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NEUROSONOLOGY НЕВРОСОНОЛОГИЯ
AND CEREBRAL И МОЗЪЧНА
HEMODYNAMICS ХЕМОДИНАМИКА

Official Journal of the Bulgarian Society
of Neurosonology and Cerebral
Hemodynamics

Издание на Българската асоциация
по невросонология и мозъчна
хемодинамика

**SECOND
NATIONAL
CONGRESS**
with International
Participation



**ВТОРИ
НАЦИОНАЛЕН
КОНГРЕС**
с международно
участие

September 30 - October 2, 2016
Sofia, Bulgaria

**Programme
and Abstracts**

**Програма
и резюмета**

**NEUROSONOLOGY
AND CEREBRAL
HEMODYNAMICS**

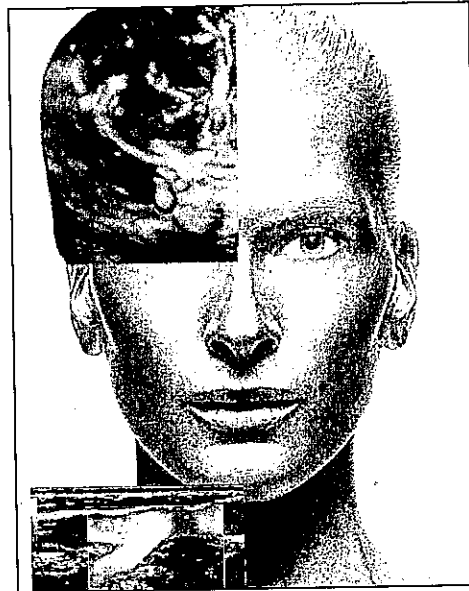
**НЕВРОСОНОЛОГИЯ
И МОЗЪЧНА
ХЕМОДИНАМИКА**

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**Volume 12, Number 2
2016**

**Том 12, Брой 2
2016**

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NEUROSONOLOGY AND CEREBRAL HEMODYNAMICS

Official Journal of the Bulgarian Society
of Neurosonology
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Volume 12, 2016, Number 2

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НЕВРОСОНОЛОГИЯ И МОЗЪЧНА ХЕМОДИНАМИКА

Издание на Българската асоциация
по невросонология
и мозъчна хемодинамика

Том 12, 2016, Брой 2

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Проф. Никола Каракънев	
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BULGARIAN SOCIETY
OF NEUROSONOLOGY
AND CEREBRAL
HEMODYNAMICS

SECOND NATIONAL CONGRESS **ВТОРИ НАЦИОНАЛЕН КОНГРЕС**
with International Participation **с международно участие**

September 30 – October 2, 2016
Bulgarian Red Cross
Sofia, Bulgaria

30 септември – 2 октомври 2016 г.
Български червен кръст
София, България

Under the Aegis

Neurosonology Research Group
of the World Federation of Neurology
European Society of Neurosonology
and Cerebral Hemodynamics
Medical Faculty of
Sofia University "St. Kliment Ohridski"
Military Medical Academy
Bulgarian Academy of Sciences and Arts
Bulgarian Society of Neurology
Bulgarian Medical Association
Bulgarian Red Cross

Под егидата

Изследователска група по невросонология
към Световната федерация по неврология
Европейско дружество по невросонология
и мозъчна хемодинамика
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Satellite Symposium

INNOVATIONS IN MEDICINE

Student Workshop in Neurology
Medical Faculty of Sofia University "St. Kliment Ohridski"
Bulgarian Academy of Sciences and Arts
Bulgarian Society of Neurosonology and Cerebral Hemodynamics



SOFIA UNIVERSITY
"ST. KLIMENT OHRIDSKI"



БАНМХ
BULGARIAN SOCIETY
OF NEUROSONOLOGY
AND CEREBRAL
HEMODYNAMICS

Programme

Програма

FRIDAY, 30 September 2016

**SECOND NATIONAL CONGRESS
of the Bulgarian Society
of Neurosonology and
Cerebral Hemodynamics
with International Participation**
(Bulgarian Red Cross)

**ВТОРИ НАЦИОНАЛЕН КОНГРЕС
на Българската асоциация
по невросонология и мозъчна
хемодинамика
с международно участие**
(Български червен кръст)

Registration	14.00 – 15.00	Регистриране
General Assembly of BSNCH (for members)	15.00 – 17.00	Общо събрание на БАНМХ (за членове)
Satellite Symposium of UCB. Moderator: E. Titianova (Bulgaria)	17.00 – 17.30	Сателитен симпозиум на UCB. Модератор: Е. Титянова (България)
Vertigo and Nootropics. S. Andonova (Bulgaria)		Вертиго и ноотропни средства. С. Андонова (България)
Coffee Break	17.30 – 18.00	Кафе пауза
Opening Ceremony	18.00 – 18.15	Официално откриване
Satellite Symposium of Actavis. Moderator: E. Christova (Bulgaria)	18.15 – 19.00	Сателитен симпозиум на Actavis. Модератор: Е. Христова (България)
Folk Wisdom and Scientific Discoveries. E. Titianova (Bulgaria)		Народни мъдрости и научни открития. Е. Титянова (България)
Discussion	19.00 – 19.15	Дискусия
Welcome Dinner Restaurant "Tabiet"	19.30 – 22.00	Вечеря Ресторант „Табиег“

SATURDAY, 1 October 2016

Registration (Bulgarian Red Cross) 08.00 – 18.00 Регистриране (Български червен кръст)

INTERNATIONAL ROUND TABLE МЕЖДУНАРОДНА КРЪГЛА МАСА

Plenary Session I: Endovascular Treatment of Stroke. Moderators: E. Titianova (Bulgaria) K. Niederkorn (Austria)	09.00 – 10.30	Пленарна сесия I: Ендоваскуларно лечение на мозъчен инсулт. Модератори: Е. Титянова (България) К. Нидеркорн (Австрия)
Endovascular Stroke Therapy – Present Status. K. Niederkorn (Austria)	09.00 – 09.20 L1	Ендоваскуларно лечение на мозъчен инсулт – съвременни аспекти. К. Нидеркорн (Австрия)

Improve In-hospital Workflow for Acute Stroke Treatment. <i>M. Mijajlovic (Serbia)</i>	09.20 – 09.40 L2	Подобряване на вътрешболничната организация при лечение на остър мозъчен инсулт. <i>М. Михайлович (Сърбия)</i>
Endovascular Treatment of Stroke in Bulgaria. <i>I. Petrov (Bulgaria)</i>	09.40 – 10.00 L3	Ендоваскуларно лечение на мозъчен инсулт в България. <i>И. Петров (България)</i>
Registry of Stroke Patients in Bulgaria – Comparative Analysis from the Database. <i>S. Andonova (Bulgaria)</i>	10.00 – 10.20 L4	Регистър на болните с мозъчен инсулт в България – сравнителен анализ от базата данни. <i>С. Андонова (България)</i>
Discussion	10.20 – 10.30	Дискусия
Coffee Break	10.30 – 11.00	Кафе пауза
Plenary Session II: Advances in Treatment of Cerebrovascular Diseases. <i>Moderators: M. Mijajlovic (Serbia) S. Andonova (Bulgaria)</i>	11.00 – 12.30	Пленарна сесия II: Новости в лечението на мозъчносъдовите заболявания. <i>Модератори: М. Михайлович (Сърбия) С. Андонова (България)</i>
The Importance and Mangement of TIAs. <i>V. Demarin (Croatia)</i>	11.00 – 11.20 L5	Значимост и управление на ТИА. <i>В. Демарин (Хърватия)</i>
Recommendations for Treatment of Intracerebral Hamorrhage. <i>M. Mijajlovic (Serbia)</i>	11.20 – 11.40 L6	Препоръки при лечение на интрацеребрална хеморагия. <i>М. Михайлович (Сърбия)</i>
Extra- and Intravascular Stenting and Treatment of AVMs. <i>K. Niederkorn (Austria)</i>	11.40 – 12.00 L7	Екстра- и интраваскуларно стентирание и лечение на АВ-малформации. <i>К. Нидеркорн (Австрия)</i>
Neuro-Ophthalmic Symptoms in Carotid Pathology. <i>S. Cherninkova (Bulgaria)</i>	12.00 – 12.20 L8	Невроофтальмологична симптоматика при каротидна патология. <i>С. Чернинкова (България)</i>
Discussion	12.20 – 12.30	Дискусия
Lunch	12.30 – 14.00	Обяд
Poster Sessions	13.00 – 14.00	Постерни сесии
Plenary Session III: Clinical Application of Neurosonology – New Aspects. <i>Moderator: V. Demarin (Croatia)</i>	14.00 – 15.30	Пленарна сесия III: Клинично приложение на невросонологията – нови аспекти. <i>Модератор: В. Демарин (Хърватия)</i>
Ultrasound Techniques in Critically ill Patients. <i>M. Mijajlovic (Serbia)</i>	14.00 – 14.30 L9	Ултразвукови техники при критично болни пациенти. <i>М. Михайлович (Сърбия)</i>
Can Doppler be Useful in Assessing Embolic Strokes of Undetermined Source (ESUS). <i>N. Bornstein (Israel)</i>	14.30 – 15.00 L10	Полезна ли е Доплеровата сонография при емболичен инсулт от неясен източник (ESUS). <i>Н. Борницайн (Израел)</i>
Ultrasound of Peripheral Nerves. <i>S. Schreiber (Germany)</i>	15.00 – 15.30 L11	Ултразвук на периферни нерви. <i>С. Шрайбер (Германия)</i>
Coffee Break	15.30 – 16.00	Кафе пауза
Practical Seminar. Ultrasound of Peripheral Nerves. <i>S. Schreiber (Germany)</i>	16.00 – 17.30	Практически семинар. Ултразвук на периферни нерви. <i>С. Шрайбер (Германия)</i>

NURSING
TRAINING COURSE
(Bulgarian Participants)

ОБУЧИТЕЛЕН КУРС ЗА
МЕДИЦИНСКИ СЕСТРИ
(български участници)

HEALTH CARE
IN ACUTE STROKE

Medical Faculty of
Varna University "Prof. Dr. P. Stoyanov"

Medical Faculty of
Sofia University "St. Kl. Ohridski"

Military Medical Academy
Bulgarian Society of Neurosonology
and Cerebral Hemodynamics

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Военномедицинска академия
Българска асоциация по невросонология
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VARNA UNIVERSITY
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MILITARY
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БАНМХ
BULGARIAN SOCIETY
OF NEUROSONOLOGY
AND CEREBRAL
HEMODYNAMICS

Moderator: S. Andonova (Bulgaria)

Модератор: С. Андонова (България)

Registration (Bulgarian Red Cross) 08.00 – 16.00 Регистриране (Български червен кръст)

Treatment Hospital Organization in Acute Stroke. R. Futchedzieva (Varna)	16.00 – 16.20	Организация на болничното лечение при остър мозъчен инсулт. Р. Фучеджиева (Варна)
Special Nursing in Acute Stroke Patient. S. Todorova (Varna)	16.20 – 16.40	Специфични здравни грижи при болен с остър мозъчен инсулт. С. Тодорова (Варна)
Endovascular Embolization of Cerebral Aneurysms – Role of Nurse Anesthetist. R. Semovska, S. Vuldjieva (Sofia)	16.40 – 17.00	Ендоваскуларна емболизация на мозъчни аневризми – роля на анестезиологичната сестра. Р. Семовска, С. Вулджиева (София)
Practical Seminar: Role of Nurses in Neurointensive Treatment in Cerebral Stroke. S. Andonova (Varna)	17.00 – 17.20	Практически семинар: Роля на медицинската сестра в невроинтензивното лечение при мозъчен инсулт С. Андонова (Варна)
Discussion	17.20 – 17.30	Дискусия



БЪЛГАРСКА АСОЦИАЦИЯ
НА ПРОФЕСИОНАЛИСТИТЕ
ПО ЗДРАВНИ ГРИЖИ



Consensus Meeting

Консенсусна среща

INTERDISCIPLINARY
CONSENSUS
FOR MECHANICAL
THROMBECTOMY IN
ACUTE ISCHEMIC STROKE
(*Bulgarian Participants*)

ИНТЕРДИСЦИПЛИНАРЕН
КОНСЕНСУС ЗА МЕХАНИЧНА
ТРОМБЕКТОМИЯ
ПРИ ОСТЪР ИСХЕМИЧЕН
МОЗЪЧЕН ИНСУЛТ
(*български участници*)

At the initiative of
*Bulgarian Society
of Endovascular
Therapy*

По инициатива на
*Българското дружество
по ендоваскуларна
терапия*



BULGARIAN
SOCIETY OF
ENDOVASCULAR
THERAPY

Moderator: I. Petrov (Bulgaria)

Модератор: И. Петров (България)

Opening	18.00 – 18.10	Откриване
Thrombectomy in Acute Ischemic Stroke – Diagnostic and Treatment Algorithm. <i>S. Andonova (Varna)</i>	18.10 – 18.40	Тромбектомия при остър исхемичен мозъчен инсулт – диагностично-лечебен алгоритъм. <i>С. Андонова (Варна)</i>
Requirements for conducting thrombectomy in Acute Ischemic Stroke. <i>I. Petrov (Sofia)</i>	18.40 – 19.10	Изисквания за провеждане на тромбектомия при остър исхемичен мозъчен инсулт. <i>И. Петров (София)</i>
Discussion	19.10 – 19.30	Дискусия
Closing	19.30 – 19.40	Закриване
Gala Dinner (<i>Hotel "Marinela"</i>) Poster Awards	20.00	Гала вечеря (<i>Хотел „Маринела“</i>) Постерни награди

SUNDAY, 2 October 2016

Satellite Symposium

Сателитен симпозиум

INNOVATIONS IN MEDICINE

ИНОВАЦИИ В МЕДИЦИНАТА

*Student Workshop in Neurology
Medical Faculty of Sofia
University "St. Kl. Ohridski"
Bulgarian Academy of Sciences
and Arts
Bulgarian Society of Neurosonology
and Cerebral Hemodynamics*

*Студентски кръжок по неврология
Медицински факултет на Софийски
университет „Св. Кл. Охридски“
Българска академия на науките
и изкуствата
Българска асоциация по невросонология
и мозъчна хемодинамика*



SOFIA UNIVERSITY
"ST. KLIMENT OHRIDSKI"




БАНМХ
BULGARIAN SOCIETY
OF NEUROSONOLOGY
AND CEREBRAL
HEMODYNAMICS

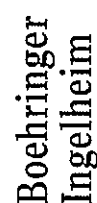
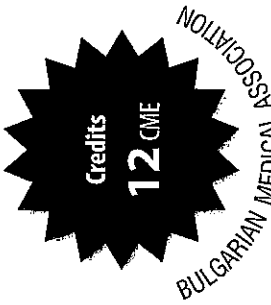
*Moderators: L. Spasov, M. Kamenova,
E. Titianova (Bulgaria)*

*Модератори: Л. Спасов, М. Каменова,
Е. Титянова (България)*

Opening	10.00 – 10.10	Откриване
Mirror Neurons. a New Era in Medicine.	10.10 – 10.40	Огледални неврони.
<i>M. Dimcheva, E. Titianova (Bulgaria)</i>	LS1	<i>М. Димчева, Е. Титянова (България)</i>
3D Bioprinting. a New Era in Medicine.	10.40 – 11.10	3-измерно биопринтиране. Нова ера в медицината.
<i>M. Peshevska, Ts. Dimitrova, E. Titianova (Macedonia, Bulgaria)</i>	LS2	<i>М. Пешевска, Цв. Димитрова, Е. Титянова (Македония, България)</i>
High Intensity Focused Ultrasound in Medicine.	11.10 – 11.40	Високоинтензивен фокусиран ултразвук в медицината.
<i>P. Karazapianov, E. Titianova (Bulgaria)</i>	LS3	<i>П. Каразапряннов, Е. Титянова (България)</i>
Discussion	11.40 – 11.20	Дискусия
Closing Ceremony	11.20 – 11.30	Официално закриване

TIMETABLE

Time	FRI 30.09.2016	SAT 1.10.2016	SUN 2.10.2016	Time
08.00-08.30	 <p>BULGARIAN SOCIETY OF NEUROSONOLOGY AND CEREBRAL HEMODYNAMICS</p> <p>BSNCH</p> <p>SECOND NATIONAL CONGRESS <i>with International Participation</i></p>	Reception desk opening	Reception desk opening	08.00-08.30
08.30-09.00			Plenary Session I: ENDOVASCULAR TREATMENT OF STROKE	08.30-09.00
09.00-09.30			Coffee Break	09.00-09.30
09.30-10.00			Plenary Session II: MODERN TREATMENT OF STROKE	09.30-10.00
10.00-10.30			Lunch	10.00-10.30
10.30-11.00			Poster Sessions	10.30-11.00
11.00-11.30			Plenary Session III: Non-Vascular and Emergency Ultrasound	11.00-11.30
11.30-12.00			Coffee Break	11.30-12.00
12.00-12.30			Nursing Training Course HEALTH CARE IN ACUTE STROKE	12.00-12.30
12.30-13.00			INTERDISCIPLINARY CONSENSUS FOR MECHANICAL THROMBECTOMY IN ACUTE ISCHEMIC STROKE	12.30-13.00
13.00-13.30		Reception desk opening for registration	13.00-13.30	
13.30-14.00		General Assembly of BSNCH (for members)	13.30-14.00	
14.00-14.30		Satellite Symposium of UCB "Vertigo and Nootropics"	14.00-14.30	
14.30-15.00		Opening Ceremony	14.30-15.00	
15.00-15.30		Satellite Symposium of Actavis "Folk Wisdom and Scientific Discoveries"	15.00-15.30	
15.30-16.00		Welcome Dinner	15.30-16.00	
16.00-16.30			16.00-16.30	
16.30-17.00			16.30-17.00	
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19.30-20.00			19.30-20.00	
20.00-21.00			20.00-21.00	
21.00-22.00			21.00-22.00	



ГЕДЕОН РИХТЕР АД

Poster Sessions

SATURDAY, 1 October 2016 (13:00 – 14:00)

Bulgarian Red Cross

Poster Session I. NEUROLOGICAL DISEASES

Chairpersons: I. Velcheva, Z. Stoyneva, Iv. Petrov (Bulgaria)

- P1 **Vertebral Artery Dissection – a Clinical Case Report.**
K. Georgiev, R. Fuchidzhieva, S. Andonova (Bulgaria)
- P2 **Ischemic Stroke in a Patient with Congenital Spherocytic Anemia and Patent Foramen Ovale – a Case Report.**
R. Fuchidzhieva, K. Georgiev, S. Andonova, E. Kalevska (Bulgaria)
- P3 **Transcranial Brain Sonography Findings in Parkinson's Disease: First Results from Tuzla, Bosnia and Herzegovina.**
D. Smajlović, OĆ Ibrahimagić (Bosnia and Herzegovina)
- P4 **Study of Clinical Characteristics in Patients with Syncope.**
N. Chaushev, R. Kuzmanova, P. Damyanov, I. Velcheva (Bulgaria)
- P5 **Local Carotid Stiffness in Patients with Cerebral Infarctions.**
I. Velcheva, G. Tsonevska, Ts. Kmetski (Bulgaria)
- P6 **Cerebral Amyloid Angiopathy – Case Study.**
V. Simonovic (Serbia)
- P7 **Moya-moya Disease – Case Study.**
D. Petkovic (Serbia)
- P8 **Accuracy of Sudancupping Test for the Diagnosis of Cervical and Lumbosacral Disc Prolapse to Instrumental Investigations (Xray, CT and MRI).**
Waeil Hadda Mohammed Ali, Kamal Khalafalla Elbashir, Eltahir Ahmed Babikir (Sudan)
-

Poster Session II. NEUROREHABILITATION

Chairpersons: D. Lubenova, B. Stamenov, I. Takeva (Bulgaria)

- P9 **Rehabilitation and psychological approach to patients with Cerebrovascular disease.**
I. Takeva, E. Anzova, T. Radeva, M. Blagoeva (Bulgaria)
- P10 **The Effect of Neurorehabilitation in a Patient with Stroke After Cardiac Surgery (Case Report).**
I. Takeva, A. Malinova (Bulgaria)
- P11 **Effect of Kinesitherapy on the Kinetic Parameters of Gait in Patients with Supratentorial Unilateral Stroke in Chronic Period.**
D. Vasileva, D. Lubenova, K. Grigorova-Petrova, A. Dimitrova, M. Nikolova (Bulgaria)
- P12 **The effectiveness of Bobath Concept in Stroke Rehabilitation.**
E. Zhelyazkova, A. Tomov (Bulgaria)
- P13 **Early Intensive Exercise for Postoperative Physical Therapy after Spinal Surgery.**
Ts. Bizheva, D. Lubenova, K. Grigorova-Petrova (Bulgaria)
-

P9

REHABILITATION AND PSYCHOLOGICAL APPROACH TO PATIENTS WITH CEREBROVASCULAR DISEASE

I. Takeva, E. Anzova, T. Radeva, M. Blagoeva

Department of Physical Medicine and Rehabilitation, University Hospital "Losenets" – Sofia, Bulgaria

Objective: The aim is to achieve an optimal recovery of the motor function and independence in everyday life, as well as to ameliorate the dysarthria and improve the psycho-emotional state and quality of life after a stroke through an early initiated integrated approach.

Material and Methods: The subject under study was a man aged 66, with ischemic stroke in the left middle cerebral artery lapse 23 days. The method included rehabilitation activities, speech therapy and psychotherapy. Barthel Index tests were used for assessing the patient's independence in everyday life. The self-assessment HADS scale was used to determine his levels of depression and anxiety, while the Von Zerssen adjective mood scale was used to determine the types of conditions.

Results: The clinical examination of the patient establishes a right-sided hemiparesis that is more severe for the hand, and sensorimotor aphasia, depression and anxiety. After administration of the rehabilitation program, the overall assessment by Bartel changes from 50 units to 85 units. After the ten psychological sessions, the study establishes a decrease of the high levels of depression by 19% to 11% and of the levels of anxiety by 17% to 14%. The daily speech rehabilitation ameliorates the speech disturbances in breathing and speech rate.

Conclusion: Psychological and speech disturbances are an obstacle to recovery. The early initiated integrated approach, which is conducted individually and is specifically oriented, leads to improvements in the motor activity, speech disorders and psychological state of patients with cerebrovascular disease.

Key words: psychotherapy, speech therapy, stroke.

P10

THE EFFECT OF NEUROREHABILITATION IN A PATIENT WITH STROKE AFTER CARDIAC SURGERY(CASE REPORT)

I. Takeva, A. Malinova

Clinic of Physical and Rehabilitation Medicine, University Hospital "Losenets" – Sofia, Bulgaria

Objective: To analyze the effect of the neurorehabilitation program, including the Proprioceptive Neuromuscular Fa-

cilitation (PNF) method, in a patient with stroke after cardiac surgery.

Material and Methods: We present a 72-year old patient with right-side haemiparesis as a result of an ischemic stroke in the left middle cerebral artery after cardiac surgery (aorto-coronary bypass and replacement of mitral valve). The patient was with an impaired myocardial function with ejection fraction (EF) <42%, as well as with a paroxysmal atrial fibrillation. His condition was evaluated with the Rankin Scale and his general functions were tested using the Test of Brunstrom. In addition, the blood pressure and heart rate were monitored. The program included the PNF method with optimum resistance, which should not cause unwanted pain and burden the cardiovascular function. This method facilitates neuromuscular response using proprioceptive incentives.

Results: As a result of the neurorehabilitation program the patient went from 4th to 3rd degree on the Rankin Scale. Indicators of the Test of Brunstrom also improved.

Discussion: After the 35-day program with the method of PNF with optimum resistance, the neurological status of the patient and his cardiac function improved.

Key words: neurorehabilitation, proprioceptive neuromuscular facilitation, stroke.

P11

EFFECT OF KINESITHERAPY ON THE KINETIC PARAMETERS OF GAIT IN PATIENTS WITH SUPRATENTORIAL UNILATERAL STROKE IN CHRONIC PERIOD

D. Vasileva¹, D. Lubenova², K. Grigorova-Petrova², A. Dimitrova², M. Nikolova²

¹Faculty of Medical Sciences, Goce Delchev University – Shtip, Macedonia, ²Department "Kinesitherapy and Rehabilitation", Faculty of Kinesitherapy, Tourism and Sports Animation, National Sports Academy "Vasil Levski" – Sofia, Bulgaria

Objective: The aim of the study is to trace the effects of specialized kinesitherapeutic methodology (SKTM) on the kinetic parameters of gait in patients with supratentorial unilateral stroke in the chronic period (SUSChP).

Material and Methods: The study was conducted in 67 patients with SUSChP (56 patients included in the experimental group – 32 men and 24 women, with duration of disease 7.8 ± 2.0 months, and 11 patients in the control group – 9 men and 2 women, with duration of disease 7.3 ± 1.5 months).

To evaluate the changes in the gait, cadence of 6 m and 10 m and the speed of movement, which are the most informative kinetic parameters, were followed. Patients in the experimental group were treated with a specialized 10-day kinesitherapy, which they continued to perform later as an adapted exercise program at home for a period of one month.

Results: After applying SKTM, the highest trend towards improvement in the kinetic parameters of gait was established after the 1st month with a level of significance during treatment $p < 0.001$.

Conclusion: The enclosed SKTM in the experimental group continued later as an adapted exercise program at home, significantly improved the kinetic parameters of gait in patients with SUSChP.

Key words: chronic period, gait, kinetic parameters.

P12

THE EFFECTIVENESS OF BOBATH CONCEPT IN STROKE REHABILITATION

E. Zhelyazkova, A. Tomov

Clinic of Physical and Rehabilitation Medicine, Univerity Hospital "Losenets" – Sofia, Bulgaria

In nowadays, the Bobath Concept or neurodevelopmental treatment is the most popular treatment approach used in stroke rehabilitation. Bobath analysis as a tool, can be used with every type of neuro-disability. It involves "observation, analysis, interpretation, experimentation, outcome measurement". Using Bobath Method, we try to develop new functions, new mechanisms of movement, trying to integrate the more damaged side to such a movement scheme, that can achieve maximal independence in functional performance, improvement in motor movement and self-care skills.

Material and Methods: This study was conducted with a 79 – years old woman with a left-sided ischemic stroke, which is in chronic stage of recovery. There were presented some tests to evaluate sensorimotor control of upper and lower limb, dexterity, mobility, activity of daily living, health-related quality of life, balance control: 1. Berg Balance Scale, 2. Motricity Index, 3. Rivermead Mobility Index, 4. Fugl – Meyer Assessment of Sensorimotor Recovery After Stroke, 5. Frenchay Arm Test, 6. Stroke Upper Limb Capacity Scale (SULCS), 7. Motor Activity Log, 8. Barthel Index, 9. Time Up and Go, 10. Dynamic Gate Index, 11. Nottingham, 12. Modified Ashworth Scale.

Results: According to the tests we made, it was found that our patient's level of activity is very high. She has good balance in standing position, in walking, almost no problem in gait pattern. The most important activity for our patient was to can manage with her daily activities with her right hand.

After the therapy we made, we established through the tests we made, that there was improvement in sensorimotor control of the upper limb, dexterity, mobility and activities of daily living.

Conclusion: According to the tests we made, it was found that our patient's level of activity is very high. She has good balance in standing position, in walking, almost no problem in gait pattern. The most important activity for our patient was to can manage with her daily activities with her right hand. After the therapy we made, we established through the tests we made, that there was improvement in sensorimotor control of the upper limb, dexterity, mobility and activities of daily living.

Key words: Bobath Concept, stroke rehabilitation.

P13

EARLY INTENSIVE EXERCISE FOR POSTOPERATIVE PHYSICAL THERAPY AFTER SPINAL SURGERY

Ts. Bizheva, D. Lubenova, K. Grigorova-Petrova

Department of Kinesitherapy and Rehabilitation, National Sports Academy "V. Levski" – Sofia, Bulgaria

Objective: To assess the effect of early physical therapy intervention after lumbar spine surgery.

Material and Methods: Twenty patients volunteers treated in the Department of Neurosurgery of the University Hospital Sofamed, Sofia were studied. The assessment was made on the first day after surgery and on the discharge. The time to move from lying to sitting position and the time for 6-meter walk were measured. All patients performed daily physical therapy exercises, including proprioceptive neuromuscular facilitation (PNF) to facilitate transfer from lying to sitting position, and gait training.

Results: The integrated programme of early physical therapy improves the outcome and leads to increase of functional activities in bed.

Conclusion: The conducted study shows that an in-hospital physical therapy intervention influences positively the functional activities and walking speed in patients after spinal surgery.

Key words: early physical therapy, spinal surgery.