

ФИЗИКАЛНА МЕДИЦИНА РЕХАБИЛИТАЦИЯ

ГОДИНА XV
ISSN – 1312-0417

ЗДРАВЕ

БРОЙ 1/2015

PHYSICAL MEDICINE REHABILITATION HEALTH Vol 13 №1/2015

OFFICIAL JOURNAL OF

**ASSOCIATION OF PHYSICAL
MEDICINE & REHABILITATION**

MEMBER OF



ESPRM

European Society of
Physical & Rehabilitation Medicine

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АСОЦИАЦИЯ ПО ФИЗИКАЛНА МЕДИЦИНА И РЕХАБИЛИТАЦИЯ**

ФИЗИКАЛНА МЕДИЦИНА РЕХАБИЛИТАЦИЯ ЗДРАВЕ

ГОДИНА XIV
ISSN – 1312-0417

БРОЙ 1/2015

PHYSICAL MEDICINE REHABILITATION HEALTH

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www.bgsprm.com; e-mail: office@bgsprm.com
Печат: ПРИМА ПРИНТ ЕООД, СОФИЯ

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BIOACTIVITY OF MINERAL WATER AND NATURAL SUBPRODUCTS AS A NON-PHARMACEUTICAL ALTERNATIVE TO CHEMOTHERAPY SIDE-EFFECTS REDUCTION

L. Vesselinova¹, J. Raynov²

*¹Military Medical Academy, MHAT, Sofia,
MMDER/Clinic of Physical and Rehabilitation Medicine;*

²Clinic of Hematology

ABSTRACT

In this paper are discussed the diversity and specific bioactivity of the balneological factors in Bulgaria, which are not referred to as an empiric contraindication but rather as unfulfilled potential for controlling the cytostatic treatment side-effects (hematological and non-hematological toxicity: nausea and vomiting, hypo-/ paresthesia).

The authors strongly believe that not only the patients' quality of life will be improved, but there will also be a positive impact on the prognosis and outcomes concerning the above mentioned diseases. The standard treatment procedures rely on symptomatic medicines, which is an additional burden to the patients and often an interruption of the chemotherapy course is needed. The authors recommend the national balneology resource due to its antioxidant and immunomodulating characteristics presented as a reasonable alternative resulting in cytostatic treatment side-effects reduction and strictly correlating with the patient's clinical status and restrictions needed. The new and enriched possibilities offered by modern medicine related to monitoring the status of oncohematological patients concerning both quantitative indexes and qualitative assessment of the disease activity and progression are reasonable enough to undergo a contemporary re-evaluation of the balneotherapy as a possible psycho-somatic stabilizing factor with patients in the middle or after treatment thanks to its antioxidant and immunomodulating bioactivity presented here. These are effects of significant importance for the treatment of the conditions mentioned which, according to the authors, justify balneological treatment as an important stage of the side-effect reduction and disease prognosis.

What should be noted too is that the specific bioactivity of each balneological factor such as mineral water and sub-products like peat, peloids and lye depends on the prevailing specific mineral and/or chemical content depending on climate. A correct interdisciplinary clinical approach to each case and balneological complex bioactivity are the crucial check-points to create a riskless balneological prescription to enhance and improve the quality of life as well as recreative motivation of oncohematological patients undergoing active chemo-therapy. A national program supported by official governmental and nongovernmental institutions and organizations is more than needed, which will also result in a positive social and economic result.

Key words: *bioactivity, balneological factor, malignant hemopathies, side-effect reduction, immunostimulating mineral water, natural subproducts, quality of life.*

LOW-INTENSITY AND LOW-FREQUENCY PULSATION ELECTROSTATIC FIELD. THERAPEUTIC EFFECTS OF DEEP OSCILLATION TREATMENT ON DEGENERATIVE JOINT DISEASES

G. Mratzkova¹, E. Ilieva², M. Ivanova³

¹*Medical Faculty, Department of Medical Rehabilitation and Occupational Therapy, Physical Medicine and Sport, Trakia University, Stara Zagora*

²*Physical and Rehabilitation Medicine Department, Medical University, Plovdiv*

³*Rheumatology Clinic, St. Ivan Rilski University Hospital, Sofia*

ABSTRACT

The development and implementation of new prevention, treatment and rehabilitation methods, which have a multifactor influence on pathogenetic causes for the occurrence and progression of a number of diseases, improvement of functional status and increasing of protective and adaptive capabilities of bodies, are among the priorities of modern Physical Medicine.

The Deep Oscillation treatment method is in fact based on the use of low-frequency pulsation electrostatic field. The main therapeutic effects are achieved as a result of the electric field pulse generated with low frequency ranging from 5 to 250 Hz, with small amperage 5–7 μ A and biphasic mode.

The therapeutic effects actually depend on the frequency range. What is achieved is a rapid and sustained pain relief, improvement of microcirculation and reduction of swelling. The fibrinolytic effect and increased tissue elasticity lead to normalization of the muscle tone and improves the mobility of the joints system. Anti-inflammatory and immune-stimulating effect is also observed.

The application of the Deep Oscillation therapy in the treatment and rehabilitation of degenerative joint diseases aims to reduce pain, activate thropics of periarticular tissues, to reduce swelling and improve the movement efficiency in the affected joint.

Key words: *Low-frequency alternating electrostatic field, DEEP oscillation, osteoarthritis*

KINESITHERAPY BEHAVIOR IN POSTOPERATIVE PERIOD WITH ASEPTIC NECROSIS OF METACARPAL – CLINICAL CASE

K. Kazalakova¹, V. Spassoff², R. Tasheva³

¹*Physical Medicine and Rehabilitation Unit Pirogov Emergency Hospital, Sofia*

²*First Traumatology Clinic, Pirogov Emergency Hospital, Sofia*

³*National Sports Academy, Sofia*

ABSTRACT

The aim of the paper is to present a recovery methodology based on kinesis agents of wrist function with patients who have had surgeries due to aseptic necrosis in the metacarpal. Here are presented the methods of eliminating postmobilisation edema together with pain reduction, trophic improvement in the damaged area and functional capacity improvement.

Key words: *aseptic necrosis, kinesis, edema, function.*

REQUIREMENTS AND POSSIBILITIES IN REGARD TO MINERAL WATER ANALYSIS IN BULGARIA

I. Bournaska, N. Staneva

*National Specialized Hospital for Physical Therapy and Rehabilitation,
Specialized Laboratory for Mineral Water Analysis*

ABSTRACT

Bulgaria's abundance in mineral waters is a main prerequisite to using them for treatment purposes since ancient times. In recent years, their huge diversity has led to the fast development of balneology, spa and wellness areas in the country. The presence of slightly mineralized water with excellent organoleptic properties is the reason for increasing the number of water bottling plants and meeting the drinking needs of the population. In order to meet the present requirements of the bottling industry, the Bulgarian legislation has been synchronized with the European Union regulations.

Mineral water content and the level of mineral water purity are among the main conditions concerning mineral water use. Diversity in terms of content, technological and bottling methods are at the core of the existing differences and deviations regarding the approved standard. In that respect, the quality and safety control of mineral waters together with the compliance assessment regarding the current regulation documents are a main factor for the various applications of mineral waters.

Bulgaria has an established practice of mineral water analysis and control. Sampling and testing are conducted by accredited laboratories for analyzing microbiological, physical, chemical and radiological indicators in compliance with the current legislation of the Republic of Bulgaria and the European Union. After summarizing the results, the analyzed water sources are assessed in terms of properties and applicability.

Considering all this, the issues about the requirements and possibilities related to mineral water analysis are quite topical and will be useful to the people applying Bulgarian mineral water in one way or another.

