

Keywords: distal humerus bone, elbow joint, fracture, conservative and operative methods of treatment, rehabilitation.

PP 19

THE EFFECT OF MINERAL RICH FOOT BATH ON THE OVERUSE SYNDROM OF LOWER EXTREMITIES

Varje-Riin Tuulik^{1,2}, Tatjana Rõõmussaar³, Monika Kumm^{1,4}, Viia Tuulik¹, Taavi Päll⁵

¹The Centre of Excellence in Health Promotion and Rehabilitation, Haapsalu, Estonia, ²West Tallinn Central Hospital, Tallinn, Estonia, ³Järveotsa Perearstikeskus, Tallinn, Estonia, ⁴Pärnu College, University of Tartu, Pärnu, Estonia, ⁵Department of Microbiology, Institute of Biomedicine and Translational Medicine, University¹² of Tartu, Tartu, Estonia

Introduction. Prolonged standing is likely to contribute to musculoskeletal and vascular symptoms. Work related lower extremity overuse with prolonged standing needs more attention and also an effective rehabilitation intervention. The aim of the study is to measure the efficiency of mineral rich leg baths as rehabilitation intervention for the lower extremity overuse by prolonged standing.

Methods. Study group were 50 persons 18–65 years old who work 4 hour and more in standing position.

Inclusion criteria BMI less than 35 and mild or moderate problem with leg tiredness, pain or uncomfortable. Subjective pain score in scale 2–7 from 10 in Nordic musculoskeletal pain questionnaire. The rehabilitation intervention was 5 days leg bath with 38–40 °C warm water for 15–20 min.

I group – used as additive 100 mg dry sea mud and 100 mg Mg salt. There were 25 persons in this group (7 male, mean age 45.7, mean BMI 25.9)

II group – used as additive only Mg salt (100 g). There were 25 persons in the second group (1 male, mean age 40.0 years, mean BMI 24.5) Before and 2–3 days after the last procedure a nurse measured 1) skin temperature on the first toe and 2) circumference of the leg 4 cm proximally from the ankle (measurement point C4) and 8 cm proximally (measurement point C8).

Results.

- There was no difference between two study groups in the temperature measured on the top of first toe. In pooled study group temperature increased by 0.095 °C [95%CI, 0.055 to 0.14], posterior probability that effect is bigger than zero is 1 (statistically important).
- Ankle circumference in study group with younger (less than 40 years) diminished -2,8 mm [95%CI, -8 mm to +2.7 mm], posterior probability that the effect size is smaller than zero 0.87 (statistically not important).
- The lower back, neck and knees were the most reported painful areas measured by the Nordic musculoskeletal pain questionnaire. Mean pain score diminished in both groups in all body areas – for example in lower back average effect size was more than 2 points in 10 point scale, posterior probability that effect size is bigger than zero is 1 (statistically important).

Conclusions. Both foot baths were effective in case of lower extremity overuse with prolonged standing.

PP 20

COMPREHENSIVE REHABILITATION PROGRAM FOR MIDDLE AGE WOMEN WITH FUNCTIONAL ARTHRALGIA OF THE KNEE JOINT

Tetiana Turytska, Oleksii Vinnyk, Dmitriy Nosivets
Oles Honchar Dnipro National University, Dnipro, Ukraine

Introduction. Knee joints (KJ) are often exposed to severe overload, which is associated with constant stress during their functional purpose and is initially manifested by arthralgia. Musculoskeletal pain

associated with degenerative-dystrophic changes is most common in women, whose frequency increases with age. The initial assessment of the functional status of the KJ should emphasize the exclusion of urgent reasons when considering the need for assistance. Therefore, there is a need for a comprehensive approach to correct the functional state of patients with arthralgia of the KJ using non-drug methods of rehabilitation, namely physical therapy.

Research methods: physical research methods used to assess the functional state of the KJ.

Main results and conclusions. During the period of sparing-motor regime, the task was to reduce muscle imbalance, improve trophic processes in the tissues of the KJ, correction of the patient's psycho-emotional state. To achieve the goal were used: morning gymnastics (15-20 minutes) daily, independent classes; kinesitherapy aimed at improving mobility in the spine and KJ (30 min) 5 g / week 2 g / day; therapeutic massage (self-massage) of both lower extremities and the reflex zone of the lumbar region (20 min), 10 procedures; amplipulse on the lumbar spine (10 min), 5-7 procedures; magnetic therapy on the site of KJ (15 min), 10 procedures; reflexology 2 g / week from 5 to 20 procedures, including general and local points. During the period of sparing-training mode, the development of KJ mobility was added. The task of kinetotherapy was aimed at achieving painless passive and active movements in the KJ and lumbar spine. Mechanotherapy, PIR and intra-articular oxygen therapy (2 g / week, 5 procedures, 40-60 ml) were added to the morning gymnastics and therapeutic massage. During the period of training motor mode focused on stabilizing the KJ, increasing the amount of active movements. Added: intra-articular autoplasm therapy (1 g / week, 5 procedures, 3-4 ml), biopuncture with complex biological drugs (2 g / week, 10 procedures) and kinesiotope 1 time in 10-14 days, 3 times.

Conclusions: The use of complex physical therapy improves the functionality of patients by reducing muscle imbalance and the intensity of pain. The effectiveness of the complexity of rehabilitation measures, which differ in the direction of exercises aimed at improving the specific needs of the patient, was proved.

Key words: knee joint, physical therapy, rehabilitation, middle-aged women.

PP 21

IN-PATIENT POST-COVID REHABILITATION IN CHRONIC FATIGUE AND COGNITIVE DISORDERS

Liudmila Babliuk, Svitlana Fediaieva², Iryna Babova³, Vita Miesoiadova¹, Sergii Tamazlykar⁴

¹Ivano-Frankivsk National Medical University, Ivano-Frankivsk, Ukraine, ²Danylo Halytsky Lviv National Medical University, Lviv, Ukraine, ³South Ukrainian National Pedagogical University named after K.D. Ushynsky, Odesa, Ukraine, ⁴Central City Clinical Hospital of Ivano-Frankivsk City Council, Ivano-Frankivsk, Ukraine

SARS-CoV-2 infection is suspected to affect almost 80% of the world's population and the majority will need a rehabilitation care.

The purpose of the study was to estimate effectiveness of rehabilitation program in patients after Coronavirus disease with cognitive disorders and manifestations of chronic fatigue syndrome.

The study design included 60 patients after SARS-Cov-2 infection of age 43,9±1,08 years (26 women and 34 men) who underwent rehabilitation in Department of Physical Rehabilitation of Central City Clinical Hospital (Ivano-Frankivsk) with chronic fatigue and cognitive disorders syndromes. All patients were divided into two groups due to severity of the disease in acute period at the hospital stage: group I - 28 patients with a general condition of moderate severity and 32 patients - group II, with severe course of the disease and oxygen demand. The duration of rehabilitation program was 14 days, observation periods: on 1st, 7th and 14th day. Online Stroop Test, Beck Depression Inventory, Spielberger-Khanin test, The Faces Pain Scale-Revised, Epworth Sleepiness Scale, Pittsburgh Sleep Quality Questionnaire were used. Rehabilitation program consists of: physical exercises, massage of the neck area, electrosleep and low-frequency magnetic therapy during 1st week; on the 2nd week

amplipulse in the projections of the cervical sympathetic ganglia, paravertebral and interscapular area and darsonval of the scalp region of the head were added.

Patients of I group complained about anosmia, cephalgia, cognitive impairment, increased anxiety and fatigue, of II group – dysgeusia, dyssomnia, and depression. Rehabilitation eliminated cognitive dysfunction, depression, cephalgia, drowsiness and dyssomnia on the 7th day in patients of I group, and in patients of II group on the 14th day. Thus, 9,4% patients of II group after of rehabilitation had manifestations of minor recurrent headache and drowsiness.

Patients after Coronavirus disease, who needed oxygen therapy at the hospital stage, need long-term rehabilitation program.

PP 22

HOUSE DUST MITE SENSITIVITY IN ATOPIC CHILDREN WITH TOL-LIKE RECEPTOR 2 POLYMORPHISM

Volosovets Olexander, Mozyrska Olena

O.O. Bogomolets National Medical University, Kyiv, Ukraine

Introduction: Atopic dermatitis is a chronic recurrent inflammatory skin disease that affects 5-20% of children. Airborne allergens derived from house dust mites can cause atopic dermatitis. TLR2 play an important role in the recognition of house dust mite allergens. The aim of this study was to investigate the prevalence of sensitization to house dust mites in children with atopic dermatitis and the role of TLR2 rs4696480 polymorphism in the development of sensitivity to house dust mites.

Materials and methods: The study included 100 patients with atopic dermatitis. Genotyping of the polymorphism TLR2 rs4696480 was performed in the patient group using real-time PCR. Measurements of sIgE to dust mites were performed by Western blotting according to the manufacturer's protocol (Simesta-Medivis, Ukraine-Germany).

Results: Sensitization to house dust mites was found in 48% of children. Children with elevated levels of specific IgE to dust mites had a significantly higher SCORAD index than patients without sensitization ($p < 0.001$). In the group of children sensitized to house dust mites, there were significantly higher levels of total IgE ($p < 0.001$) and a longer course of the disease ($p < 0.05$). There was no statistically significant difference in the distribution of genotypes depending on the presence of sensitization to dust mites (OR=1.250 (0.481-3.245)) for AA and AT, OR=2.125 (0.715-6.315 (0.715-6.315)) for AA and TT).

Conclusion: This study showed that the susceptibility to dust mites among children with atopic dermatitis is 48%. The presence of susceptibility to house dust mites affects the severity of the disease. There is a need for further study of the factors predisposing to the development of epicutaneous sensitization in children with atopic dermatitis.

PP 23

TREATMENT AND REHABILITATION OF PATIENTS WITH PRIMARY PERIODONTITIS ASSOCIATED WITH CHRONIC PERSISTENT HERPES VIRUS INFECTION

Tetiana Volosovets, Anton Volosovets

Shupyk National University of Healthcare of Ukraine, Kyiv, Ukraine

Introduction. Periodontal diseases associated with persistent viral and bacterial infection are difficult to treat and lead to a significant reduction in the functionality of the dental system as a whole. They are characterized by a long period of recovery and subsequent rehabilitation.

Materials and methods. Examination of 290 adult patients with primary periodontitis revealed persistence of herpes virus infection in 153 (52.79%) individuals with a predominance of its associated forms in 135 (88.23%) individuals. The highest number of recurrences of GVI in the oral cavity was observed in patients aged 18-24 years.

Patients were divided into 2 groups. The first group included 87 patients who at the time of examination had no visible signs of herpesvirus infection in the oral cavity, the second group (66 people) included patients with existing herpesvirus lesions in the oral cavity. For the treatment and rehabilitation of patients of group 1 we have proposed a combined scheme with the inclusion of immunomodulators of plant origin with antiviral effect. For the treatment of patients in group 2 standard therapy with antiviral drugs was used (valacyclovir orally and cycloferon 5% liniment for applications to the elements of the lesion).

Results. After the treatment, the dynamics of index and biochemical parameters in patients of groups 1 and 2 significantly improved, although the results obtained after treatment in the groups differed significantly due to the predominant indicators of group 1. Patients were given recommendations for oral care, individual selection of care products. After 6 months, the picture of stable remission was observed in 97.65% of patients of the first and 85% of the second group. After 1 year, the tendency to stable remission was observed in 93.6% of patients in group 1 and 73.1% of patients of group 2.

Conclusions. The effectiveness of treatment according to our proposed scheme is 12.65% higher than the effectiveness of treatment according to the generally accepted scheme. The efficiency of rehabilitation with the usage of the proposed drug exceeds the efficiency of rehabilitation of patients treated and rehabilitated according to conventional schemes by 20.5%.

PP 24

WAYS OF MEDICAL AND PSYCHOLOGICAL REHABILITATION OF CHILDREN, WHO HAVE SUFFERED AS A RESULT OF RUSSIAN MILITARY AGGRESSION AGAINST UKRAINE

Oleksandr Volosovets¹, Sergiy Kryvopustov¹, Sergiy Guryev², Anton Volosovets³, Olena Mozyrska¹, Olga Dzuba¹, Marya Kryvopustova¹, Natalia Slusar¹, Lyliya Korkh¹, Iryna Dzuba¹, Svetlana Iordanova

¹Bogomolets National Medical University, Kyiv, Ukraine, ²«Ukrainian reaches and practical centre of emergency medical aid and disaster medicine Ministry of Public Health of Ukraine», Ukraine, ³Shupyk National University of Healthcare of Ukraine, Kyiv, Ukraine

Introduction. Russia's military aggression against Ukraine is lasting for three months now. Children and women are suffering the most from this war and its aftermath, because they have become targets of violence. According to preliminary analysis, more than 24,000 civilians have been killed so far, including 200 Ukrainian children and more than 300 children who have been injured and disabled. More than 1.7 million children and their parents have been forced to leave Ukraine and are now become refugees in EU countries. The consequences of war have a profound effect on their health and well-being, and for some it will last for a lifetime.

The hostilities directly led to chronic stress and the destruction of the children's habitual world, where they felt safe. This was due to the tragic events witnessed by these children: violence of the occupiers (massacre of civilians in Bucha, barbaric destruction of the population of Mariupol, Kharkiv, Volnovakha, Irpen, Borodyanka, Trostyanets, etc.), loss of home, relatives and friends, forced change of residence and schools, information wars.

As a result, such children have suffered from severe trauma, accompanied by fear, anxiety, loss of security, which is subsequently realized in post-traumatic stress disorder and leads to the development of mental and behavioral disorders.

According to the results of our retrospective medical and statistical research, children from Donetsk and Luhansk regions of Ukraine, where hostilities took place during the last 8 years, have demonstrated an increase of mental and behavioral disorders and growth of number of children with disabilities due to this pathology.

Such children's mental disorders have led to the increasing of incidence of epilepsy, infectious diseases, respiratory diseases, bronchial asthma, pneumonia, cardiovascular disease and oncology in war-torn regions in comparison with the national average level.