and a flow / volume test on a spiroanalyzer "SpiroSift 2000" from Fukuda (Japan).

Studies of the level of cortisol in the blood and the immune status were carried out by radioimmunoassay.

RESULTS AND DISCUSSION

As you can see from the table. 1, the main clinical indicators of the state of patients after the course of treatment significantly improved in all studied groups. At the same time, in terms of the number of seizures per day, the duration of seizures and continuous night sleep, the effectiveness of basic drug treatment and treatment with the inclusion of invasive and non-invasive RT into the treatment process did not differ significantly.

Table 1

Dynamics of clinical symptoms of bronchial asthma during I course of treatment

Patient groups	Average amount attacks per day	Average duration attacks (minutes)	Average duration night sleep (hours)
I (control)	1.19 ± 0.17	23.33 ± 1.40	5.12 ± 0.29
	0.45 ± 0.07 ** (-62%)	17.50 ± 1.03 * (-25%)	6.73 ± 0.12 * (+31%)
II (IT)	1.35 ± 0.13	22.17 ± 1.26	5.26 ± 0.28
	0.54 ± 0.09 ** (-60%)	14.88 ± 1.14 * (-33%)	6.99 ± 0.16 * (+33%)
III (KNMTM)	1.72 ± 0.12	22.65 ± 0.90	5.23 ± 0.22
	0.63 ± 0.06 *** (-64%)	15.47 ± 1.04 ** (-32%)	6.75 ± 0.11 ** (+29%)

Note: in each cell of the table, the upper values are before the treatment, the lower ones are after the treatment. Asterisks mark significant treatment effects (* - p <0.05; ** - p <0.01; *** - p <0.001).

Bronchial patency increased to a comparable extent in all comparison groups according to the flow-volume test. So, after the course of treatment in the control group, the increase in FEV1 averaged +16.3%, with the use of IRT in the group - + 13.6% and with the use of CNMRT in the group - +14.4%. Tiffeneau's index in group increased by an average of 24.4%, in group - by 10.9%, in III - by 14.7%, and the maximum forced expiratory flow rate of the transient zone of the lungs (MOS75-25) increased, respectively, by 21.8%, 23.7% and 20.4%.

Significantly improved in BA patients who received various therapeutic complexes and indicators of daily peak flowmetry (Table 2).

It can be seen that in the control group, after the first course of treatment, an increase in peak expiratory flow rate was noted both in the morning (PSVv) and in the evening (PSVv) measurements by 32.8 Δ % and 56.7 Δ %, respectively. After 1 month from the start of treatment, these indicators remained practically unchanged. After 6 months, when a significant proportion of patients experienced an exacerbation of asthma under the influence of seasonal factors, the mean values of PSVv and PSVv were insignificantly higher than the initial values by 15.6 Δ %, and 20.8 Δ %, respectively, and after 12 months, against the background of adjusted therapy, again significantly increased relative to the initial value by 27.6 Δ % and 45.2 Δ %, respectively. Individual analysis showed a seasonal exacerbation of asthma in all patients with a moderate course and in 9 out of 15 patients with a mild persistent course.

table 2

Dynamics of the average peak forced expiratory flow rate (PSV) during the year observation (in% of due value)

Исследуемые показатели		Группы исследования		
		I группа, n = 30	II группа, n = 30	III группа, n = 34
Исходный показатель	ПСВ утро % от должн.	65,5 \pm 2,30	60,13 \pm 2,52	59,15 \pm 1,45
	ПСВ вечер % от должн.	51,23 \pm 2,27	46,56 \pm 2,67	43,36 \pm 2,55
	Суточный разброс в %	14,27 \pm 0,56	13,57 \pm 1,08	15,79 \pm 0,9
После I курса лечения	ПСВ утро % от должн.	87,0 \pm 2,89 Δ = +32,89*	76,82 \pm 2,30 Δ = +27,76*	75,26 \pm 2,00 Δ = +27,24*
	ПСВ вечер % от должн.	80,27 \pm 2,56 Δ = +56,69*	61,20 \pm 2,33 Δ = +31,44*	64,76 \pm 1,67 Δ = +49,35*
	Суточный разброс в %	6,73 \pm 0,84 Δ = -52,84*	9,13 \pm 0,84 Δ = -32,71*	10,5 \pm 0,71 Δ = -33,50*
Через 1 месяц лечения	ПСВ утро % от должн.	86,2 \pm 8,79 Δ = +31,69*	82,20 \pm 2,55 Δ = +36,70	76,92 \pm 1,94 Δ = +30,05
	ПСВ вечер % от должн.	79,60 \pm 2,58 Δ = +55,38*	62,0 \pm 2,64 Δ = +33,16*	64,56 \pm 1,59 Δ = +48,89*
	Суточный разброс в %	6,60 \pm 0,78 Δ = -53,74*	8,17 \pm 0,94 Δ = -39,84*	10,0 \pm 0,52 Δ = -36,66*
Через 6 месяцев лечения	ПСВ утро % от должн.	75,74 \pm 2,43 Δ = +15,63	79,67 \pm 2,41 Δ = +32,50*	80,07 \pm 1,64 Δ = +35,37
	ПСВ вечер % от должн.	61,87 \pm 2,62 Δ = +20,77*	61,87 \pm 2,83 Δ = +32,88*	68,02 \pm 1,6 Δ = +56,78
	Суточный разброс в %	13,87 \pm 0,81 Δ = -2,80	11,79 \pm 0,90 Δ = -13,11	7,91 \pm 0,75 Δ = -49,91*
Через 12 месяцев лечения	ПСВ утро % от должн.	83,56 \pm 2,13 Δ = +27,57*	80,93 \pm 3,43 Δ = +34,61*	80,37 \pm 1,46 Δ = +35,87*
	ПСВ вечер % от должн.	74,50 \pm 2,53 Δ = +45,22*	65,95 \pm 2,62 Δ = +41,65*	69,55 \pm 1,45 Δ = +60,40*
	Суточный разброс в %	9,06 \pm 0,91 Δ = -36,51*	8,98 \pm 0,69 Δ = -3,82*	8,69 \pm 0,47 Δ = -44,97*

Примечание: Δ рассчитано относительно исходной величины, * - P < 0,05.

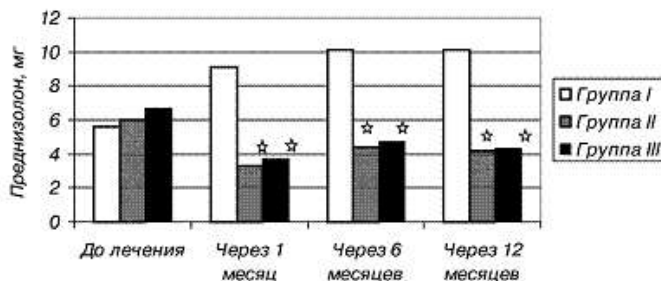
In group 2, after the first course of IT treatment, the mean PSVv value increased by 27.8 Δ %, and PSVv by 31.4 Δ %. After 1 month of treatment, the PSVv parameters increased by 36.7 Δ % relative to the initial value, and the PSVv practically did not change. In the autumn-winter period, after 6 months of controlled treatment, the mean values of PSVv and PSVv were significantly higher than the initial value by 32.5 Δ %, and 32.9 Δ %. After 12 months from the start of treatment, PSVv increased on average by 34.6 Δ %, and PSVv - by 41.6 Δ %. The effectiveness of treatment in the autumn-winter period had fluctuations only in patients with moderate BA, and in patients with mild persistent course, the state remained stable.

In the 3rd group of patients after the 1st course of KNMTM use, the average values of PSVv and PSVv increased by 27.2 Δ % and 49.3 Δ %, respectively. After 1 month, bronchial patency and Δ PSV remained practically at the same level. In the autumn-winter period, 6 months after the start of the research, a further increase in bronchial patency was noted.

relative to the initial value: PSVu by 35.4Δ%, PSVv - by 68.0Δ%. After 12 months, this trend continued. In general, according to the data of daily peak flowmetry during the course of a year of course treatment, the number of episodes of unstable bronchial asthma with a clearly pronounced seasonal dependence in the groups receiving IT and KNMTM decreased in comparison with the group receiving drug treatment by more than 2 times, which indicates an increase in the tolerance of these patients to the effects of seasonal trigger factors.

It was also found that in patients of the control group after 1, 6 and 12 months of treatment, the indicator of the average daily number of attacks of suffocation for the control week during the year of observation decreased by 57, 34 and 51%, in patients of group 2 with IT - by 58, 60 and 55%, and 3 groups receiving KNMTM - by 65, 67 and 76%, respectively.

At the same time, in all three groups of patients by the end of I of the course of treatment, the daily doses of bronchodilators Beroteka and theophylline preparations were reduced by 60–86% and did not differ significantly between the groups. Analysis of the dynamics of average daily doses B₂- short-acting adrenostimulants (beroteka and salbutamol), which were used to relieve asthma attacks, showed the absence of such in patients of the control group and a slight decrease in the dose of these drugs in patients of groups 2 and 3, who did not reveal any seasonal dependence ... At the same time, to achieve a pronounced clinical effect 1 in the group receiving only pharmacotherapy, it was required (Fig. 1), an increase in the average daily doses of glucocorticoid drugs by 88%, while in the groups receiving additional invasive and non-invasive RT, its daily doses were even reduce by 45% and 48%, respectively.



Rice. 1. Dynamics of average daily doses of glucocorticosteroid drugs, in terms of prednisone during the year of treatment.

It is important to note that a similar ratio of doses of glucocorticoids used while maintaining positive clinical results in the studied groups of BA patients was observed against the background of an increase of 28% and 38%, respectively, in the 2nd and 3rd groups of the initially reduced blood concentration of cortisol and a decrease by 25% of the number of B-lymphocytes, a decrease of 28-35% in the concentration of IgE and an increase of 19-23% in the number of T-lymphocytes and by 23% of the fraction of T-suppressors.

Evaluating the results obtained in general, we can conclude that modern basic pharmacotherapy provides a significant improvement in bronchial patency and a decrease in bronchial hyperreactivity. However, with prolonged and strong exposure to well-known, including seasonal, trigger factors, the effectiveness of pharmacotherapy is not stable and requires correction of daily doses of drugs in the direction of their increase. At the same time, the introduction of both invasive and non-invasive TM methods into the complex treatment of BA makes it possible to reduce the number of episodes of unstable BA with a clearly pronounced seasonal dependence by more than 2 times during the year of treatment, with a significant decrease in the drug load, which indicates an increase in the tolerance of these patients to the effects of seasonal trigger factors.

It can be assumed that the achievement of such a significant corrective and preventive

effects in these patients is associated with the regular implementation of both invasive and non-invasive TM methods known [7, 8] endogenous adaptive, in essence, corrective mechanisms, including such as stress-limiting and immunomodulatory effects.

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