DAY 1

Scientific Tracks & Abstracts

International Conference on

Neurological Disorders, Stroke and CNS

October 22-23, 2018 | Athens, Greece

DAY 1

October 22, 2018

Sessions

Cerebrovascular Disorders | Stroke Rehabilitation & Recovery | CNS(Central nervous system) | Stoke and Cerebral Hemorrhage | Spine & Spinal Disorders | Neurological Disorders | Dementia | Stroke

Session Chair	**Session Co-Chair**
Ivet Borissova Koleva	Magda Tsolaki
Medical University, Bulgaria	Department of Neurology, Thessaloniki, Greece

Session Introduction

Title: **Neurorehabilitation of hemiparetic shoulder and hemiparetic hand of post-stroke patients: impact of mirror therapy and functional electrostimulations on autonomy**
Ivet Borissova Koleva, Medical University, Bulgaria

Title: **Clinical results of stem cell therapy in neurological disorders**
Alok Sharma, NeuroGen Brain and Spine Institute, India

Title: **Experience in the management of aneurismal subarachnoid haemorrhage in bogotá, colombia**
Gustavo Adolfo Uriza Sinisterra, National University of Colombia, Colombia

Title: **Septic cavernous sinus thrombosis: review of 13 cases focused in treatment and outcome**
Shemsedin Dreshaj, University of Prishtin, Republic of Kosovo

Title: **Extensive cervical epidural abscess: case report**
Mohamed E Elsebaey, Damanhour Medical National Institute, Egypt

Title: **Balance training is an important component of the rehabilitation complex in patients with vertebrobasilar insufficiency after cardiac surgery (valve replacement)**
Ivet Borissova Koleva, Medical University, Bulgaria

Title: **Management of vertebral fractures with augmentation techniques in Bogotá, Colombia**
Gustavo Adolfo Uriza Sinisterra, Department of Neurosurgery National University of Colombia, Colombia

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NEUROREHABILITATION OF HEMIPARETIC SHOULDER AND HEMIPARETIC HAND OF POST-STROKE PATIENTS: IMPACT OF MIRROR THERAPY AND FUNCTIONAL ELECTROSTIMULATIONS ON AUTONOMY

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[3]University of Telecommunications, Bulgaria

Introduction: Stroke is a socially important disease in industrialized countries, with a high level of prevalence and mortality. Motor weakness and spasticity provoke pathokinesiological dysbalance in the upper extremity, with severe difficulty in everyday activities of stroke survivors.

Aim: Our goal was to evaluate the impact of mirror therapy and functional electrostimulations in the complex neurorehabilitation algorithm in patients with post-stroke hemiparesis, hemiparetic shoulder and hemiparetic hand.

Material & Methods: A total of 171 post-stroke patients with hemiparetic shoulder and hemiparetic hand were observed. Patients were randomized into four therapeutic groups (57 per group). The control was done before, during and at the end of the NR course (of 20 treatment days), and one month after its end-using a battery of clinical methods and functional scales. In all patients, we applied a complex neurorehabilitation (NR) program of physiotherapy, cryotherapy and ergotherapy; including proprioceptive neuromuscular facilitation (Kabath), strength and endurance exercises for shoulder abductors and rotators (rotator cuff muscles), wrist and fingers extensors and flexors, lateral trunk and scapular muscles; grip and grasp training and goal-oriented activities. Group (gr) 1 received only this NR programme. In gr 2, we applied mirror therapy for the hemiparetic hand. In the next group (gr 3), we added functional electrostimulations for the deltoid muscle, for extensors of the wrist and fingers.

Results & Discussion: The comparative analysis of results demonstrates significant pain reduction (visual analogue scale); diminution of spasticity and contracture (Aschworth scale); increase of the range of motion (ROM) of the humeroscapular joint, of the wrist and fingers (goniometry); recovery of the humeroscapular rhythm and the grasp kinesiology; improvement of functional capacity (Brunnstrom), grasp capacity (Box and Block test) and autonomy (FIM)-self-care subscale; Barthel index-subscales grooming, eating, getting dressed, bathing).

Conclusion: Neurorehabilitation improve patient's autonomy and quality of life

Biography

Ivet Borissova Koleva is a Medical Doctor, Specialist in Neurology and in Physical and Rehabilitation Medicine (PRM), with 30 years of clinical practice in the domain of Neurorehabilitation. She has completed a PhD thesis on physical prevention and therapy of diabetic polyneuropathy and a thesis for Doctor of Medical Sciences on Neurorehabilitation in Patients with Socially Important Neurological Diseases. She received the titles of Associate Professor (2006) and Professor (2010) in PRM. Currently, she is serving as a Professor in the Medical University of Sofia, Bulgaria. She is the author of many scientific papers, monographs and manuals in the fields of neurorehabilitation, neuro-ergotherapy, grasp and gait rehabilitation, functional evaluation, pain management. She is the Member of national and international associations of PRM and President of Bulgarian Neurorehabilitation Society and Editor-in-chief of the Bulgarian scientific journal Neurorehabilitation since 2006.

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CLINICAL RESULTS OF STEM CELL THERAPY IN NEUROLOGICAL DISORDERS

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Stem cell therapy has emerged as a promising treatment option for various incurable neurological disorders. We have studied the safety and efficacy of intrathecal transplantation of autologous bone marrow mononuclear cells in these disorders and will present our data. In neurodevelopmental disorders such as autism spectrum disorder (ASD), out of 32 cases of ASD, 92% cases showed improvement in different aspects of Indian scale for assessment of autism (ISAA) along with improved scores of clinical global impression (CGI) and functional independence measure (FIM) indicating cognitive and functional improvements; in cerebral palsy, out of 40 cases of CP, 95% patients showed improved oromotor activities, neck control, sitting, standing, walking balance and speech with improved metabolism recorded in the PET-CT scan of brain; in intellectual disability (ID), outcome of 29 patients of the intervention group was compared to that of 29 patients from only rehabilitation group and it was found that all patients in the intervention group showed improvement while, there was no improvement in 20.69% patients from only rehabilitation group. In neuromuscular disorders such as muscular dystrophy (MD), out of 150 MD patients, 86.67% showed improved strength in trunk, upper and lower limbs and gait; in amyotrophic lateral sclerosis (ALS), comparison of the survival analysis was performed between the treated population (n=37) and the control group (n=20). It was found that the survival duration of the treated population was 30.38 months more than that of the control group. In neurotraumatic disorders such as spinal cord injury (SCI), 91% of 110 thoracolumbar SCI patients and 74% of 56 cervical SCI patients showed improvement in spasticity, sensation, trunk control, bladder management, standing and sitting balance, ambulation and ADLs along with FIM, ASIA, and EMG/NCV; in traumatic brain injury (TBI), 93% of 14 TBI patients displayed improved balance, voluntary control, muscle tone, oromotor activities, cognition, coordination, speech, ambulation and ADLs after intervention. In neurovascular disorders such as brain stroke, 24 patients those who have brain stroke, better outcome was observed in patients with ischemic stroke as compared to haemorrhagic stroke with improvement in ambulation, hand function, standing and walking balance. We conclude that stem cell therapy is a safe and an effective treatment option for the above clinical conditions

Biography

Alok Sharma is the Director of NeuroGen Brain and Spine Institute, Professor and Head of Department of Neurosurgery, LTMG Hospital and LTM Medical College. He has completed his MS and MCh from KEM Hospital and Seth GS Medical College, Mumbai and subsequently trained at the Karolinska University Hospital, Sweden and University of Colorado Health Sciences Center, USA. He has published 112 scientific papers, authored 14 books, edited 2 books, contributed chapters in 8 books and made over 150 scientific presentations nationally and internationally. He is Founding President of the Stem Cell Society (India) and Vice President of International Association of Neurorestoratology. He is Founder of *The Indian Journal of Stem Cell Therapy* and on the Editorial Board of four journals. He has been conferred with numerous awards and honors during his career. His other areas of special interest are Neuroendoscopy, Psychosurgery, Spinal fixations and Revascularization for cerebral ischemia.

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EXPERIENCE IN THE MANAGEMENT OF ANEURISMAL SUBARACHNOID HAEMORRHAGE IN BOGOTA, COLOMBIA

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Aneurismal subarachnoid haemorrhage (SAH) accounts for about 5% of all cerebrovascular disease. It´s a common and frequently devastating condition. In South America, estimated incidence is 9.1 cases for 100.000 population. American and European guidelines advise endovascular treatment in highly specialized centers. However, developing countries lack sometimes of such centers. In Colombia, due to our health system . endovascular centers are just emerging and maturing. We compare our surgical series of the last 10 years with the result of endovascular centers, showing that, despite those centers are relatively new, results are comparable to those on the literature. Surgery also shows an important and prevailing role in contemporary treatment of subarachnoid haemorrhage.

Biography

Dr. Gustavo Adolfo Uriza completed his medical degree in 1992 and then his neurosurgical training in 1998 at the same University. He has specialized studies in Colombia in vascular, tumor, trauma and spine surgery. He is the director of the Universidad de La Sabana School of Medicine since 2008. He has performed over 5000 surgical procedures during his career, serves as President of Bogotá region at the Colombian Association of Neurosurgery and has published several papers in local and regional journals.

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SEPTIC CAVERNOUS SINUS THROMBOSIS: REVIEW OF 13 CASES FOCUSED IN TREATMENT AND OUTCOME

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Introduction: Septic cavernous sinus thrombosis (SCST) is a rare complication associated with face and neck area infection. SCST is known for severe clinical presentation, often complicated and bad outcome. Till now, there are no randomized and controlled trials for management of this condition.

Objective: To describe clinical characteristics, treatment and outcome of hospitalized confirmed SCST patients in Infectious Diseases Clinic in Prishtina, Kosovo.

Methods: Clinical and laboratory data of 13 confirmed SCST cases treated in our institution, were reviewed retrospectively.

Results: 13 cases of SCST in Infectious Diseases Clinic in Prishtina were treated between the Jan' 1st 1991 and Dec' 31st 2017. Five cases did not survive the disease (38.5%), three of 13 (23%) presented neurological complications at discharge from the hospital. 12 cases presented purulent meningoecephalitis and one sympathetic meningitis. In 12 (92.3%) cases, primary focus was in upper part of the face. Ethological agent was identified in 11 (84.6%), and in 8 (61.5%), it was *Staphylococcus aureus*. All patients were treated with anti edematous therapy, antibiotics, corticosteroids, whereas 7 (53.8%) patients were treated with anticoagulant therapy for four days. In one patient treated with anticoagulant therapy, hemorrhagic complications were seen. Contrast enhanced CT of head was 100% sensitive in detection of SCST, whereas contrast MRI confirmed SCST in only one of the four cases.

Conclusions: The prognosis of SCST now a day is more favourable than before. Anti-coagulants seem to be a safe addition treatment to antibiotic, also in patients with SCST and central nervous system infection

Biography

Shemsedin Dreshaj has completed his Medical Faculty in Prishtina, Kosovo in 1984. He has worked as a Specialist in Infectious Diseases at University Medical Centre Ljubljana, Slovenia in 1991and Subspecialist in CNS infections at Montefiore Medical Centre, NY, USA in 1996. He has completed his PhD in 2003 from Faculty of Medicine in Prishtina .He worked as Senior Infectious Diseases doctor in Infectious Diseases Clinic Prishtina in 1990, Head of Department for Neuroinfections (1992-2008), Head of ICU Department in Infectious Diseases Clinic (2008-2018). He was Head of Infectious Diseases Clinic (2006-2014), Vice Dean for academic affair's (2009-2013), Medical Faculty in Prishtina. His research activities are focused on neuroinfection and neurological disorder. He has published more than 21 manuscripts in international journals, more than 40 proceedings and presented several oral or poster presentations in this field.

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EXTENSIVE CERVICAL EPIDURAL ABSCESS: CASE REPORT

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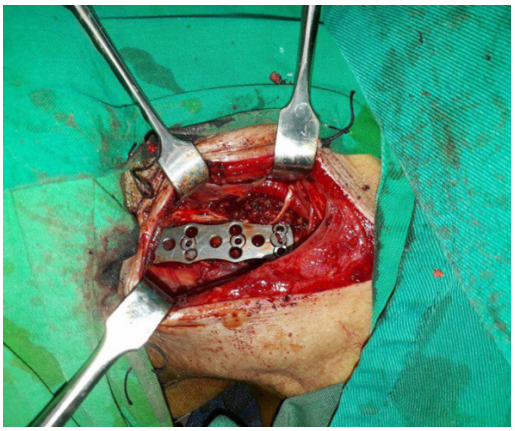
Background: Spinal epidural abscess is very annoying problem, which needs an immediate medical attention. Its presence within the cervical spine is life threating issue because of the vital functions that can be compromised as a result from just the compression effect. So the concept of the bony decompression is essential in such cases.

Aim: To describe a rare presentation of spinal epidural abscess, a case report of an extensive epidural abscess within the cervical spinal region.

Results: Case report of cervical epidural abscess in 56 year old male from Rosetta complained of acute onset of neck pain for about 2 months, with progressive course of upper and lower limbs weakness and with no sphincter affection. Patient has not undergone any neck and back surgery previously. Patient has a history of renal impairment and on medical treatment for about 4 years. Magnetic Resonance imaging of the cervical spine, showed ventral cervical spinal cord compression by an epidural abscess extending from the apex of dens to the level of C5. Surgical intervention via anterior approach and corpectomy of the C4 and C5, iliac crest graft with plate and screws fixation was done. About 3 months after surgery, the patient markedly improved and was able to perform the usual lifestyle activities.

Conclusion: Diagnosing patient with epidural abscess within the cervical spine is somewhat a difficult suspecting issue in patient with no history of chronic illness nor previous spine surgery. Evacuation of the abscess and corpectomy of the friable pathological levels, fusion with iliac crest graft and fixation with plate and screws was a suitable option in management of this case.



Biography

Mohamed Gohary is working as Neurosurgery MD at Alexandria University and Consultant of Neurosurgery. Also Member in NAAS. Member in ESA and Member in ENS.

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BALANCE TRAINING IS AN IMPORTANT COMPONENT OF THE REHABILITATION COMPLEX IN PATIENTS WITH VERTEBROBASILAR INSUFFICIENCY AFTER CARDIAC SURGERY (VALVE REPLACEMENT)

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[3]University of Telecommunications, Bulgaria
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Introduction: After valve replacement cardiosurgery (with extracorporeal circulation), some patients develop cerebrovascular insufficiency in the vertebro-basilar system with balance problems or ataxia signs. Our goal was to evaluate the prevalence of cerebrovascular insufficiency in old patients after cardiac surgery with extracorporeal circulation and to investigate the possible impact of balance training in the complex cardiac rehabilitation (CR) algorithm of these patients.

Material & Methods: We have observed 213 patients after cardiac surgery (7-10 days after aortic, mitral or tricuspid valve replacement). Patients were randomized into three therapeutic groups (71 per group). The control was done before, during and at the end of the CR course (of 10 treatment days), and one month after its end-using a battery of clinical methods and functional scales. In all patients, we applied a complex cardio-rehabilitation (CR) programme of physiotherapy and ergotherapy including cardio training, respiratory exercises (predominantly for external and internal intercostal muscles) and goal-oriented activities (standing up, walking and climbing stairs). Group (gr) 1, received only this CR programme. In gr 2, we added balance training exercises. In the next group (gr 3), we applied additionally coordination exercises for the upper and lower extremities.

Results: The statistical analysis of the results of functional assessments demonstrated significant improvement of circulatory parameters (response of arterial tension and pulse to physical activity); upgrade in cardiac functional parameters (holtercardiography; transthoracic echocardiography /ejection fraction), enlargement in autonomy (timed up and go test; functional independence measure–subscales of self-care, transfers and locomotion) in all patients. We observed bigger amelioration in trunk stability, balance and gait velocity in the second and the third groups (Tinetti test, Berg balance scale).

Conclusion: Balance training must be obligatory element of cardiorehabilitation algorithm in patients after cardiosurgery requiring extra-corporeal circulation

Biography

Ivet Borissova Koleva is a Medical Doctor, specialist in Neurology and in Physical & Rehabilitation Medicine (PRM) with 30 years of clinical practice in the domain of Neurorehabilitation. She has completed a PhD thesis on Physical Prevention and Therapy of Diabetic Polyneuropathy and a thesis for Doctor of Medical Sciences on Neurorehabilitation in patients with socially important neurological diseases. She received the titles of Associate professor (2006) and Professor (2010) in PRM. Currently, she is serving as a Professor in the Medical University of Sofia, Bulgaria. She is also the consulting PRM specialist of several university hospitals, including the National Heart Hospital of Sofia (Cardiorehabilitation Department). She is the author of scientific papers, monographs and manuals in the fields of Physical Medicine and Rehabilitation, occupational therapy, Grasp and Gait rehabilitation, functional evaluation, pain management. She is the Member of national and international associations of PRM and President of Bulgarian Neurorehabilitation Society and Editor-in-chief of the Bulgarian scientific journal *Neurorehabilitation* (since 2006).

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MANAGEMENT OF VERTEBRAL FRACTURES WITH AUGMENTATION TECHNIQUES IN BOGOTÁ, COLOMBIA

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Vertebral osteoporotic fractures are an increasing cause of back pain and disability, especially in the elderly population. Open surgery for the treatment of those fractures may involve high risks in these patients, creating the need of less invasive procedures. Vertebroplasty initially led to controversial results, but the use of high viscosity cements and the depuration of the techniques have shown real benefit in the last years. We describe our experience with vertebroplasty alone and other augmentation techniques since 2005, showing increase in the daily performance of elderly patients after osteoporotic fractures. We also explore new frontiers for these techniques

Biography

Dr. Gustavo Adolfo Uriza completed his medical degree in 1992 and then his neurosurgical training in 1998 at the same University. He has specialized studies in Colombia in vascular, tumor, trauma and spine surgery. He is the director of the Universidad de La Sabana School of Medicine since 2008. He has performed over 5000 surgical procedures during his career, serves as President of Bogotá region at the Colombian Association of Neurosurgery and has published several papers in local and regional journals.

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Video Presentation

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RECANALIZATION IN ACUTE ISCHEMIC STROKE

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Many aspects of stroke have been extensively studied; the prognosis of acute ischemic stroke is one of these aspects. Also many studies directed to early spontaneous or induced (artificial) recanalization by using thrombolytic therapy, relay on early restoring of blood flow.

Aim of the study: **To evaluate the prognostic value of recanalization in acute ischemic stroke by using cerebral angiography in correlation with clinical outcome and brain C T scan findings.**

Subjects & Methods: **This study was conducted on 16 patients out of 50 patients, who came to the emergency department of Al-Azher university hospitals from Mar' 2003 to Mar' 2005. All patients included in the study, came within 6-8 hours from ischemic stroke onset and age greater than 18 years (thrombolytic therapy may be needed). All selected patients were subjected to the following: history taking, general and neurological examination including National Institute of Health Stroke Scale (NIHSS). CT scan of brain was performed at the time of admission to exclude cerebral haemorrhage, mass lesion and was repeated when needed. Laboratory investigation, cerebral angiography was performed at the first 6-8 hrs of admission, to detect the site of occlusion and recombinant tissue plasminogen activator (rtPA) injection in appropriate cases and repeated after 24 hrs, to detect early recanalization.**

Results: **There was statistically significant difference in angiographic findings as regard outcome, higher frequency of recanalization level among good outcome group (P<0.05), statistically significant difference in D M distribution as regard outcome, higher frequency of D M among bad outcome group (P<0.05), statistically significant difference in time of onset distribution as regard outcome, higher frequency of late onset among bad outcome (P<0.05).**

Conclusion: **Patient with stroke and no documented angiographic occlusion (spontaneous recanalization) must be withdrawn from thrombolytic therapy .Cerebral angiography can be done for ischemic stroke patients, who are candidates for thrombolytic therapy.**

Biography

Fathi Mahmoud Afifi Nasra has started his career in 1976 and completed his Master's degree in 1979 and PhD in 1984, respectively. He was promoted to Associate Professor of Neurology in Al-Azhar University in 1989. Then, he was promoted to Professor of Neurology inthe same University in 1994..He was elected as the Editor in Chief of Journal of Egyptian stroke, board of the *Journal of Neurology, Psychiatry and Neurosurgery and board of Al-Azhar medical journal*, in 1999. He was awarded the annual National Research Academy Award for Neurology (Osama Elwan).In 2003; he was promoted to a Chairman Of Neurology Departmentof Al-Azhar University and Secretary of Permanent Scientific Commite to promote professor and assistant professor in Neurology. He established the Neurocritical Care Unit and Interventional unit in Al-Azhar university Hospitals in 2004. Now, he is the President of Egyptian Stroke Society.

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