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МЕДИЦИНСКИ УНИВЕРСИТЕТ – ПЛОВДИВ

ПЪРВА КАТЕДРА „ВЪТРЕШНИ БОЛЕСТИ“
СЕКЦИЯ „ФИЗИКАЛНА ТЕРАПИЯ И РЕХАБИЛИТАЦИЯ“

АКТУАЛЕН ФОРМАТ

на дисертационен труд за придобиване на образователна и научна степен „доктор“

д-р Миле Стефанови Държанова

ПРОУЧВАНЕ ЕФИКАСА НА КОМПЛЕКСНА
РЕХАБИЛИТАЦИОННА ПРОГРАМА ПРИ ПАЦИЕНТИ СЛЕД
КРДОПРОТЕЗИРАНЕ
НА ГАЗСЪБЕДЕРНАТА СТАВА

Научен специалитет „МЕДИЦИНА“

Докторска програма
„Физиотерапия, кинезиология и рехабилитация“

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Пловдив, 2015

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MEDICAL SPECIALISTS

UEMS

Logo of the Association of Physical Medicine & Rehabilitation (APMR) and the European Union of Medical Specialists (UEMS) featuring a person in a wheelchair and a mountain peak.

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Joint hip arthroplasty is one of the most widespread surgery procedures in orthopedics and traumatology, with its origins dating back to the end of the 19th century. Physical therapy and rehabilitation of patients with replacement of the hip joint is an integral and irreplaceable part of their treatment and recovery. Purpose of the report is creating, performing and measuring the results of a complex physiotherapy and rehabilitation program for patients with arthroplasty of the joint hip. The complex physiotherapeutic and rehabilitation program consists of 5 main parts: Early post-surgery period (patients still in an orthopedics ward); Early rehabilitation at home; Late post-surgery period (hospital rehabilitation); Late post-surgery period (treatment in an outpatients' department); Functional recovery period and life with an artificial joint. All patients participating in the study had initial measurements and tests taken according to a specifically designed individual file. After finishing the last rehabilitation course, the same measurements are taken again. Patients which have passed all the steps of the post-surgery physiotherapeutic and rehabilitation program until the end of the first year after arthroplasty achieve sufficient muscle stamina, a stable and proper walking movement, independence in day-to-day activities, optimal movement volume in the artificial hip, and last but not least, good self-esteem.

3. ., ., . ().
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CABI: Global Health Database

SELF-SERVICE AMONG PATIENTS WITH ARTHROPLASTIC HUMEROSCAPULARIS (personal hygiene and toilet)

The purpose of this announcement is to examine, study and analyze the recovery of everyday life activities (personal hygiene and toilet) among patients with arthroplastic humeroscapularis. At the Clinic for rehabilitation and physical medicine at MHFAT “Dr. Georgi Stranski” – Pleven 15 patients with arthroplastic humeroscapularis have undergone physiorehabilitation program. The patients did the complex physiorehabilitation program in several consecutive courses until a maximum functional recovery of the humeroscapularis was reached. We entered the results of the held tests in personal file card of each patient in the beginning and in the end of the rehabilitation period. We observed favourable influence on the functional mobility of the operated limb and improvement of self-service.

Key words: *articulatio humeroscapularis, artroplastica, rehabilitation, self-services*

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PAIN AND MODERN METHODS OF PHYSICAL ANALGESIA

We present some contemporaneous theories of pain and therapeutic concepts of analgesia, including drug and physical analgesia, are presented. We mentioned different natural and preformed physical modalities, with effectiveness in clinical neurorehabilitation practice. **COAL:** Comparative evaluation of drug, physical and combined analgesia on the peripheral radicular pain. **MATERIAL AND METHODS:** During last years a total of 93 patients with a vertebrogenic

radiculopathy are observed and investigated - in-patients [of the National Hospital of Physical Therapy and rehabilitation (Sofia) and of- the Rehabilitation Clinic of the University Hospital of Pleven] and out-patients [of some Medical Centers of Sofia and Pleven]. Patients are randomized to three treatment groups of 31 each one. The investigation was conducted in accordance with consideration for the protection of patients, as outlined in the Declaration of Helsinki, and was approved by the appropriate institutional review boards and ethics commissions. All patients gave written informed consent before undergoing any examination or study procedure. Groups 1 received only drug therapy - paravertebral infiltrations with cortico-steroids, B vitamins and local anesthetic with consecutive peroral non-steroidal anti-inflammatory drug (NSAID). Patients of group 3 received only physical modalities [complex rehabilitation programme including transcutaneous electroneurostimulation (TENS), exercises, massages, sea lye compresses distally). In group 2 we applied drug and physical analgesia techniques. For statistical evaluation we used t-test (ANOVA) and Wilcoxon rank test (non parametrical correlation analysis), performed using SPSS package. The treatment difference was considered to be statistically significant if the p value was < 0.05 . The comparative. **ANALYSIS of RESULTS** shows a significant improvement of the symptoms of the patients, concerning pain relief (visualized by the analysis of results express scales of Zung for depression and anxiety). The drug analgesia in group 1 is fast, but short. The efficacy in group 3 is slow, but stable, and durable. We observed best results in group 2. We expose our own conception of pathogenetical mechanisms of physical analgesia. **DISCUSSION:** The drug therapy is efficient but with short duration. The physical analgesia initiates its effect slowly, but their results are stable. Best efficacy was observed in case of combination of medication with physical modalities - in the beginning due to non-steroidal anti-inflammatory drug, toward the moment of effective «input» of physical modalities. **CONCLUSION:** We could recommend the complex program for treatment of the paravertebral pain.

Key words: physical modalities, steroids, non-steroidal anti-inflammatory drug, neuropathic pain, analgesia

5. „ . (–). : . . – ” – 40 ”, 2014 3-4; : , 171-179.

IS N 978-954-756-158-8



REHABILITATION PROGRAM FOR PATIENTS AFTER TOTAL HIP ARTHROPLASTY

Hip joint arthroplasty is a highly effective procedure for both advanced coxarthrosis and fractured femoral neck which decreases the pain and the level of disability in patients. The aim of this scientific announcement is to characterize the group of patients participating in a study called “Studying the effects from a complex physiotherapy and rehabilitation program in patients after Total hip arthroplasty. The study has 203 participants (135 women and 78 men) aged between 22 and 84, which received treatment at the Physical and Rehabilitation Medical Clinic at UMBAL – Pleven, and the patients underwent initial and final (at the end of the first year after surgery) measurements and tests. The physiorehabilitational treatment after endoprosthesis leads to a faster and more complete functional recovery, thus helping the patients to return faster to unaided physical movement and daily routine, as well as restoring their psychological and emotional state and returning to a suitable labor occupation.

Key words: *join replacement, hip joint, physical medicine, rehabilitation*

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6. rastanova M., Vacheva D., Mircheva A. Complex rehabilitation program of patients with hip joint replacement in the period of functional recovery– until the end of the first year after surgery. *European Journal of Scientific Research*, "Paris University Press" 2016; vol. II, 1 (13): 541-548.

ISSN: 0140-5286

Proceedings of the Journal are located in the Databases Scopus

Source Normalized Impact per Paper (SNIP): 3.796

SCImago Journal Rank (SJR): 3.925

European Journal of Scientific Research



№1(13), January-June, 2016

*"Paris University Press"
2016*

Joint replacement of the hip joint is currently one of the most widespread surgery procedures in orthopedics and traumatology. Rehabilitation after that is an indispensable part of the functional recovery of patients with endoprosthesis. Improvement of surgery methods and techniques and the introduction of new prosthesis materials have resulted in endoprosthesis becoming one of the most successful treatment methods in general. **The aim** of this report is to track and measure the results of the applied rehabilitation process during the functional recovery period of 12 months after surgery for patients with hip joint arthroplasty. **Methods and materials:** A total of 152 patients (107 female and 45 male aged 22 to 84) with hip joint endoprosthesis due to a femoral neck bone fracture participated in the study. The rehabilitation program consisted of: kinesitherapy (underwater shower massage; underwater gymnastics; isometric and analytical isotonic exercises for lower limb, paravertebral, stomach, upper limb and shoulder muscles; exercises with gym equipment; post isometric relaxation; sports elements – swimming, underwater aerobics, cycling); treatment with performed physical factors (low-frequency impulse magnetic field; interferential currents – quadrupole isoplanar interference; electrostimulation; ergotherapy – daily activities of life. We took the self-rating test and the complex functional assessment test at the beginning and at the end of the observed period, and stored the results in an

individual file for each patient. **Results and discussion:** Based on the results from the study, we can conclude that applying a complex rehabilitation program which includes kinesitherapy, performed physical factors and occupational therapy significantly speeds up and improves the recovery process, and ensures reaching optimal functional results for patients with endoprosthesis.

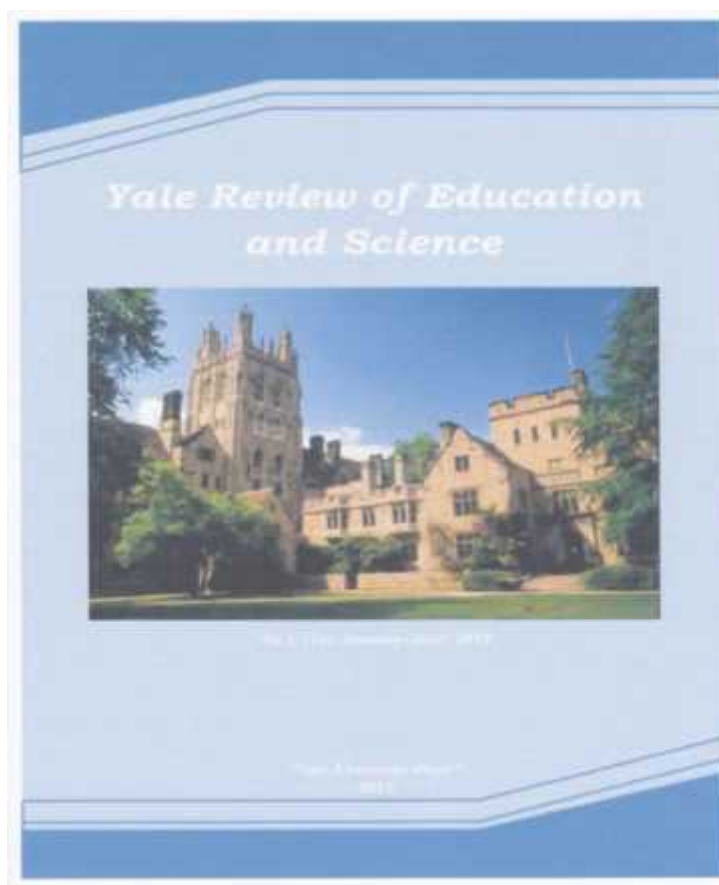
Keywords: *total hip arthroplasty, hip joint, rehabilitation.*

7. Krastanova M., Vacheva D. Rehabilitation in Patients with Hip Osteoarthritis. *Yale Review of Education and Science*. “Yale University Press” 2015; vol. 1 (16): 484-489.

ISSN 0044 – 0092

Source Normalized Impact per Paper (SNIP): 4, 865

SCImago Journal Rank (SJR): 4, 875



Over the years, the number of patients with an affected hip joint has been increasing. As age increases, the symptoms become more acute and Arthroplasty is required. With the complex rheumatologic and physiotherapy treatment, surgery can be postponed in time, and the symptoms of the osteoarthritis changes can be significantly reduced by regular treatment procedures. To trace the effect of a one-year complex and systematic medication therapy combined with a physiorehabilitation program for patients with hip joint osteoarthritis.

Key words: *osteoarthritis, hip joint, physiotherapy, rehabilitation*

8. **Krastanova M**, Valeshkov D.A, Vacheva D. E. Results from a complex rehabilitation program for patients with hip joint endoprosthesis, applied during the first two weeks after surgery. *Euroasian Union of Scientists*, , 12 (21) / 2015; 43-46.

ISSN 2411-6467

International Index Copernicus (IIC) – 2013 .: 5, 71

Scientifik Journal Impact Factor (SJIF) 2014-15 .: 2,16

JIFACTOR – 2014 .: 5,76

The Citation Linkung Backbone (CROSSREF.ORG)

Directory of Open Access Journals (DOAJ)

International Index Copernicus (IIC)

Global IF – 0,787

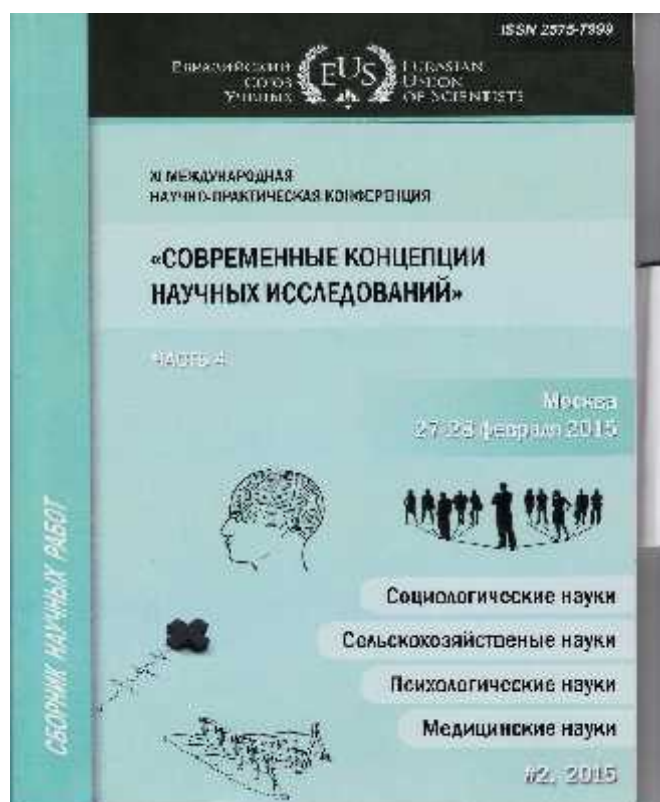


Introduction: Joint replacement (alloplasty, endoprosthesis) is currently one of the most successful surgery procedures in orthopedics and traumatology. The aim of this study is to track and measure the results of the administered protocol from the applied rehabilitation during the early post-surgery period (the hospitalization time in an orthopedic clinic from the 2nd to the 12th day after surgery) for patients with hip joint endoprosthesis. Methods and materials: A total of 203 patients (135 female and 68 male aged 22 to 84) with hip joint endoprosthesis due to femoral neck bone fracture participated in the study. The rehabilitation program consisted of: kinesitherapy (active exercise; verticalization in several stages; training in walking

with walking aids) and occupational therapy – daily life activities. Results from the locomotion test (number of steps per 10 meters and movement speed) and from the Daily Activities of life test were taken at the beginning and at the end of the period. The results are stored in an individual file for each patient. Results and discussion: The statistical analysis of the results for number of steps per 10 meters and for movement speed show significant improvement of the overall functional condition of patients at the end of the hospitalization period. At the end of the early rehabilitation period, the Wilcoxon curve for the DAL test shifts significantly to the right, which signifies a better self-sufficiency for patients, as well as an improvement in their psychological and emotional state and well-being.

Key words: Total hip arthroplasty, hip joint, rehabilitation

9. Krastanova M. Complex Treatement for Patients with Total Hip Arthroplasty after a Hip Joint Fracture. *Euroasian Union of Scientists*. 2015, vol. 2, (11):125-9. ISSN 2575-7999 – 941X



Fractures in the hip joint area (fig. 1) are the worst complication of general osteoporosis and pose a serious threat to the health and survival of the elderly people. The number of hip joint fractures is increasing due to the prolonged lifespan of the population [2]. The risks of having such a fracture is determined by various factors like osteoporosis, previous fractures, impaired overall health conditions, cognitive impairments, changes related to age, and traumas. Approximately 50% of the hip joint fractures worldwide affect the femoral neck (fig. 2), while the rest are trochanteric and subtrochanteric fractures. Frandsen and Kruse (1983) predict that the

number will triple (to 6, 5 million) by year 2050. The degree of functional recovery of patients with hip joint arthroplasty is determined by the complex physiotherapy treatment program [1], combined with prevention from further fractures. This is achieved by maintaining a good cooperation between the physiotherapy and rheumatology specialists. **Aim:** The aim of this study is to present a combined approach of the Rheumatology Clinic and the Physical and Rehabilitation Clinic at the Univeristy Hospital in Pleven, Bulgaria, for treatment of patients with hip joint endoprosthesis after a femoral neck fracture as a result of general osteoporosis. **Methods and Materials:** The target group for the study consists of 41 patients with hip joint endoprosthesis due to a femoral neck fracture, and all of them were diagnosed with general osteoporosis using the osteodensitometry method. All patients had initial and final measurements and tests taken according to a specifically created individual patient file, which includes: a visual analog scale for the pain (VAS), goniometry, manual muscle testing (MMT), locomotion test, and a daily activities of life test (DAL). The complex therapy includes drug treatment with bisphosphonates controlled by a rheumatologist, and a physiotherapeutic program which consists of: kinesitherapy, occupational therapy, electrotherapy with low frequency magnetic field (LFMF), interferential currents (IFC) and electrostimulation of the abductor muscles of the hip joint. **Results:** The data from the study was processed using two statistical computer programs – the Wilcoxon signed ranks test and SPSS for Windows v.7.0. All the results from the initial and final measurements and VAS tests for the pain, goniometry, manual muscle tests, locomotion tests and DAL tests were used. The results of the VAS tests for pain are displayed on fig. 8, and show that the patients report significant pain immediately after trauma (11,33 points out of maximum 20), which impairs their overall psychological and emotional condition. At the end of the rehabilitation process the subjective feelings of pain are reduced to 2, 57 points, which is very close to no pain at all (0 points). **Conclusion:** A positive effect from the complex drug and physiotherapeutic treatment has been observed in all the measured indicators over the course of one year after endoprosthesis, regardless of the patients' age and sex.

10. Krastanova M. St., Vacheva D. E. A comparative analysis between the recovery results of patients with hip joint replacement in the period of functional recovery–until the end of the first year after surgery#2, 2015 cz 2, East European Scientific Journal, Warsaw, Poland, 2015 2:73-76.

ISSN: 2468-5380



Joint replacement is currently one of the most widespread surgery procedures in orthopedics and traumatology. Physical and rehabilitation medicine plays an important part for improving the speed and the degree of functional recovery for patients with hip joint arthroplasty. Conducting proper and timely rehabilitation plays an important role for a more complete recovery and for prevention from complications. Endoprosthesis significant number of patients does not carry out adequate rehabilitation treatment after hospital discharge from the Department of Orthopedics and Traumatology. The reasons for this are mostly financial, social or domestic difficulties. The aim of this report is to make a comparative analysis between the recovery results of patients who conducted a comprehensive rehabilitation treatment, and a control group of patients who conducted only early physical therapy and occupational therapy in the hospitalization in the Department of Orthopedics and Traumatology in the period of functional recovery – until the end of the first year after surgery. Methods and materials: A total of 213 patients (147 female and 66 male aged 22 to 84) with Hip Joint Arthroplasty due to osteoarthritis or femoral neck bone fracture participated in the study, divided into two groups, according to postoperative behavior. Rehabilitation program of the first observed therapy group includes: kinesitherapy; treatment with performed physical factors (low-frequency impulse magnetic field; interferential currents – quadrupole isoplanar interference; electrostimulation); occupational therapy – daily activities of life. Patients in the second control group have conducted kinesitherapy and occupational therapy only in the early postoperative period in orthopedic clinic. We took the test

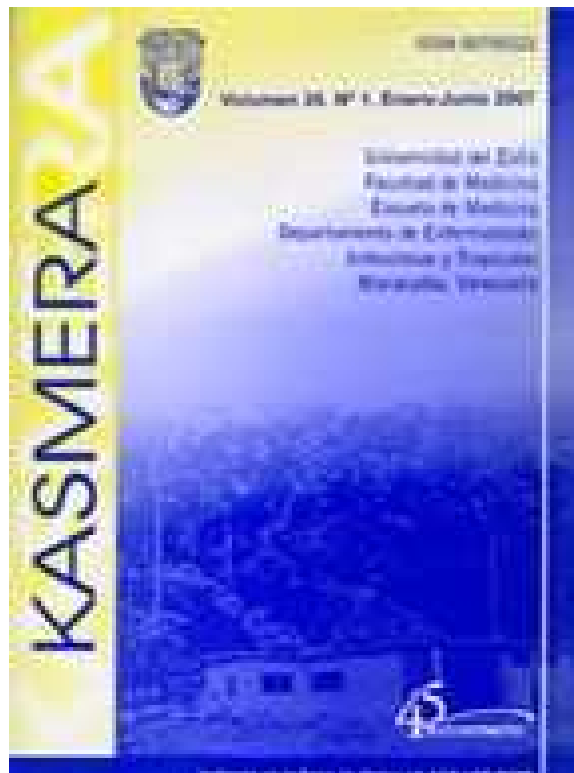
for pain, self-rating test and the complex functional assessment test at the beginning and at the end of the observed period, and stored the results in an individual file for each patient. Results and discussion: Based on the results from the study, we can conclude that applying an annual complex rehabilitation program which includes kinesitherapy, performed physical factors and occupational therapy significantly speeds up and improves the recovery process, and ensures reaching optimal functional results for patients with endoprosthesis.

Key words: total hip arthroplasty, hip joint, rehabilitation

11. rastanova M., Vacheva D., Mircheva A. Rehabilitation of patients with hip joint endoprosthesis (*Late post-surgery period – ambulatory rehabilitation*) Kaskera Journal ().

ISSN: 0075-5222

Science Citation Index Expanded – Impact Factor: 0.071



The interest in hip joint arthroplasty rehabilitation in the literature is explained by the achievements and development of modern physical and rehabilitation medicine, and also from the importance of lower limbs for a person's locomotion and for performing daily activities of life. Rehabilitation represents an indispensable part of their medical treatment and functional recovery. **The aim** of this report is to track and measure the results of the applied rehabilitation process in the late post-surgery period of ambulatory rehabilitation, 4 to 6 months after surgery for patients with hip joint endoprosthesis. **Methods and materials:** A total of 152 patients (107 female and 45 male aged 22 to 84) with hip joint endoprosthesis due to a femoral neck bone

fracture participated in the study. The rehabilitation program consisted of: kinesitherapy (underwater shower massage; underwater gymnastics; isometric and analytical isotonic exercises for lower limb, paravertebral, stomach, upper limb and shoulder muscles; exercises with gym equipment; post isometric relaxation; sports elements – swimming, underwater aerobics, cycling); treatment with performed physical factors (low-frequency impulse magnetic field; interferential currents – quadrupole isoplanar interference; electrostimulation); ergotherapy – daily activities of life. We took the VAS test for pain, the locomotion test and the DAL test at the beginning and at the end of the observed period, and stored the results in an individual file for each patient. **Results and discussion:** Based on the statistical analysis of the data from the study we can conclude that applying a complex rehabilitation program significantly speeds up the recovery of patients with hip joint endoprosthesis, and improves its quality, ensuring optimal functional results and self-sufficiency.

Key words: *total hip arthroplasty, hip joint, rehabilitation*

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. 2016 ().

ISSN:1314-0434

13. rastanova M., Vacheva D., Mircheva A. A comparative analysis between the recovery results of patients with hip joint replacement in the period of early

rehabilitation at home (13-45 days after surgery) *J of IMAB*, 2016; vol. 22, (2): 1111-1113.

ISSN 1312 – 773X

International Index Copernicus (IIC) – 2013 .: 5, 71

Scientifik Journal Impact Factor (SJIF) 2014-15 .: 2,16

JIFACTOR – 2014 .: 5,76

The Citation Linkung Backbone (CROSSREF.ORG)

Directory of Open Access Journals (DOAJ)

International Index Copernicus (IIC)

Global IF – 0,787



Rehabilitation of the patients with Hip Joint Arthroplasty is an indispensable part of the functional recovery. **The purpose** of this report is to track and measure the results of an applied complex rehabilitation program during the early post-surgery period in home setting (13-45 days after surgery) and to make a comparative analysis between the recovery results of patients who conducted a comprehensive rehabilitation treatment, and a control group of patients who conducted only early physical therapy and occupational therapy in the hospitalization in the Department of Orthopedics and Traumatology. **Methods and materials:** 152 patients (107 female and 45 male) aged between 22 and 84 with Hip Joint Arthroplasty due to osteoarthritis or femoral neck fracture participated in the study, divided into two groups, according to postoperative behavior. The rehabilitation program consists of: kinesitherapy (positional therapy, isometric exercises, movement of the artificial hip

joint within the allowed volumes, exercises for upper limbs and the healthy lower limb) and ergotherapy (ergonomic home environment adjusted to performing the daily activities of life). Patients in the second control group have conducted kinesitherapy and occupational therapy only in the early postoperative period in orthopedic clinic. **Results:** Locomotion test and DAL test measurements were taken and the results for each patient were stored in a special patient file. **Conclusion:** Ensuring an ergonomic home environment and independent practice of kinesitherapeutic and ergotherapeutic stimulate the recovery of the patients' self-reliance, significantly improve the psycho-emotional balance and self-respect, and serves as an important basis for the latter stages of rehabilitation.

Key words: endoprosthesis, hip joint, rehabilitation

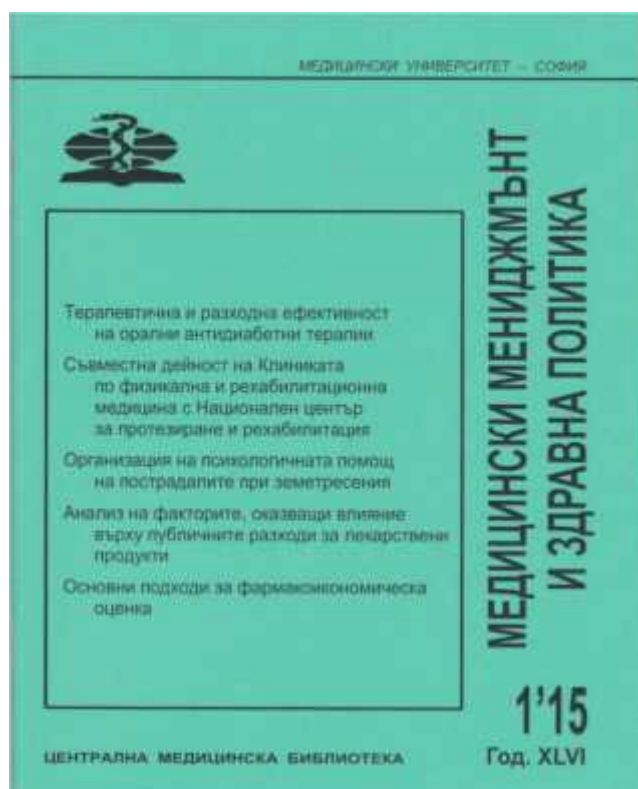
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ISSN 1312 – 0336
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**JOINT ACTIVITY OF THE CLINIC OF PHYSICAL AND
REHABILITATION MEDICINE AT THE UNIVERSITY HOSPITAL –
PLEVEN, WITH THE GORNA BANYA NATIONAL CENTER FOR
PROSTHETICS AND REHABILITATION**

Amputation is a life-saving operation, and the consequences have negative influences on man not only regarding his physical abilities, but in all other life aspects – social, mental and emotional, professions and family life.

The purpose of this announcement is to popularize the joint activity of the Clinic of Physical and Rehabilitation Medicine at The University Hospital – Pleven, with the Gorna Banya National Center for Prosthetics and Rehabilitation, for development of a specialized sector for training of patients with amputated lower limb to walk with prosthesis. In the beginning of 2014, after signed agreement for joint activity, the Centre provided all necessary equipment (auxiliary walker, therapeutic staircase and a trestle, an uneven surface flooring and moving surface flooring), for training of patients with prosthesis. Main obligation of the Clinic is to admit patients with prosthesis from the National Centre, in the Rehabilitation Ward, in compliance with clinic path 244, and to train them walking with prosthesis on various surfaces and to get over obstacles. The admitted patients with amputated lower limb are provided with transportation from their homes to the University Hospital and back, as well as with specialized rehabilitation programme that accelerates and assists the training for using prosthesis. The amputation of limbs almost always leads to severe stress state

and depression that can be surmounted with the help of suitable rehabilitation and ergotherapy. The complete physical and rehabilitation programme shall be started on time, and necessary means and methods for supporting and facilitating the daily activities of people with permanent disabilities shall be applied.

Key words: *amputation, prosthesis, rehabilitation, occupational therapy*

15. Krastanova M., Vacheva D. Complex Functional Assessment of the Hip Joint. *J of IMAB*, 2015; vol. 21, (3): 883-886

ISSN 1312 – 773X

International Index Copernicus (IIC) – 2013 .: 5, 71

Scientifik Journal Impact Factor (SJIF)

JIFACTOR – 2013 .: 0, 5

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Directory of Open Access Journals (DOAJ)

International Index Copernicus (IIC)



In relation to the study reporting the effects of applying phased complex rehabilitation in patients with total hip arthroplasty, it has been concluded that the everyday clinical practice in Bulgaria does not apply complex examination, giving an objective picture about the extent of functional status of patients with trauma and

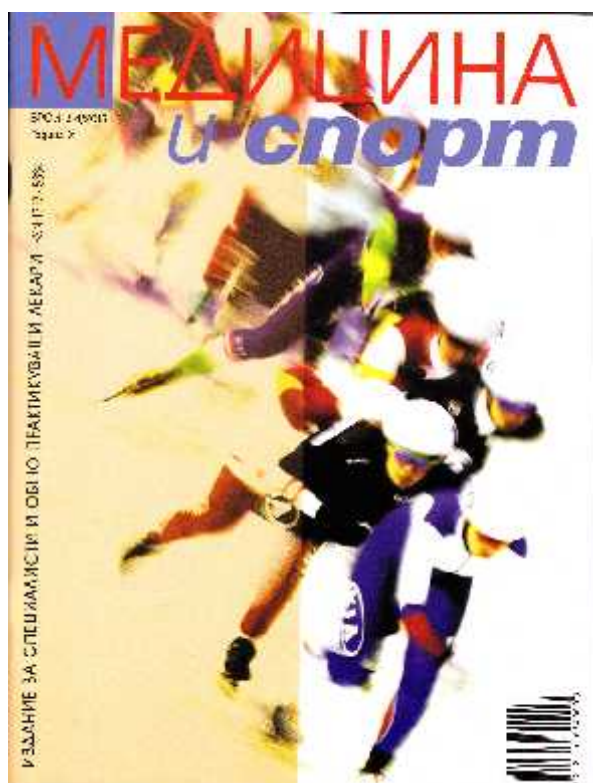
diseases of the hip. **Aim:** The main goal of this report is to present a test which incorporates all known and routine research and in which the total number of points determines the functional status of patients with trauma and diseases of the hip. **Resources and Methods:** Based on the Hip dysfunction and Osteoarthritis Outcome Score (HOOS), the Harris Hip Score modified test, scale D, Aubigne and Postel and Iowa's test for complex functional evaluation of the hip joint, we have developed a test including information about the degree of pain; goniometry and manual muscle testing of the hip; locomotor test – type of gait and adjuvants; test for Daily Activities of Life. The test additionally includes a scale with an equation of results in points and a key for defining the degree of functional status in patients with trauma and diseases of the hip. The test has been developed on the basis of expert assessment by doctors and physiotherapists of the proposed indicators for evaluation and determination of the weighting factors' contribution to the general condition of the patient. The total number of points for each indicator has been determined by an average of data used by the experts. **Conclusion:** The developed and tested method of complex functional assessment of the hip joint enables our colleagues, dealing with trauma and diseases of the hip, to use it in various research and scientific projects, as well as in general medical practice.

Key words: *functional assessment, hip joint, rehabilitation, occupational therapy*

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ISSN1312-5664



In relation to the study reporting the effects of applying phased complex rehabilitation in patients with total hip arthroplasty, it has been concluded that the everyday clinical practice in Bulgaria does not apply complex examination, giving an objective picture about the extent of functional status of patients with hip joint illness or trauma. **Aim:** The main goal of this report is to present a method which incorporates all known and routine research and in which determines the functional status of patients with hip joint illness or trauma. **Resources and Methods:** Based on the Hip dysfunction and Osteoarthritis Outcome Score (HOOS), the Harris Hip Score modified test, scale D'Aubigne and Postel and Iowa's test for complex functional evaluation of the hip joint, we have developed a test including information about the degree of pain; goniometry and manual muscle testing of the hip; locomotor test – type of gait and adjuvants; test for Daily Activities of Life, self-assessment test quality of life with arthroplasty. **Conclusion:** The developed and tested method of complex functional assessment of the hip joint enables our colleagues, dealing with trauma and diseases of the hip, to use it in various research and scientific projects, as well as in general medical practice.

Key words: Total hip arthroplasty, hip joint, rehabilitation

17. „Съвременни технологии и науки”, „Съвременни технологии и науки”, 2015 V/1: 155-8. „Science & Technologies”, Union of Scientist” Stara Zagora”, 2015 V/1: 155-8. **ISSN 1314-4111.**

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		Publisher "Union of Scientists - Stara Zagora"	

The purpose of the study is to optimize the treatment of patients related to work. Object of the research are 70 patients hospitalised in Department of Occupational diseases, University Hospital - Plevna during the period 2013 - 2014. Clinical, paraclinical and survey research methods have been used. Conclusions are given and recommendations have been made to improve the treatment and rehabilitation of persons with upper limb disabilities from strain.

Key words: *strain, upper limb*

18. rastanova M., Vacheva D. Rehabilitation of patients with hip joint endoprosthesis (early rehabilitation at home).

, 2015, Vol 4, No: 2/ 79-82.

ISSN: 2367-5519



Hip joint replacement (endoprosthesis, alloplasty) is one of the most common surgery interventions in orthopedics and traumatology. Rehabilitation is an indispensable part of the functional recovery for patients with endoprosthesis. The aim of this study is to track and measure the results of an applied complex rehabilitation program during the early post-surgery period in home setting (13-45 days after surgery) for patients with hip joint alloplasty. Methods and Materials: 152 patients (107 female and 45 male) aged between 22 and 84 with hip joint endoprosthesis due to osteoarthritis or femoral neck fracture participated in the study. The rehabilitation program consists of: kinesitherapy (positional therapy, isometric exercises for gluteal and hip muscles, movement of the artificial hip joint within the allowed volumes, exercises for the shoulder muscles, upper limbs and the healthy lower limb) and ergotherapy (ergonomic home environment adjusted to prevent from falling and complications, increasing the movements and physical activities of the patients and performing the daily activities of life). Locomotion test and DAL test measurements were taken upon discharge from the Orthopedics and Traumatology clinic and upon admittance for treatment at the rehabilitation department, and the results for each patient were stored in a special patient file. Results and Discussion: Ensuring an ergonomic home environment and independent practice of kinesitherapeutic and ergotherapeutic activities (learned during the early rehabilitation period) stimulate the recovery of the patients' self-reliance, significantly improve the psycho-emotional balance and self-respect, and serves as an important basis for the latter stages of rehabilitation. Early rehabilitation for patients with hip joint endoprosthesis shortens the period of functional recovery overall.

Key words: endoprosthesis, hip joint, rehabilitation

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ISSN-1312-0417



REHABILITATION AFTER HIP JOINT ENDOPROSTHESIS (literature review)

Endoproshtesis of the hip joint is a highly effective treatment procedure for both femoral neck bone fractures and for advanced coxarthrosis, which decreases the pain and minimizes the degree of patients' disability. Joint replacement (alloplasty, endoprosthesis) is currently one of the most wide-spread surgery procedures in orthopedics and traumathology. The necessity of rehabilitation for patients after

surgery has been discussed in medical literature for several decades now, yet the specific components, frequency and progress of the post-surgery rehabilitation program are still not standardized. These programs in Europe are performed according to protocols which are based more on the personal experience of the specialists in the respective rehabilitation departments, than on proven medical studies and experiments on the effects of different kinesitherapy methods on both the hip joint itself and the patients' overall functional recovery.

Key words: *joint replacement, hip joint, physical medicine, rehabilitation*

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The aim of this report is to present a collaborative study of the Physical and Rehabilitation Clinic and the Department of Occupational Diseases in University Hospital Pleven at the University Hospital, Pleven, Bulgaria regarding treatment of patients with occupational diseases caused by excessive strain on the musculoskeletal system and the peripheral nervous system during labour activities. **Methods and materials:** Object of the examination are 50 patients (35 female and 15 male aged 22 to 60), who are hospitalized in the Department of Occupational Diseases in University Hospital Pleven from 2012 to 2014. The professional risk is reduced to systematic pressuring of the musculoskeletal system and the peripheral nervous system during work activities. In the examination there are used clinical, laboratorial, electrophysiological and X-Ray methods of diagnostics and inquiring methods. The treatment consisted of: an medications (NSAIDs, analgesics, corticosteroids, miorelaskanti and vitamins) and physiotherapy treatment (medical massage, medical gymnastics, occupational therapy, magnetic field electrophoresis with lye and ultrasound NSAIDs). **Results and discussion:** Based on the statistical analysis of the data from the study we can conclude that applying a complex rehabilitation program significantly speeds up the recovery of 48 patients with hip joint endprosthesis, and improves its quality, ensuring optimal functional results..

Key words: *occupational diseases, strain, rehabilitation*

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, V, 2012, 2: 7-11.

ISSN 1311- 1817

Год. XIV
2/2012

Брижливостта е гарант за висока квалификация на българските лекари.
Повишаване броят образователни нива на студентите работи по програмите на МОН.
Проучванията изследват за корозионна покривка.
Медицински изследвания изследват за профилактика на заболявания.
Здравеопазването е гарант за поддържане на висока квалификация на лекарите.
Проучванията изследват за корозионна покривка.
Медицински изследвания изследват за профилактика на заболявания.
Здравеопазването е гарант за поддържане на висока квалификация на лекарите.

ОБЩА МЕДИЦИНА

МЕДИЦИНСКИ УНИВЕРСИТЕТ - СОФИЯ  МЕДИЦИНСКИ УНИВЕРСИТЕТ - СОФИЯ



Wilcomn rank test -

FOLLOW-UP OF DAYLY LIFE ACTIVITY OF RECOVERY IN PATIENTS WITH SEQUELAE OF CEREBROVASCULAR DISEASE

We present some contemporaneous theories of pain and therapeutic concepts of analgesia, including drug and physical analgesia, are presented, We mentioned different natural and preformed physical modalities, with effectiveness in clinical neurorehabilitation practice. **GOAL;** Comparative evaluation of drug, physical and combined analgesia on the peripheral radiolar pain. **MATERIAL AND METHODS:** During last years a total a! 93 patients with a vertebrogenic radiculopathy are observed and investigated - in-patients [nl the National Hospital of Physical Theiapy and rehabilitation (Sofia) and of the Rehabilitation Clinic of the University Hospital of Pteven] and out-patients [of some Medical Centers of Sofia and Pleven], Patients are randomized to three treatment groups of 31 each one. The investigation was conducted n accordance with consideration for the protection of patients, as outlined in the Declaration of Helsinki, and was approved by the appropriate institutional review boars and ethics commissions. All patients gave written informed consent before undergoing any examination or study procedure. Groups 1 received only dwg therapy - paraveriebiai infiltrations wSh cortico-steroids, B vitamins and local anesthetic with consecutive perorai nonsteroidal anti-inttammator /drug (NSAID). Patients of group 3 received only physical modalities [complex rehabilitation programme including transcutaneous electroneurostmulation TENS). Exercises, messages, SES lye compresses dislatty). In group 2 we applied drug and physical analgesia techniques. For statistical evaluation we used t-test (ANOVA) and Wilcomn rank test (non paramedical correlation analysis), performed using SPSS package. The treatment difference was considered to be statistically significant if the p value was < 0.05. The comparative **ANALYSIS of RESULTS** shows a significant improvement of the symptoms of the patients, concerning pain relief (visualized by the analysis of results of Visual analogue scale of McGill 0-20), depression and anxiety (evaluated using express scales of Zung for depression and anxiety. The drug analgesia in group 1 is fast, but short. The efficacy in group 3 is slow, but stable, and durable. We observed best results in group 2. We expose our own conception of pathogenetical mechanisms of physical analgesia. **DISCUSSION:** The dnjg therapy is efficient but with shoit duration. The physical analgesia initiates its effect slowly, but their results are stable. Best efficacy was observed in case of combination of medication with physical modalities - in the beginning due to non-steroidat anti-inilainmatory drug, toward fte moment ot effective <inputa of physical modalities. **CONCLUSION:** We could recommend tha complex program for treatment oftheparavertebral pain.

Key words: *physical modalities, steroids, non-steroidat anti-inflammatory drug, neuropathic pain, analgesia*

ISSN 1310 – 0505

Scientific Journal Rankings (SJR) – 2012 .: **0, 100**

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2010 – 2012

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Wilcoxon rank test –

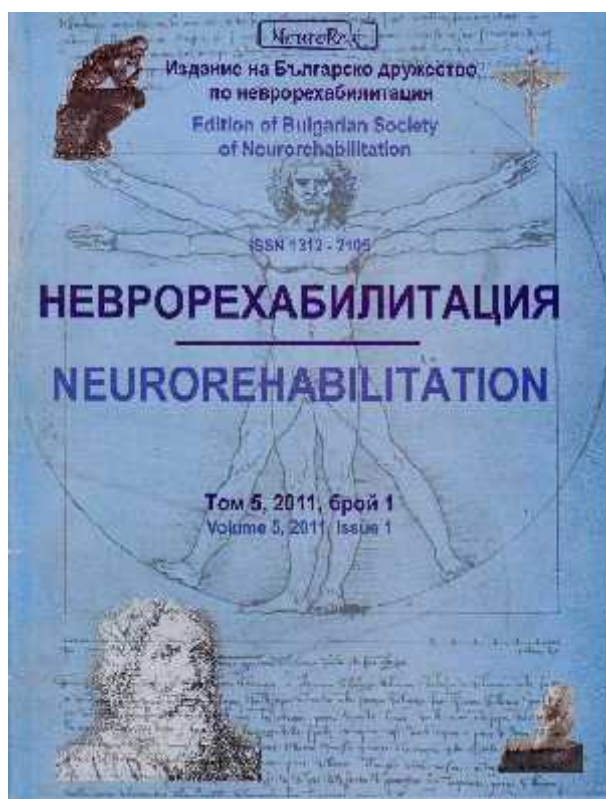
REHABILITATION AND OCCUPATIONAL THERAPY WITH POLYARTHROSIS PATIENTS

ver the last years the number of patients with joints affected by osteoarthritis has been increasing. The pathology is moving into a younger age and more and more patients are becoming handicapped and physically unable to work because of it during the active years of their lives. Aim of this report: to trace the effect of the applied physiotherapeutical and occupational therapy program with patients whose musculoskeletal system is affected in multiple ways. **Sources and methods:** for the period between 2010 and 2012, 247 patients with polyarthrosis underwent treatment in the physical and rehabilitation clinic. In order to track the progress, measurements (the angle and the centimeter movement of the affected joints and the lumbosacral part of the spine) were taken at the beginning and at the end of the treatment, along with a pain measurement test and a daily activities test. The physiotherapeutical program includes: magnetotherapy, treatment with medium frequency electrical currents, ultrasound therapy, therapeutic massage and kinesitherapy. **Results and analysis:** we applied the Wilcoxon rank test (a statistics method for analysis and spreading of non-parametric data) to the data from the survey. **Conclusions:** Undergoing physiotherapeutical treatment for patients whose musculoskeletal system is affected in multiple ways supports and enhances the medicament treatment. This complex approach results in significant improvement of the daily activities and the quality of life of the patients.

Key words: *osteoarthritis, rheumathology, physical therapy, rehabilitation, occupational*

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COMPLEX PHYSICAL-THERAPEUTIC AND REHABILITATION PROGRAM FOR FUNCTIONAL RECOVERY AND IMPROVEMENT OF THE QUALITY OF LIFE OF PATIENTS WITH SACRO-ILIAC BLOKKAGE, LOW BACK PAIN AND LUMBO-SACRAL RADICULOPATHY

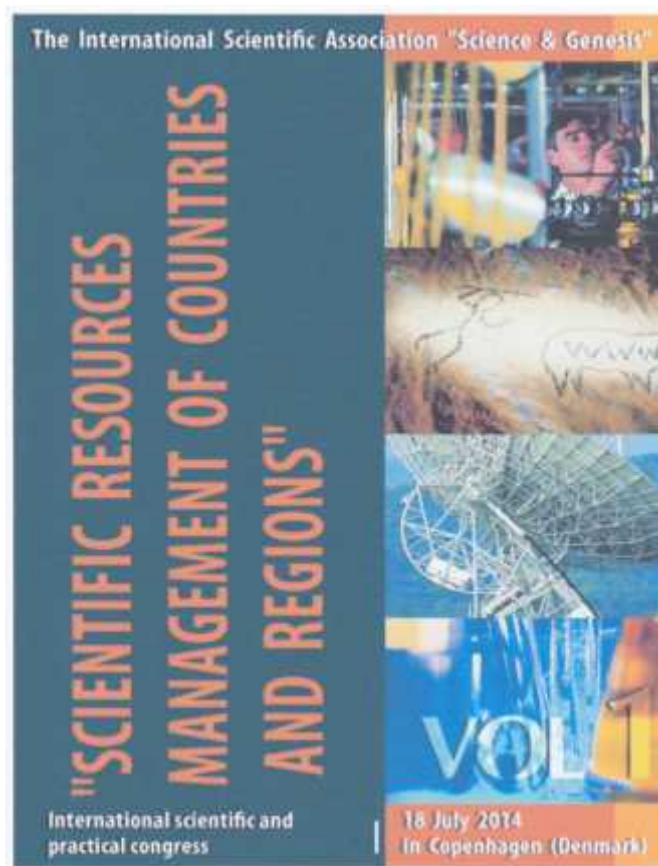
Goal: Evaluation of the effectiveness of complex physical therapy and rehabilitation in patients with sacro-iliac blockage, low back pain and lumbo-sacral radiculopathy. **Material and methods:** We observed 58 patients (two groups of 29 patients, treated 10 days like in-patients and successive 10 days like out-patients) in the Clinic of Physical and Rehabilitation Medicine of the University Hospital with Medical Center – Pleven. The Physical and Rehabilitation complex in both groups includes physiotherapeutic techniques, oriented to the cervical and the lumbar part of the spine and the transition regions (analytic exercises for paravertebral muscles, exercises for muscle belt, manual therapeutic techniques for the spine with accent on the transition regions and the respective sacro-ilkiac joint, manual massage, post-isometric relaxation and stretching techniques, education of the patients in back

schools principles); impulse magnetic field and low frequency electrical currents on the respective inferior limb. In the second group we applied too phonophoresis with Ne-ox gel (non-steroidal anti-inflammatory drug, standard method of ultrasound application). For statistical evaluation we used t-test (ANOVA) and Wilcoxon rank test (non parametrical correlation analysis). **Results:** Comparative analysis of results shows positive effects on the vertebral static, muscular disbalance, low back pain and the positive sensory signs of the radicular syndrome; more significant in group II. **Conclusion:** The Physical and Rehabilitation complex accelerates the functional recovery and ameliorates the quality of life of patients.

Key words: *back pain, sacro-iliac blockage, mobilization, auto-mobilization, back school*

25. **Krastanova M., Vacheva D.** Complex physiotherapeutic and rehabilitation program for patients after total hip arthroplasty. : *Geldof S.* red. International Scientific and Practical Congress „Management of the scientific potential of contries and regions”; 2014 July 18; Copenhagen: Collection Paper. Denmarc: „Science & Genesis”, 2014, 185-191.

IS N 978-966-53268-09



Joint hip arthroplasty is one of the most widespread surgery procedures in orthopedics and traumatology, with its origins dating back to the end of the 19th century. Physical therapy and rehabilitation of patients with replacement of the hip joint is an integral and irreplaceable part of their treatment and recovery. Purpose of the report is creating, performing and measuring the results of a complex physiotherapy and rehabilitation program for patients with arthroplasty of the joint hip. The complex physiotherapeutic and rehabilitation program consists of 5 main parts: Early post-surgery period (patients still in an orthopedics ward); Early rehabilitation at home; Late post-surgery period (hospital rehabilitation); Late post-surgery period (treatment in an outpatients' department); Functional recovery period and life with an artificial joint. All patients participating in the study had initial measurements and tests taken according to a specifically designed individual file. After finishing the last rehabilitation course, the same measurements are taken again. Patients which have passed all the steps of the post-surgery physiotherapeutic and rehabilitation program until the end of the first year after arthroplasty achieve sufficient muscle stamina, a stable and proper walking movement, independence in day-to-day activities, optimal movement volume in the artificial hip, and last but not least, good self-esteem.

Key words: *hip joint, arthroplasty, hip joint replacement, rehabilitation, physiotherapy*

26. Vacheva D., Krastanova M. Rehabilitation of the Movement Capacity of the Shoulder Joint after Mamectomy.

””; 2013
19; ” (): . : , 2013, 22-31.
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Over the past years we have seen a significant increase in the number of patients undergoing surgery due to breast cancer (mamectomy). The lowest age of the patients of working age is also decreasing. **The Goal** of this report is to show the effects of the applied kinesitherapy program, including daily activities in the early post traumatic period with the aim of preventing contracture in the shoulder joint and lymphoedema. **Materials and methods:** The kinesitherapy method with instructions for day-to-day activities is developed and implemented in Physical and Rehabilitation Medical Clinic since more than 30-th years and begins on the second day after surgery, on the patient's bed in the hospital room. **Results:** Undergoing early rehabilitation restores the power and volume of movement of the upper limb which is on the affected side of patients, and it also soothes the pain, prevents the occurrence of lymphoedema and stimulates the ability of self-service. **Conclusions:** Early rehabilitation of patients who underwent mamectomy helps their faster recovery and return to their normal daily activities, in both private and professional aspect. The efforts put in early rehabilitations contribute to the improvement of their psychological and emotional state. **Summary:** With good cooperation from the patient's side and the performing of the suggested exercise program at home they regain full capacity of their shoulder joint movement on the side which had surgery. **Key words:** mamectomy, rehabilitation, occupational therapy

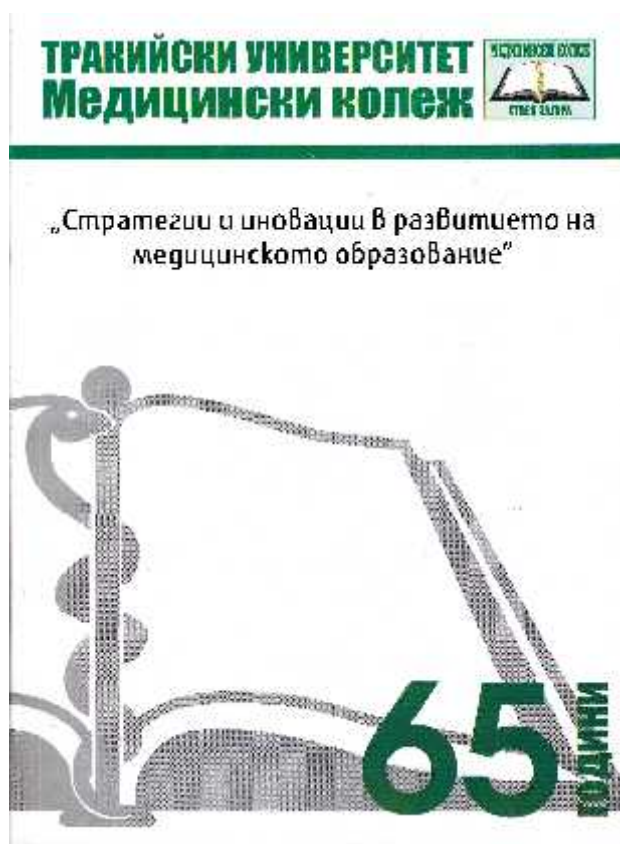
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ISBN 978-954-338-044-2



With the development of modern thechnology, the arthroplasty method is becoming more and more popular and widely used in orthopedic surgery.

The aim of the message (report) is to track, measure and analyze the rehabilitation of daily activities (putting on clothes and shoes) with patients who have an endoproshtesis humeroscapularis joint.

The patients participated in a **complex physiorehabilitation programme**, adjusted to their individual state and generally includes: *cryotherapy, physiotherapy, occupational therapy, (ergoterapiq pak se prevejda taka)* and *electrotherapy*.

In order to achieve good results from the rehabilitation of patients with an endoproshtesis humeroscapularis joint and to improve their self-service abilities, early rehabilitation is crucial.

Key words: *articulatio humeroscapularis, aloplastica, rehabilitation, self-services*

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ISBN: 978-954-756-179-3 , 2015,1-180.

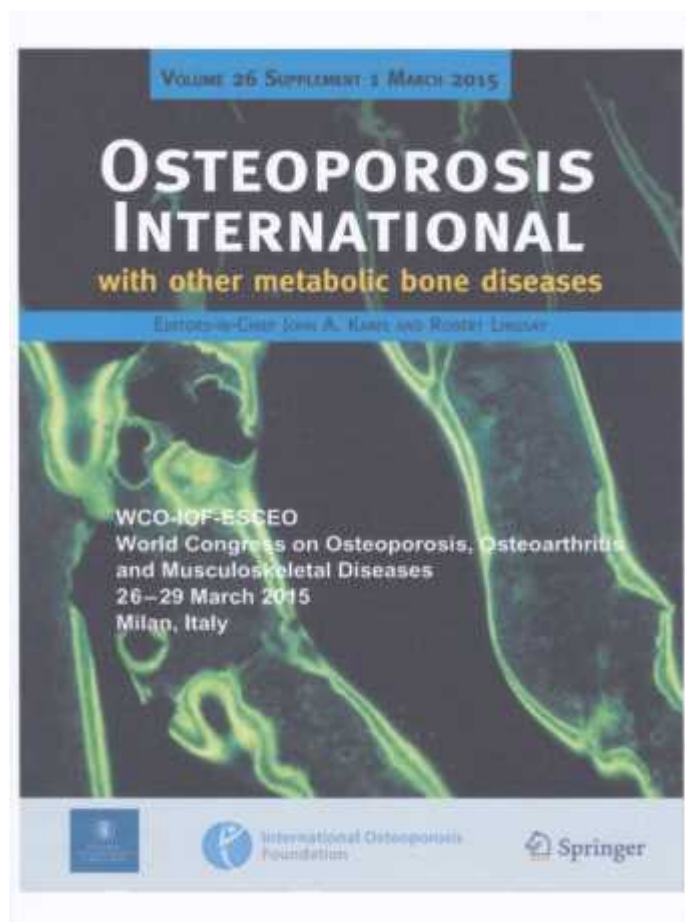


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29. D. Vacheva, **M. Krastanova**. Complex Treatment for Patients with Total Hip Arthroplasty after a Hip Joint Fracture as a Result of a General Osteoporosis. *Osteoporosis International*. Vol. 26, Supplement 1, 2015, P 115, p. 76.

ISSN 0937 – 941X

Tomson Reuters (ISI) 2014 .: 4, 169



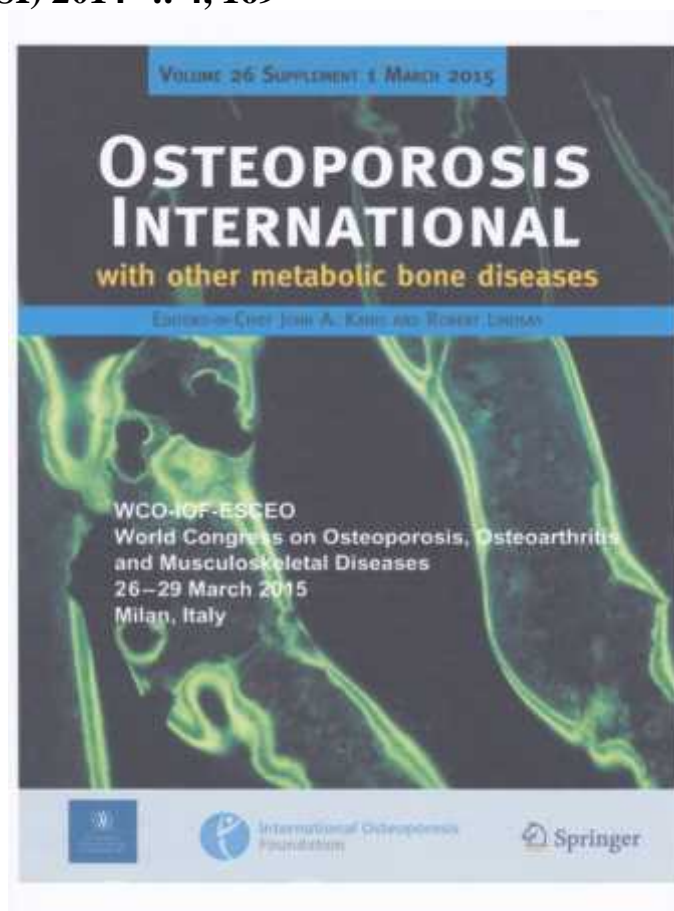
We present a collaborative study of the Rheumatology Clinic and the Physical and Rehabilitation Clinic at the University Hospital, Pleven, Bulgaria regarding treatment of patients with hip joint endoprosthesis after a hip joint fracture as a result of general osteoporosis. 41 patients who had endoprosthesis after a hip joint fracture and were diagnosed with a general osteoporosis with DXA participated in the study. The complex therapy includes drug treatment with Alendronate, combined with a physiotherapeutic program: kinesitherapy, ergotherapy, electrotherapy with Magnetic Field and Interferential Current and electro stimulation of the abductor muscles of the joint hip. A positive effect from the complex drug and physiotherapeutic treatment has been achieved in all the observed indicators over the course of one year, regardless of the patients' age and sex.

Key words: *osteoporosis, total hip arthroplasty, hip joint fracture, physiotherapy, rehabilitation*

30. M. Krastanova, D. Vacheva. Complex Therapy for Algodystrophy. *Osteoporosis International*. Vol. 26, Supplement 1, 2015, P 114, p. 75.

ISSN 0937 – 941X

Tomson Roiters (ISI) 2014 .: 4, 169



In this report we present a collaborative study between the Physical and Rehabilitation Clinic and the Rheumatology Clinic at the University Hospital in Pleven, Bulgaria, regarding treatment of patients with algodystrophy syndrome after

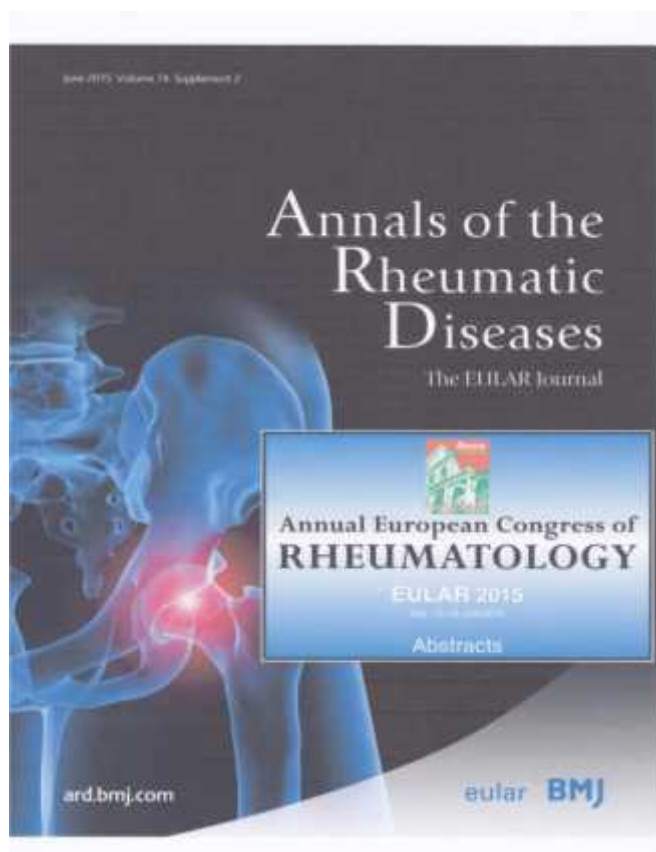
a distal radius fracture. 48 patients with algodystrophy syndrome after a distal radius fracture participated in the study. The complex therapy includes a drug treatment with Calcitonin and a physiotherapeutic program: underwater gymnastics, kinesitherapy, and electrotherapy with Magnetic Field and Interferential Current. A positive effect from the complex drug and physiotherapeutic treatment has been achieved in all the observed indicators, regardless of the patients' age and sex.

Key words: *algodystrophy syndrome, distal radius fracture, physiotherapy, rehabilitation*

31. Panchovska M., Nikolov N., **Krastanova M.**, Vacheva D. Complex Treatment for Hip Joint osteoarthritis Patients. *Annals of Rheumatic Diseases*. The Abstract Book. June 2015, Volume 74, Supplement 2, P AB0869, p. 1191.

ISSN 0003 – 4967

Tomson Reuters (ISI) 2014 .: 10, 377



ver the last years the number of patients with joints affected by osteoarthritis has been increasing. The pathology is moving into a younger age and more and more patients are becoming handicapped and physically unable to work because of it during the active years of their lives. Aim of this report: to trace the effect of the applied physiorehabilitational and occupational therapy program with patients whose musculoskeletal system is affected in multiple ways. **Sources and methods:** for the period between 2010 and 2012, 247 patients with polyarthrosis underwent treatment in the physical and rehabilitation clinic. In order to track the progress, measurements

(the angle and the centimeter movement of the affected joints and the lumbosacral part of the spine) were taken at the beginning and at the end of the treatment, along with a pain measurement test and a daily activities test. The physio-rehabilitational program includes: magnetotherapy, treatment with medium frequency electrical currents, ultrasound therapy, therapeutic massage and kinesitherapy. **Results and analysis:** we applied the Wilcoxon rank test (a statistics method for analysis and spreading of non-parametric data) to the data from the survey. **Conclusions:** Undergoing physio-rehabilitational treatment for patients whose musculoskeletal system is affected in multiple ways supports and enhances the medicament treatment. This complex approach results in significant improvement of the daily activities and the quality of life of the patients.

Key words: *osteoarthritis, rheumatology, physical therapy, rehabilitation, occupational therapy*

32. Nikolov N., Panchovska M., rastanova M. omplex therapeutic approach for patients with rheumatoid arthritis. *Osteoporosis International*. Vol. 27, Supplement 1, 2016, P 339.

ISSN 0937 – 941X

Tomson Roiters (ISI) 2014 .: 4, 169



The aim of this study is to measure the effect of conducting a complex drug treatment combined with a physio-rehabilitation program in patients with rheumatoid arthritis. **Methods and Materials:** Between 2012 and 2015, 57 patients

with rheumatoid arthritis were hospitalized and treated at the Rheumatology Ward at UMBAL “Dr. Georgi Stranski” – Pleven. 23 of them were male and 34 female, aged between 23 and 69, with moderate activity (SUE < 25 mm, fibrinogen and CRP at relevant values, AST and RF (-). In addition to the drug therapy with analgetics, NSPV and chondoprotectors, the patients also undergo a complex physical and rehabilitation program consisting of: electrotherapy, therapeutic massages, kryotherapy, active methods of kinesitherapy and occupational therapy. Functional tests and measurements were made for the purpose of the study: VAS for the pain, a daily activities life test (DAL) and complex functional assessment test (CFA).

Results and analysis: An individual patient file is created for every patient where his results from the tests and measurements are stored in order to track the patient's condition over the course of treatment (which consists of treatment in the Rheumatology ward, treatment in the Medical Rehabilitation ward and ambulatory physio-rehabilitation courses). The Wilcoxon rank test (a statistical method for analysis and spreading of non-parametric data) was used to measure the complex functional assessment test results. The Wilcoxon curve shifts to the right, which indicates an improvement of the patients' self-sufficiency and of their quality of life. When applying the VAS test for pain and daily activities life test, the average values at the beginning and at the end of the observed period are measured and compared. The results show a pain decrease by around 35%, and an increase in the joint function. The ANOVA statistical analysis method was applied to the results of the both tests (VAS and DAL). **Results and discussion:** The collaboration between rheumatologists and physiotherapists for treatment of patients with RA widens the range of daily activities that the patients can perform without experiencing pain, slows down the progression of the deterioration process and makes the daily life of patients more complete and self-sufficient. For patients who are still at working age, the duration of their temporary inability to work is decreased, and they can resume working activities sooner, or they can acquire new professional skills with a lower degree of physical stress which suits their condition and physical abilities. The advent of permanent disability for patients is delayed. **Conclusion:** The complex physio-rehabilitational and rheumatological treatment for patients with RA is effective and leads to a significant improvement in the quality of life of patients.

Key words: *rheumatoid arthritis, rheumatology, physical therapy, rehabilitation, occupational therapy*

33. Nikolov N., Panchovska M., **rastanova M.** Osteoarthritis in general practice: from university education to personalized medicine. *Osteoporosis International*. Vol. 27, Supplement 1, 2016, P 633.

ISSN 0937 – 941X

Tomson Roiters (ISI) 2014 .: 4, 169

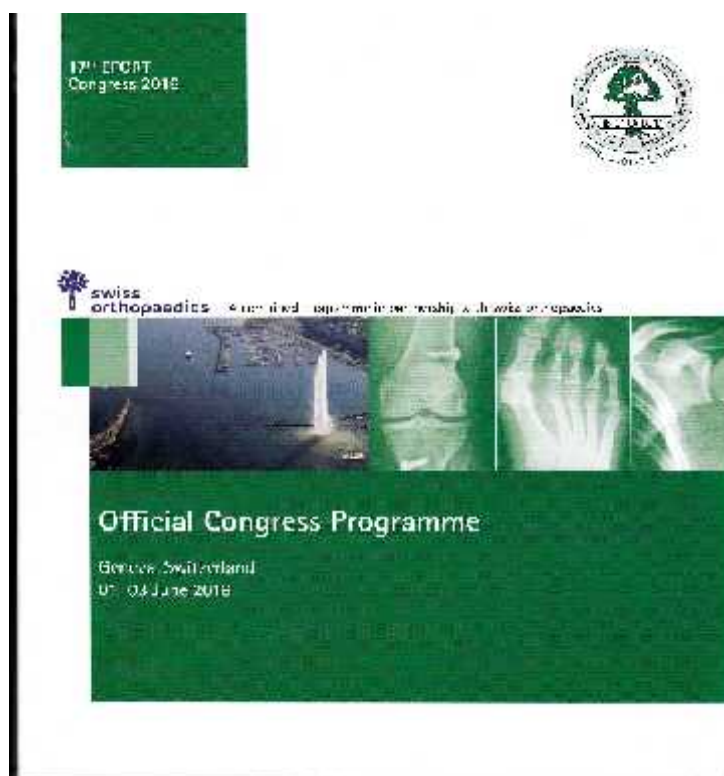


Osteoarthritis (OA) is the most common rheumatic disease which affects about 20 % of the world population. Patients with OA occupy a significant part of the visits in the office of the general practitioner. Both pharmacological and nonpharmacological treatment of OA is used and regulated by guidelines according to the localization of OA. In recent years personalized medicine convincingly enters the medical practice, displaying individual approach to each patient. Specific biomarkers are investigated with respect to diagnosis, treatment and prognosis of the diseases, incl. OA University education in rheumatology should be continued and developed also after graduation, according to the latest achievements of science.

Aim: To evaluate the training of Bulgarian general practitioners (GPs) in the field of osteoarthritis - the most common rheumatic disease in general practice. **Material and methods:** Anonymous questionnaire based survey was conduct, involving 35 GPs with a total number of patients 39,349 over age of 18 years. From OA suffer 7837 patients. The length of service of GPs vary from 8.1 to 35.2 years. Seven GPs have in addition to their general practice diploma an acknowledged specialty in internal diseases and one of them in neurology. Alternative and descriptive analysis was used for elaborating statistics. **Results and discussion:** Eleven from 35 GPs (31.42 %) declare willingness to upgrade their training in rheumatology. Regarding patients with OA-23 of the 35 GPs(65.71 %) consulted their patients with orthopedist in the frame of the first three visits. Thirty one (31) of 35 GPs (88.57 %) defined the management of pain syndrome as a main goal of treatment. Long-term treatment with chondroprotectors declare as necessary 27 of 35 GPs (77.14 %). Consultations with a rheumatologist in the frame of the first three visits scheduled 8 of 35 GPsOsteoporosis Int.

Key words: *rheumatoid arthritis, rheumatology, physical therapy, rehabilitation, occupational therapy*

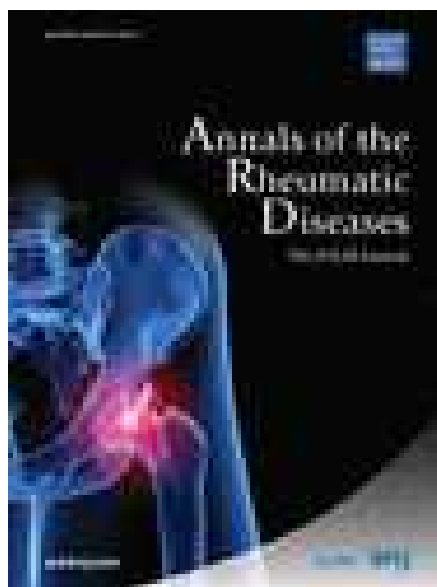
34. Krastanova M, Valeshkov D.A, Vacheva D. E Results with Application of a comprehensive program for rehabilitation of patients with Hip Joint Replacement within the first two weeks after surgery. Poster presentation at the 17thEFORT Congress to be held from 1 – 3 June 2016, P 616.



Joint replacement (alloplasty, endoprosthesis) is currently one of the most successful surgery procedures in orthopedics and traumatology. The **aim** of this study is to track and measure the results of the administered protocol from the applied rehabilitation during the early post-surgery period (the hospitalization time in an orthopedic clinic from the 2nd to the 12th day after surgery) for patients with hip joint endoprosthesis. **Methods and materials:** A total of 203 patients (135 female and 68 male aged 22 to 84) with hip joint endoprosthesis due to femoral neck bone fracture participated in the study. The rehabilitation program consisted of: kinesitherapy (active exercise; verticalization in several stages; training in walking with walking aids) and occupational therapy – daily life activities. Results from the locomotion test (number of steps per 10 meters and movement speed) and from the Daily Activities of life test were taken at the beginning and at the end of the period. The results are stored in an individual file for each patient. **Results and discussion:** The statistical analysis of the results for number of steps per 10 meters and for movement speed show significant improvement of the overall functional condition of patients at the end of the hospitalization period. At the end of the early rehabilitation period, the Wilcoxon curve for the DAL test shifts significantly to the right, which signifies a better self-sufficiency for patients, as well as an improvement in their psychological and emotional state and well-being.

Key words: Total hip arthroplasty, hip joint, rehabilitation

35. Nikolov N., Krastanova M., Panchovska M. Complex treatment of patients with gouty arthritis. *Annals of Rheumatic Diseases. The Abstract Book*. Juny 2016, Volume 75, Issue 7
ISSN 0003 – 4967
Tomson Roiters (ISI) 2014 .: 10, 4



Podagra (gout) is a type of arthritis caused by the formation of uric acid crystals within or around the joints. It is the most common type of inflammation arthritis for people over 40. Over the past several decades, the number of patients with multiple joints affected by gouty arthritis (arthritis podagrosa) has been increasing. The pathology of the illness is moving towards a younger age, and there are more and more patients who are becoming handicapped and incapable of work because of it. For some of the patients, the leading symptoms are pain and stiffness in the joints, while others develop heavy joint deformations and permanent disabilities. Applying a complex rehabilitation approach with rheumatologic aid and a physio-rehabilitation program significantly improves the condition of the patients with gouty arthritis, the strength of their symptoms diminishes, and becoming handicapped is avoided or significantly delayed. **The aim** of this study is to measure the effect of conducting a complex drug treatment combined with a physio-rehabilitation program in patients with gouty arthritis in an acute or chronic stage that heavily affects the musculoskeletal system. **Methods and Materials:** Between 2013 and 2015, 39 patients with gouty arthritis were hospitalized and treated at the Rheumatology Ward at UMBAL “Dr. Georgi Stranski” – Pleven. 26 of them were male and 13 female, aged between 43 and 62 years old, in subacute or chronic stage (SUE < 25 mm, fibrinogen and CRP at relevant values, AST and RF (-). In addition to the drug therapy with analgesics, NSAIDs and chondoprotectors, uricoinhibitors and uricoinhibitors during the non-paroxysmal period, the patients also undergo a complex physical and rehabilitation program consisting of: electrotherapy (magnetic

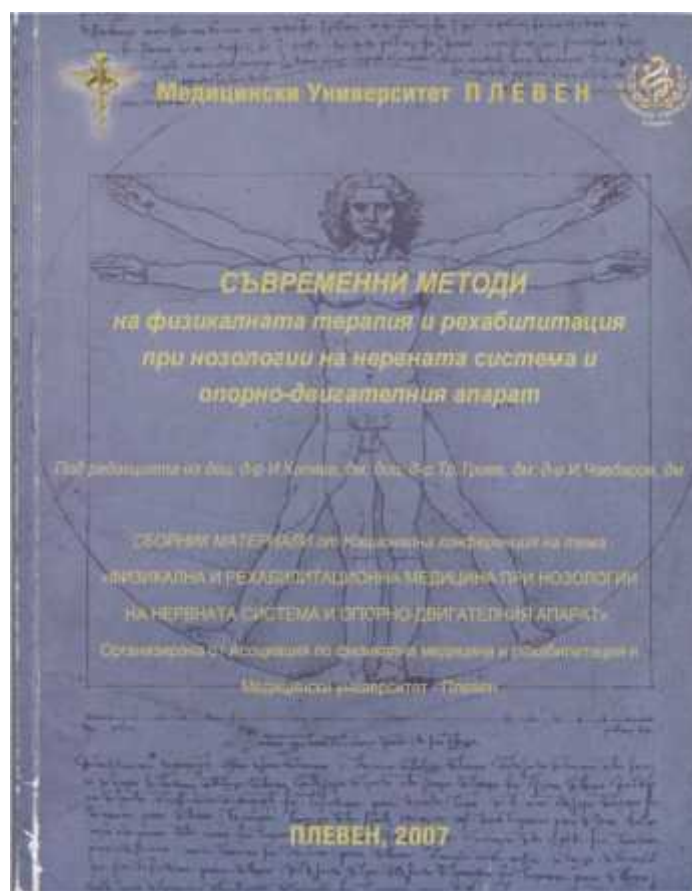
field, mid-frequency currents and ultrasound therapy with NSAIDs, therapeutic massages, cryotherapy, active methods of kinesiotherapy and occupational therapy.

Functional tests and measurements - VAS for the pain, a daily activities life test (DAL) and complex functional assessment test (CFA) - were made for the purpose of the study at the beginning and at the end of the observed period. **Results and analysis:** An individual file was created for every patient where the results from the tests and measurements are stored in order to track the patient's condition over the course of treatment. The treatment consists of 3 stages: a period in the Rheumatology ward, treatment in the Medical Rehabilitation ward and ambulatory physio-rehabilitation courses. The Wilcoxon rank test (a statistical method for analysis and spreading of non-parametric data) was applied to interpret the complex functional assessment test results. The Wilcoxon curve shifts to the right, which indicates an improvement of the patients' self-sufficiency and their quality of life. When applying the VAS test for pain and daily activities life test, the average values at the beginning and at the end of the observed period were measured and compared. The results show a pain decrease by around 35%, and an improvement in the functional capabilities of the joints. The ANOVA statistical analysis method was applied to the results of the VAS and DAL tests. Conducting physiotherapeutic treatment for patients with gouty arthritis in an acute or chronic stage complements the drug treatment and leads to faster relief of the symptoms during an acute stage, decreases the timeframe of the temporary inability to work, prevents any permanent damage to the affected joints and prevents the occurrence of permanent disabilities. **Conclusion:** For patients with gouty arthritis in an acute or chronic stage that heavily affects the musculoskeletal system, the complex physio-rehabilitational and rheumatological treatment is effective and leads to a significant improvement in the quality of life of the patients.

Key words: *podagra, rheumatology, physical therapy, rehabilitation, occupational therapy*

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IMPACT OF FUNCTIONAL ERGOTHERAPY IN THE COMPLEX NEUROREHABILITATION ALGORITHM IN MULTIPLE SCLEROSIS

On the base of a synthetic review on contemporaneous aspects of neurorehabilitation in multiple sclerosis we expone our **coal** to evaluate the impact of functional ergotherapy for the amelioration of autonomy of patient in activities of daily living and to increase his quality of life. **Material and methods:** In the observation were included 198 patients with multiple sclerosis (cerebro-spinal form in remission) in the experimental group conducting the offered by us physiorehabilitation program and 49 patients in the control group rehabilitated to a standard method. Patients were evaluated before to and after the rehabilitation and one month later. Statistical evaluation of results was realized thought the statistical package SPSS. **Results of analysis:** During prospective observation in groups with functional ergotherapy we noted a significant effect on spasticity, balance, stability of gait and test of walking, depressivity. In **conclusion** we underline the favorable effect of the inclusion of functional ergotherapy in the complex neurorehabilitation algorithm on patients quality of life.

Key words: *multiple sclerosis, quality of life, functional ergotherapy, activities of daily living, neurorehabilitation*

Conference “Public Health Policy and Practice”, 10th anniversary of the Faculty of Public Health, Medical University – Pleven, 1-3 Oktober 2015

5. Krastanova M. Complex functional assessment of the Hip Joint. Jubilee Scientific Conference “Public Health Policy and Practice”, 10th anniversary of the Faculty of Public Health, Medical University – Pleven, 1-3 Oktober 2015, 71-72.



Outcome Score (HOOS),
D'Aubigne and Postel
Iowa
Hip dysfunction and Osteoarthritis
Harris Hip Score,
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COMPLEX FUNCTIONAL ASSESSMENT OF THE HIP JOINT

In relation to the study reporting the effects of applying phased complex rehabilitation in patients with total hip arthroplasty, it has been concluded that the everyday clinical practice in Bulgaria does not apply complex examination, giving an objective picture about the extent of functional status of patients with trauma and diseases of the hip. **Aim:** The main goal of this report is to present a test which incorporates all known and routine research and in which the total number of points determines the functional status of patients with trauma and diseases of the hip. **Resources and Methods:** Based on the Hip dysfunction and Osteoarthritis Outcome Score (HOOS), the Harris Hip Score modified test, scale D, Aubigne and Postel and Iowa's test for complex functional evaluation of the hip joint, we have developed a test including information about the degree of pain; goniometry and manual muscle testing of the hip; locomotor test – type of gait and adjuvants; test for Daily Activities of Life. The test additionally includes a scale with an equation of results in points and a key for defining the degree of functional status in patients with trauma and diseases of the hip. The test has been developed on the basis of expert assessment by doctors and physiotherapists of the proposed indicators for evaluation and determination of the weighting factors' contribution to the general condition of the patient. The total number of points for each indicator has been determined by an average of data used by the experts. **Conclusion:** The developed and tested method of complex functional assessment of the hip joint enables our colleagues, dealing with trauma and diseases of the hip, to use it in various research and scientific projects, as well as in general medical practice.

Key words: *functional assessment, hip joint, rehabilitation, occupational therapy*

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Rehabilitation of patients with hip joint arthroplasty (late post-surgery period – hospital rehabilitation)

Hip joint replacement (endoprosthesis, aloplasty) has become one of the most frequent surgery interventions of the 20th century. **The aim** of this study is to conduct rehabilitation therapy in the late post-surgery period of hospital rehabilitation (45 days after surgery), to track their progress and measure the results. **Methods and materials:** 152 patients with hip joint endoprosthesis participated in the study. All of them underwent surgery and rehabilitation at the Clinical rehabilitation department of the Physical and Rehabilitation Medicine Clinic at UMBAL “Doctor G. Stranski”, Pleven. Kinezitherapy includes therapeutic massage, isometric exercises for gluteal and hip muscles, isotonic exercises for the hip the knee joint, breathing exercises, analytical gymnastics, exercises for balance and posture stability; gait control, exercises with gym equipment; occupational includes all DAL activities that were practiced at home; treatment with performed physical factors includes applying magnetic field, interferenz current, electrostimulation of the m. quadriceps femoris

and the gluteal muscles. **Results and measurements** from the VAS test for pain, a test for muscle strength and a test for the movement volume of the hip joint were taken at the beginning and at the end of the rehabilitation process and stored in an individual file for each patient. **Conclusion:** Based on the results of the study, we can conclude that conducting a complex rehabilitation program consisting of kinesitherapy, performed physical factors and occupational therapy, leads to a significantly faster recovery and ensures that patients reach optimal functional results. **Key words:** Total hip arthroplasty, hip joint, rehabilitation

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