FB-1403-004
The concept of translational medicine in physiotherapy and rehabilitation
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The present paper is devoted to the assessment of the possibilities for the use of the concept of translational medicine in physical and rehabilitative medicine. A detailed description of the main directions of the development of translational medicine in physiotherapy and medical rehabilitation including personalized and evidence-based medicine and physioeconomics. Prospects for the further development of translational research in physiotherapy are outlined.
Key words: translational medicine, translational research, personalized physiotherapy, evidence-based physiotherapy, physiogenetics

FB-1403-012
Chronotherapy of the patients presenting with gallbladder dysfunction and dyscholia concomitant with psychovegetative disbalance
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The development of effective methods for the treatment of the patients presenting with gallbladder dysfunction and dyscholias acquires special importance when these conditions occur in the combination with psychovegetative disbalance that exerts the unfavourable influence on the functional state of the bile creting system. The use of the chronobiological approach taking into consideration the optimal time for the pplication of physiotherapy with modern instrumental factors makes it possible to improve parameters of the contractile function of the gallbladder, increase colloid stability of bile, normalize characteristics of the psychovegetative status, and enhance the adaptive potential of the organism. Such approach ensures the well apparent therapeutic effect in conjunction with good tolerance of the treatment.
Key words: gallbladder dysfunction, dyscholia, psychovegetative dysbalance, chronophysiotherapy

FB-1403-018
Rehabilitation of the children presenting with the functional disturbances in the locomotor system as a consequence of the craniocerebral injury
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The present paper concerns the main approaches to the estimation of the effectiveness of the rehabilitative measures for the children presenting with functional disturbances in the locomotor system caused by retarded conversion of the primitive locomotor reflexes in the context of the long-term consequences of the craniocerebral injury. Diagnostics of these disturbances and dynamic observation of the children treated by various methods of manual therapy were carried out with the use of X-ray techniques, cardiointervalography, pulse-oxymetry, and bulbar biomicroscopy.
Key words: consequences of the craniocerebral injury, craniosacral techniques, manual therapy

FB-1403-023
The new possibilities for rehabilitation of the patients presenting with cicatrical stenosis of the pharynx and trachea
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We have proposed an original approach to the combined treatment and rehabilitation of the patients presenting with cicatrical stenosis of the pharynx and trachea with the help of the following techniques: multichannel electrical stimulation with biopolar pulsed currents (based on the new highly efficacious 1-channel Miomodel-10 electrostimulator) and instant diagnostics by laser Doppler flowmetry. The study demonstrated the appreciable improvement of microcirculation in the treated patients that increased the effectiveness of their rehabilitation and allowed for the favourable prognosis.
Key w rds: electrical stimulation, microcirculation, cicatrical stenosis of the pharynx and trachea
FB-1403-027
The influence of intravenous laser irradiation of the blood on the neurovegetative regulation of the organism in the puerperae following the abdominal delivery
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Thirty one puerperae at risk of developing infectious and inflammatory diseases (IID) following the abdominal delivery were divided into 2 groups for the investigation of the neurovegetative regulation of the organism by means of cardiointervalographic analysis on day 1 after surgery and on day 6 after daily intravenous laser irradiation of the blood (ILIB) or without this treatment. By way pf prophylaxis, all the women were given intravenous injections of antibiotic amoxiclav at a dose of 1.2 g 15 min before surgery. The study showed that the use of ILIB promoted normalization of the compromised compensatory and protective reactions and improved the functional reserves of the organism in 73.3% of the women which suggests the expediency of the inclusion of this procedure in the treatment of puerperae at risk of IID following the abdominal delivery. In the absence of ILIB, the neurovegetative regulation and the adaptive reactions recovered only in 43.7% of the cases.
Key words: intravenous laser irradiation of the blood (ILIB), puerperae, Cesarean section, infectious and inflammatory diseases, cardiointervalography, regulatory mechanisms of the vegetative nervous system

FB-1403-032
The application of polychromatic laser speckle-stimulation for the pleoptic treatment of the children presenting with ambliopia
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The objective of present study was the comparative evaluation of the effectiveness of the treatment of the children presenting with ambliopia with the application of polychromatic laser speckle-stimulation at different wavelengths. It was shown that the pleoptic treatment enhanced the acuity of vision in all groups of the patients. The best results were achieved in the group undergoing polychromatic laser stimulation based on the combination of the speckle light fields in the red and green wavelength range.
Key words: amblyopia, laser speckle-stimulation in the red wavelength range, laser speckle-stimulation in the green wavelength range

FB-1403-034
The effectiveness of phototherapy used for the treatment of the newborn infants of different age presenting with conjugational jaundice
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Introduction. The break-up of erythrocytes and hemoglobin decomposition result in the release of indirect bilirubin that is possible detect in the blood. Indirect bilirubin is lipid-soluble, penetrates into the tissues (for example, into those of the central nervous system), and exhibits the histotoxic properties. Phototherapy is one of the methods by which the influence of bilirubin in the body can be reduced.
Materials and methods. The newborn infants presenting with conjugational jaundice and included in this study were divided into 2 groups depending on their age. Those comprising groups IB and IIB were treated by phototherapy while the patients in groups IA and IIA served as controls. The direct to indirect bilirubin ratio (BR) at admission and upon discharge from the clinic was calculated alongside with the growth coefficient of direct and indirect bilirubin (GC), erythrocyte index, and hemoglobin content.
Results. In control children of both age groups, the blood indirect bilirubin level decreased by 12 mcromol/day in contrast to the patients treated bi phototherapy in whom it fell down much more rapidly (by 19-21 mcromol/day; p < 0.001). Dynamics of decrease of the direct bilirubin level in the children of the younger age-group was virtually identical whereas it decreased more rapidly in the patients of the elder age-group (p < 0.05). Neither erythrocyte indices nor hemoglobin content were significantly different between the children treated by phytotherapy and the controls. It is hypothesized that the serum level of indirect bilirubin in these children is a result of immaturity of the hepatic glucuronyltransferase system.
Conclusion. Phototherapy is an effective method for the treatment of newborn infants of different age presenting with conjugational jaundice.
Key words: indirect bilirubin, direct bilirubin, newborn infants, conjugational jaundice, phototherapy
The methods of Charcot-Marie-Tooth kinesiotherapy
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Congenital Charcot-Marie-Tooth neuropathy (CCMTN) is a degenerative disease accompanied by the
development of progressive muscular weakness and persistent locomotor disturbances. At present, there
are no means to predict the clinical course of this pathology; suffice it to mention that some patients exhibit
only minor symptoms of CCMTN across the lifespan whereas others experience serious changes leading to
disability. Nevertheless, the program of efficacious habilitation may be useful in the maintenance of the
acceptable quality of life (QL) in the patients presenting with Charcot-Marie-Tooth neuropathy and even its
improvement by virtue of the maximum preservation of their physical and psychosocial functions. Moreover,
the effective habilitation program may help to decrease to a minimum the frequency of concomitant
secondary diseases, prevent or reduce the loss of working ability, and create the conditions necessary for
efficacious integration of the patients into the social life. The present article expounds the main principles of
kinesiotherapy of CCMTN, up-to-date approach to the organization of remedial gymnastics, ,
recommendations for physical training, and a set of therapeutic physical exercises indicated for use by the
patients presenting with congenital Charcot-Marie-Tooth neuropathy. The definitions of the essence of
rehabilitation and habilitation , kinesiotherapy, and therapeutic physical exercises are proposed.
Key words: Charcot–Marie–Tooth hereditary neuropathy; habilitation; therapeutic physical training;
kinesitherapy

The use of the non-medicamental methods for the treatment of chronic pyelonephritis. The
experience with the application of peloid therapy
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We undertook a study designed to evaluate the effectiveness of peloid therapy with the use of salt-saturated
silted therapeutic peloid from the lake Marmyshenskoye for the combined treatment of the patients,
presenting with chronic pyelonephritis. We have analysed the results of the treatment of 48 patients. It was
shown that the introduction of peloid therapy with the application of silted therapeutic peloid from the lake
Marmyshenskoye in the combined treatment of the patients, presenting with chronic pyelonephritis more
effectively than the standard treatment suppresses the inflammatory process due to the favourable influence
on the urine microbial spectrum, decrease of leukocyturia level, acceleration of the recovery of homeostasis,
activation of humoral immunity, and prevention of further chronization of the process.
Key words: chronic pyelonephritis; peloid therapy; therapeutic peloid.

The cradle of Russian balneotherapeutics
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This paper is designed to commemorate the 150th anniversary of the foundation of the first Russian
Balneological Society (RBS) in the city of Pyatigorsk. The authors describe the main stages of the
development and activities of RBS, and the main achievements in the field of balneotherapeutics and health
resort business including creation of the first Russian balneotherapeutic periodical (“Zapiski RBO”
[Proceedings of RBS]), setting up the first balneological museum in this country, the role and participation of
RBS in the early balneological congresses held in 1898, 1903, and 1915, establishment of the RBS library,
etc. RBS activities in the field of balneotherapeutics had a marked influence on the development of health
resort business not only in the Caucasian Mineral Waters region but also in all other spa and health resorts
of this country in greatly contributed to the development of Russian and world balneology. The Russian
Balneological Society initiated the foundation of the First Russian Institute of Balneotherapeutics.
Key words: Russian Balneological Society; the history of health resort business in the Caucasian Mineral
Waters region; first balneological congresses.