

Maltceva O.B., Guzak O.U., Dulo O.A., Kudik V.G.

State supreme scientific institution "Uzhgorod National University."

The Faculty of Health. The Department of Physical Rehabilitation. The Department of health basics. Uzhgorod. Ukraine.

THE EFFICIENCY OF THERMALBALNEOTHERAPY IN COMPLEX REHABILITATION OF THE PATIENTS SUFFERING FROM OSTEOCHONDROSIS OF THE CERVICAL SECTION OF THE SPINE AND THE SYMPTOMS OF PSYCHO-EMOTIONAL DISORDERS IN A RESORT.

Summary. This article presents the results of clinical and functional examination of the suffering patients from osteochondrosis of the cervical section of spine (OCSS) accompanied by the symptoms of psycho-emotional disorders under the influence of thermalbalneotherapy in "Thermal Star" resort. Instrumental and clinical research have confirmed the advantages of a new complex employment. The effectiveness of complex rehabilitation at a resort stage has been determined.

Keywords: rehabilitation; osteochondrosis the cervical section of the spine; thermalbalneotherapy; resort stage.

Clinical studies confirm that there are signs of psycho-emotional disorders varying degrees of severity and also options compatible somatovegetative and depressive symptom - complexes with a significant number of patients suffering from disorders of inner organs, including OCSS. [1]

According to the definition of Medical Specialities of the European Union (PRM Section), physical rehabilitation is characterized from the standpoint of modern medical approaches the one aimed at restoring physical activity and cognitive functions, improving the quality of life, lifestyle factors modification, as well as carrying out preventive measures with patients of all ages suffering from various diseases. [2]

The main tasks of a resort rehabilitation are functional impairment normalization, stabilization or chronic processes prevention. Their implementation depends on restorative rehabilitation programs individualization, which allows not only to objectify the results of rehabilitation, but also to optimize its effectiveness taking into account adaptive and compensatory abilities of the patient. The solution to this problem which presents an urgent need of rehabilitation science and practice today, is seen in the development of recovery complexes for compensatory abilities of the body and functional reserves of the affected organs or systems. [3]

Long-term studies proved the effectiveness of thermalbalneotherapy as a method of recovery of the upset functions of the body accompanied by the external use of mineral waters.

Natural silicon-thermal hot mineral water of the "Thermal Star" resort is aimed at recreation due to physical medicinal factors, which are based on mechanical factors that is the effect of the mechanical effect of thermal mineral water on the tissue and certain anatomical structures, thermal factors (the water has a surface warming and a deep thermal effects) and chemical factors (minerals, anions, cations, etc.). Changes in the temperature of tissues under the influence of thermal factors are carried out by conduction, convection, heat conversion. [4]

Certain methods for correcting concomitant symptoms of psycho-emotional disorders are used in degenerative-dystrophic diseases of the spine. However, there many unclear and controversial issues related to the effective use of differentiated methods of OCSS patients with psycho-emotional disorders symptoms rehabilitation in the conditions of a resort.

All this calls for a better understanding of the factors influencing the clinical and functional performance of OCSS patients with psycho-emotional disorders symptoms and the development of the method of thermalbalneotherapy in a resort.

The objective: To develop an effective set of rehabilitation techniques for OCSS patients with psycho-emotional disorders symptoms using thermalbalneotherapy in the pool of "Thermal Star" resort. To achieve the effectiveness of the pool thermabalneotherapy "Thermal Star" resort on the clinical and functional performance dynamics.

Materials and Methods: The observation of 31 OCSS patients with psycho-emotional disorders symptoms within the age range 24-59. Clinical and anamnestic data, neurological status examination and instrumental investigations were carried out with all the patients. A separate group of test research was conducted in order to determine the presence and the extent of psycho- emotional sphere violations. The patients have been treated in the thermal mineral water pool of the "Thermal Star" resort by a special technique which presupposed a course of 12-15 60-minutes procedures every day.

The results of the research. On admission to the sanatorium, all patients complained of the pain (discomfort) in the jugular and occipital section of the spine, Table 1.

Table 1.

The dynamics of the subjective indicators in OCSS patients with psycho-emotional disorders symptoms, influenced by the thermalbalneotherapy complex

Number p/p	Parameters	By thermal- balneo- therapy, n =31		After thermal- balneo- therapy, n = 31		Dissap- pearance of %
		abs	%	abs	%	

1	2	3	4	5	6	7
1	Pain or discomfort in the neck	31	100	13	42	58
2	Pain (discomfort) in the neck, extending to the outer surface of the anterior shoulder (C _v), posterior outer edge of the shoulder (S _{vI}), in the back surface of the shoulder (S _{vII}), in jugular and occipital sector	31	100	6	19	81
3	Painful hair areas of the scalp when palpating and combing hair.	31	100	6	19	81
4	Pain (discomfort) in the heart of the aching character	13	42	-	-	100
5	Dizziness, aggravated by raising the head (symptom artery compression)	18	58	-	-	100
6	Discomfort, stiffness in the neck	31	100	8	26	714
7	Pain and crunching when tilting and turning the head	31	100	-	-	100

A discomfort when moving or tilting and turning the head which extends to the shoulders, the pain of the scalp area when palpating and combing hair, a discomfort and stiffness in the neck have been pointed on.

The palpation of individual muscle groups confirmed the presence of pathological changes. The majority of patients (77 %) have the tension of the back group of muscles of the shoulders and the paravertebral muscles, the weakened tone of the back group of muscles of the neck, the resistance to pressure, Table 2.

Table 2.

The dynamics of palpation indices with OCSS patients with psycho-emotional disorders symptoms, influenced by the termobalneotherapy complex at the "Thermal Star" resort

Number p/p	Parameters	By thermal- balneo- therapy, n =31		After thermal- balneo- therapy, n = 31		Dissap- pearance of %
		abs	%	abs	%	
1	2	3	4	5	6	7
1	Tension of the back muscle groups of the shoulders, paravertebral muscles of paravertebral muscles of the neck in C _v – D _I	24	77	6	25	75

2	The tone of the back of groups muscles of the neck, weakened resistance when pressed	24	77	6	25	75
3	The pain when palpating spinous processes and paravertebral points of neck, C _{III} i C _{IV}	19	61	4	21	79
4	The pain in the area of muscle seals (in trapezius muscle)	19	61	-	-	100

The functional examination of neck mobility was also carried out. Most patients suffered upsetting of varying degrees of severity: with 27 (87%) patients - when turning the head to either side and tilting the head to the front, Table 3.

Table 3.

The dynamics of some functional parameters with OCSS patients with psycho-emotional disorders symptoms influenced by thermalbalneotherapy complex at the "Thermal Star" resort

Number p/p	Norm Characteristics	Characteristic parameters of OCSS when examining	By thermal-balneo-therapy, n = 31		After thermal-balneo-therapy, n = 31		Disappearance of %
			abs.	%	abs.	%	
1	2	3	4	5	6	7	8
Mobility							
1	Tilting the head forward to the angle of 70-75 °	Moderate limitation of 65 °	8	26	2	25	75
		A significant limitation less than 65 °	24	77	7	29	71
2	Tilting of the head (back) to the angle of 45-50 °	Moderate restrictions 35 °	12	39	3	25	75
		A significant limitation less than 35 °	19	61	6	32	68
3	Tutting the head in both directions possible to the angle of 60-65 °	In the normal range , but are accompanied by "crunching"	27	87	7	26	74
4	Tilting the head in the frontal plane possible to the angle of 10-15 °	In other directions reduced range of motion (stiffness) in all directions followed by "crunching"	27	87	7	26	74

Shoulder joint range of motion							
5	Shoulder abduction to the angle of 80-90 °	Moderate stiffness with limitation of range of motion (within 15-20°) in all directions	25	81	-	-	100
6	Front deviation (raising hands in front of him - 130-135 °)		27	87	-	-	100
7	Rear deviation (abduction hands back) - 35-45 °		24	77	-	-	100
8	Rotational movements outside		28	90	-	-	100
9	Rotational movements to the middle 25-35 °		29	94	-	-	100

Reasonable restrictions of tilting the head forward have been observed with 8 (26 %) patients: tilting the head back - with 12 (39 %) patients. Average mobility impairments in shoulder joints were noted with the majority of patients: shoulder abduction – 25 (81 %) patients, front deviation - 27 (87 %) patients, rear deviation - 24 (77 %) patients, rotary motion to the outside and to middle - 28 (90 %) and 29 (94 %) patients, respectively.

Survey method allowed to identify the group of patients with complex psycho-emotional disorders accompanying chronic OCSS. Thus, 24 (77 %) patients on admission to thermalbalneotherapy complained of increased fatigue, general weakness and emotional lability, difficulty in falling asleep, a decrease in general activity, a decline in energy and strength.

During the thermalbalneotherapy treatment in the pool of the resort the patients noted a general sedative and analgetic effect which was clinically manifested in the reduction of pain, the improvement of sleep, mood as well as of the general condition.

A follow-up examination at the end of the treatment confirmed the efficiency of the external use of silicon-thermal mineral water by OCSS patients with psycho-emotional disorders symptoms. Thus, the pain in the neck (cervicalgia) and discomfort - disappeared completely. The discomfort in the neck during movements radiating in different directions - reduced and appeared only with 13 (42 %) patients, with 58 % of the patients the symptoms disappeared.

The pain in the areas of the scalp when palpating and combing hair disturbed only 6 (19 %) of the patients, the percentage of disappearance is 81 %. The unpleasant feeling in the heart heartache, as well as dizziness and soreness in the neck when tilting and turning the head - have

disappeared in 100% of cases. 8 (26 %) patients complained of stiffness and discomfort in the neck with 74% of the patients the symptoms disappeared.

The tension of the back group of muscles of the shoulders, paravertebral muscles in C₅ – D₁, the resistance of the back group of neck muscles when pressed were observed with 6 (25 %) patients, while, according to patients words, the intensity and the degree of impairment reduced.

The improvements of functional parameters. Significant limitations when tilting the head forward and back disappeared with most patients, 71 % and 68 % respectively. Moderate changes in these indicators remained with 2 (25 %) and 3 (25 %) of the patients, respectively, the percent of disappearance is 75 %. 7 (26 %) of the patients, complained of pains turning the head in both directions and tilting the head in the frontal plane the percentage of disappearance is 74 %. The mobility of the shoulder joint was restored completely.

Repeated surveys of patients showed the positive dynamics in the course of disease and psycho-emotional indicators. Insomnia and the feeling of weakness in the morning almost disappeared, patients emphasized the improvement of sleep and falling asleep, restoring a sense of cheerfulness in the morning, increasing energy.

Therefore, timely and rational approach towards the rehabilitation of OCSS patients with psycho-emotional disorders symptoms through the use of thermalbalneotherapy in the pool of the "Thermal Star" resort improved the efficiency of the traditional method of treatment in the conditions of a resort.

Literature used:

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