



4<sup>th</sup> International Conference on

## **Neurodegenerative Disorders and Stroke**

July 05-06, 2017 Frankfurt, Germany

# Scientific Tracks & Abstracts Day 1

*Global Stroke 2017*

## Neurodegenerative Disorders | Brain Stroke | Acute Ischemic Stroke

### Session Chair

**Gerlinde A S Metz**

Canadian Centre for Behavioural Neuroscience, Canada

### Session Introduction

**Title: Don't get me wrong, I need just self-healing time: the mediatory roles of therapeutic catharsis seeking and social and coping self-efficacy on aggression and depression in excessive game playing**

**Hye Rim Lee**, Konkuk University, South Korea

**Title: When to Operate? When to not**

**Priya Sharda**, Penang General Hospital, Malaysia

**Title: Experience with spinal tumors in National center of neurological sciences (NCNS)**

**Abubakr Darrag Salim**, National Center for Neurological Sciences, Sudan

**Title: Effects of whole-body vibration on fall risk and functional mobility in a case of unilateral chronic stroke patient**

**Denizoglu Kulli H**, Bezmialem Vakıf University, Turkey

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# Neurodegenerative Disorders and Stroke

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## Don't get me wrong, I need just self-healing time

Hye Rim Lee, Eui Jun Jeong and Kong Jeon Young  
Konkuk University, South Korea

The debate surrounding online gaming addiction involves conflicting perspectives, and the psychological effects on players vary according to research approach and participant characteristics. The present study examined the extent to which therapeutic catharsis seeking and coping and social self-efficacy mediated the relationships between excessive game playing and aggression and depression. The study drew upon the mechanisms underlying therapeutic interventions involving catharsis, the generic model of psychotherapy, mood management theory, uses and gratifications theory, and the concepts of coping and social self-efficacy and focused on the mediation of excessive game players' aggression and depression. Data were collected from 1,227 Korean game players aged between 10 and 50 years. Structural equation modeling results indicated that players' therapeutic catharsis seeking and coping and social self-efficacy exerted a negative mediatory effect on the relationships between excessive gaming and aggression and depression. Therefore, players' motivation for seeking therapeutic catharsis could be a key psychological mechanism underlying addictive tendencies. The findings also suggested that unknown psychological factors could play a crucial role in further investigation of factors affecting addictive game playing.

## Biography

Hye Rim Lee received her Ph.D. from majoring in the Digital Culture & Contents at Konkuk University in 2016. Currently, she is a research professor at Konkuk University, Seoul, South Korea. She has published more than 30 papers in reputed journals and attended around 20 academic conferences over four years. As a consequence of her hard work and dedication to academic areas, she was honored with the award for Excellent Researcher by the Minister of Education and the Deputy Prime Minister of South Korea at the 2016 Awards and also awarded a medal as a Top 5 Excellent Researcher at her Ph.D. graduation ceremony. Furthermore, she was awarded for having the two best/excellent papers at the International Conference.

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# Neurodegenerative Disorders and Stroke

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## When to operate and when to not?

**Priya Sharda**

Penang General Hospital, Malaysia

As we enter the century of prevention is better than cure, we cannot help to infuse into it the term, do not harm. Stroke remains one of the leading causes of mortality worldwide. Mainstay of treatment remains prevention of further neurological deterioration and subsequently prevention of recurrences. The role of neurosurgery in the treatment of its mass effect remains controversial in this time and day. Studies have proven it to reduce mortality; however, morbidity remains the same. While every case referred has its own criteria to offer surgical intervention, each case is still unique to which their presentation may differ in its own accordance and risk factors underlying the mentioned disease processes. While certain criteria are taken into consideration in intervening, sometimes the clinical picture may vary accordingly. The challenge remains when to operate and when to not.

## Biography

Priya Sharda spent her formative years building her career in one of the largest bed occupancy hospital, Hospital Kuala Lumpur, Malaysia. After coming out as a Neurosurgeon from University Sains Malaysia (USM), she spent another year there before embarking into another era in the Northern region of Malaysia's primary tertiary Hospital for Neurosurgery, Penang General Hospital. She has published a few papers in reputed journals along her way despite busy schedule. She is also a keen trainer and spends time teaching post basic nursing as well as medical students.

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# Neurodegenerative Disorders and Stroke

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## Experience with spinal tumors in National center of neurological sciences (NCNS)

**Abubakr Darrag Salim and Mohammed Awad Elzain Ahmed**  
National Center for Neurological Sciences, Sudan

Spinal tumors present 5-10 % from all skeletal neoplasm, Primary intraspinal tumors comprise between 10 and 15% of all CNS tumors, with higher incidence in young children, spinal tumors are associated with aggressive morbidity.

**Results:** Total number 324 were included, age range was 2- 82 years with mean age of 39.2 years, 56.2% were males while 43.8% were females, presenting symptoms include backache in 82%, limb pain in 28%, limb weakness in 91.5 %, sensory impairment in 84% and sphincteric disturbances in 43.3% of the patients, MRI was the main investigation used Dorsal tumors were found in 38.5%, cervical in 14.2% and in the lumbar spine in 10.8% of the patients. Histopathology result was present in 64.5% and was missing in 35.5%, Meningioma was the tumor found in 23.5% followed by schwannomas in 10.5% then neurofibroma in 5.2%, ependymoma in 3.4%, astrocytoma in 2.5% haemangioma in 2.2% and dermoid in 1.5%, metastatic tumors were found only in 0.3% of the patients the final outcome was cure or improvement in 64% of the patients, while 13% remained static, 2.8% were deteriorated, 6.5 % died due to pulmonary embolism or respiratory failure, 13.6 % lost the follow up. The complications encountered were urine incontinence in 9%, urine retention in 3.7%, urinary tract infections in 4.9%, constipation in 3.4% and wound infection in 3.4% of the patients

**Conclusions:** Spinal tumors are in most instances curable conditions requiring attention in diagnosis and treatment, They present with features of progressive myelopathy, MRI is needed for diagnosis, Benign tumors like meningiomas and schwannomas constitute the majority, total excision can be achieved in most of the spinal tumor.

### Biography

Abubakr Darrag Salim has completed his primary medical school at Ain Shams university in Cairo Egypt in 1986 then he obtained MD in clinical surgery from Khartoum University in Sudan in 1997 Then he obtained MD in Neurosurgery from Sudan medical specialisation board in Sudan in 2003 he was then offered Honor MD in Neurosurgery from the same board in 2013, he is practising neurosurgery in Khartoum Sudan at Mawada and Alyaa hospital and he is the president of the advisory board of neuroscience of federal ministry of health in Sudan and member of the Neurosurgical board of Sudan medical specialisation board, He has published more than 8 papers and has presented more than 50 papers in local regional and international conferences

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# Neurodegenerative Disorders and Stroke

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## Effects of whole-body vibration on fall risk and functional mobility in a case of unilateral chronic stroke patient

Denizoglu Kulli H, Durgut E, Alpay K and Gurses HN  
Bezmialem Vakıf University, Turkey

**Purpose:** Whole-body vibration (WBV) has been used to improve neuromuscular function. The aim of the study is to determine whether whole body vibration is beneficial for fall risk and functional mobility performance in a chronic stroke patient.

**Methods:** A patient who is 37 years-old had hemorrhagic stroke in 2010. Hemiplegia was assessed via Brunnstrom motor recovery stage. The fall risk and functional mobility were measured by using Biodex Balance System and Timed Up and Go Test (TUGT). In treatment programme for lower extremity, 50 Hz vibration applied while patient was standing on a vibration platform for 1-minute six times in one session. The same protocol was performed while the patient was in quadruped position, their hands on the vibration platform for 30 seconds six times for upper extremity. The patient was treated three times a week for 10 session. The assessment were done before and after the treatment.

**Results:** Pre and post-treatment Brunnstrom motor recovery stages of lower extremity, upper extremity and hand were 4,5; 2,2; 2,3 respectively. Fall Risk Test overall stability index is  $1.70 \pm 0.35$ ;  $1.0 \pm 0.34$ . The affected and unaffected side TUGT score are 13,12 s and 15,13 s, respectively.

**Discussion:** The protocol which performed for this case can be used to improve functional mobility performance and may decreased fall risk in patients with chronic stroke. However, further studies are needed to develop a standard treatment program with WBV for fall risk and functional mobility performance among chronic stroke patient.

### Biography

Denizoglu Kulli H is pursuing PhD in Biomedical Engineering and she is a Teaching Assistant in the Faculty of Health Sciences, Division of Physiotherapy and Rehabilitation at Bezmialem Vakıf University. Her research interests include "Biomechanics of human, cardiopulmonary and neurological rehabilitation especially stroke, exercise sciences.

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Notes:

## Cerebrovascular Disorders | Neuro Therapeutics | CNS Disorders

### Session Chair

**Abubakr Darrag Salim**

National Center for Neurological Sciences & Neurosurgery, Sudan

### Session Introduction

**Title: Iron homeostasis and hepcidin quantification in Alzheimer's disease patients**

**Manolov V**, Medical University Sofia, Bulgaria

**Title: Non-Motor Symptoms In Patients With Parkinson Disease Experienced Deep Brain Stimulation**

**Tıkac G**, Pamukkale University, Turkey

**Title: Attempts to prevent falls after stroke**

**Simge KALAV**, Akdeniz University, Turkey

**Title: The Effect of Educational Intervention Programs for Caregivers of Patients with High-Grade Glioma**

**Sefika Tugba Yangöz**, Akdeniz University, Turkey

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# Neurodegenerative Disorders and Stroke

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## Iron homeostasis and hepcidin quantification in Alzheimer's disease patients

Manolov V<sup>1</sup>, Hadjidekova S<sup>1</sup>, Petrova J<sup>1</sup>, Vasilev V<sup>2</sup>, Petrova M<sup>1</sup>, Kuntchev T<sup>1</sup>, Jelev Y<sup>1</sup>, Jeliakov P<sup>1</sup>, Tzatchev K<sup>1</sup> and Traykov L<sup>1</sup>

<sup>1</sup>Medical University Sofia, Bulgaria

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**Background:** Alzheimer's disease (AD) is characterized by deposition of amyloid plaques of amyloid- $\beta$  chelating peptide with transition metal ions ( $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$  и  $\text{Fe}^{3+}$ ). The binding of  $\text{Cu}^{2+}$  and  $\text{Fe}^{3+}$  leads to toxic chemical reactions; a change in the oxidation of two metals, that leads to  $\text{H}_2\text{O}_2$  production in the presence of transition metals and finally gives toxic free  $\text{OH}\cdot$  radicals.

**Methods:** 41 Alzheimer's disease patients were included in this study. They were evaluated for serum iron, copper, selenium, zinc and hepcidin levels. Superoxide dismutase (SOD) and glutathione peroxidase (GPX) were measured as oxidative stress markers. Hepcidin, SOD and GPX were measured by ELISA methods. Serum Fe, Cu, Se and Zn were quantified by AAS. The results from AD patients were compared to age and gender matched healthy controls. We used Pearson's correlation and Student's paired t-test for statistical analysis of established results.

**Results:** We found statistically significant elevated serum iron, copper and zinc results in AD patients (42.9  $\mu\text{mol/l}$ , 39.7  $\mu\text{mol/l}$ , and 41.1  $\mu\text{mol/l}$ ) compared to control group (21.5  $\mu\text{mol/l}$ , 18.7  $\mu\text{mol/l}$ , and 15.9  $\mu\text{mol/l}$ );  $P < 0.01$ . Plasma selenium levels were decreased in AD patients (121.7 nmol/L) compared to healthy controls (652.4 nmol/L);  $P < 0.005$ . Hepcidin concentrations were increased in AD cases (61.1  $\mu\text{g/l}$ ) compared to controls (20.7  $\mu\text{g/l}$ );  $P < 0.001$ . SOD and GPX levels were decreased in Alzheimer's disease (8.9  $\mu\text{g/ml}$ , and 11.4 pg/mL) compared to normal values in healthy controls (21.7  $\mu\text{g/ml}$ ; and 39.5 pg/mL);  $P < 0.001$ .

**Conclusions:** The expected contribution from our study is practical introduction of quantification of serum hepcidin as a potential marker for early diagnosis of impaired iron homeostasis, leading trace element in the pathogenesis of neurodegenerative diseases.

### Biography

Manolov V has completed his PhD from Medical University in Sofia, Bulgaria. He is working as Assist. Prof. at Department of Clinical laboratory and clinical immunology at the same University. He has interests in iron metabolism, gynecology, neurology, endocrinology and pediatrics. He has published more than 25 papers in reputed journals and participated in more than 60 National and International meetings in different medicine fields.

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## Non-motor symptoms in patients with parkinson disease experienced deep brain stimulation

**Tıkac G, Duray M and Can Akman T**  
Pamukkale University Denizli – Turkey

**Purpose:** This study was planned to examine non-motor symptoms in patients with Parkinson disease (PD) experienced deep brain stimulation (DBS).

**Materials and Methods:** 9 patients with PD experienced DBS, were consulted to physical therapy and rehabilitation services at Pamukkale University Hospitals, were included in this study. Presence of back pain, orthostatic hypotension, constipation and insomnia were questioned after the patients' personal information was recorded.

**Results:** 4 (44.4%) of all volunteers evaluated were female and 5 (55.6%) were male. The mean age of the patients was  $65.22 \pm 7.9$  years. It was determined that the right extremities of all the subjects were dominant. 77.8% of patients had back pain; 33.3% had orthostatic hypotension; 100% had constipation and 55.6% had insomnia problems.

**Discussion:** Our study shows that non-motor symptoms including constipation and back pain seem in patients with PD experienced DBS, at a non-ignorable rate. Because most clinical studies focus on motor symptoms, evidence-based information are insufficient in patients with PD experienced DBS. Since clinicians ignore non-motor symptoms in patients with PD, we think that obtained data in our study are important for giving clinicians an idea. In this regard, in order to achieve generalizable results, studies are needed to be carried out with larger samples.

### Biography

Tıkac G has completed his primary and high schools educations in Denizli, Acipayam. In 2014, she graduated from Dokuz Eylül University, School of Physical Therapy and Rehabilitation with a title of physiotherapist. In 2016, she started to work as research assistant at Pamukkale University, Institute of Health Sciences, School of Physical Therapy and Rehabilitation. She has published no paper in reputed journals until now. She is currently doing a master's degree Physical Therapy and Rehabilitation Department of Pamukkale University, Kinikli, Denizli/Turkey.

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# Neurodegenerative Disorders and Stroke

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## Attempts to prevent falls after stroke

Simge KALAV and Hicran BEKTAS  
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Stroke is a serious condition causing to altered physical, cognitive and psychological impairments specifically related to the problem of falls in this population. Falling can lead to a new fall, fear of falling, serious injuries, restriction of daily living activities, and hospital admission. The interventions categorized according to the taxonomy developed by the Prevention of Falls Network Europe are exercises, medication, surgery, management of urinary incontinence, fluid or nutrition therapy, psychological intervention, environment/assistive technology, environmental/social environment, and knowledge interventions (Lamb 2007; Lamb 2011; Verheyden et al., 2013). Studies have been carried out to assess the effects of exercise in the acute, subacute and chronic phases after stroke on the frequency of falls. It has been found that there is no significant effect in reducing the frequency of exercise falls in studies (Dean, 2010; Dean 2012; Batchelor 2012). In a study in which the preventive effect of medical treatment was assessed, there was a significant difference in the reduction of falls compared to the placebo group in patients receiving vitamin D supplementation (Sato 2005). Preventing the causes of dizziness, dehydration and other dietary problems, blood pressure problems, or visual problems caused by the stroke; improving the leg muscle weakness with an appropriate exercise, and appropriate devices; carrying out home safety assessment, helping for the cognitive impairment with home care can be done to prevent falls by health professionals. More research is needed to provide conclusive evidence of the efficacy of these interventions regarding the prevention of falls in individuals with stroke.

## Biography

Simge KALAV is a 32 years old. she graduated from School of Health in 2008. She got her master's degree in the field of medical nursing in 2011. Her master thesis was about "The Relationship Between Caregiving Burden and Quality of Life in Family Caregivers of Stroke Patients". she worked as a nurse in an intensive care unit of a state hospital about 3 years. Now, she is a PhD student (nursing doctoral education). she also work as a research assistant in Faculty of Nursing at Akdeniz University. Her interesting area is stroke / symptom management and caregivers. Now she is preparing for a PhD thesis about problems related to ischemic stroke and self-management.

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# Neurodegenerative Disorders and Stroke

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## The effect of educational intervention programs for caregivers of patients with high-grade glioma

Şefika Tugba Yangöz and Zeynep Özer  
Akdeniz University, Turkey

**Introduction:** High grade glioma (HGG) is one of the most common central nervous system tumors in adults. Adults with HGG and their caregivers have significant information needs. It is rare that institutions provide educational programs for caregivers.

**Aim:** The aim of this review is to examine the effect of educational intervention programs for caregivers of patients with HGG.

**Methods:** Akdeniz University electronic databases center including MEDLINE, CINAHL, PubMed, Cochrane library were searched and published studies in English with “brain tumor, glioma, and education” key words and 106 articles were reached by the search results. By the analysis, the original three manuscripts have been sampled.

**Results:** In a study which was examined the effects of educational program for the caregivers of patients with HGG. According to the study, this program increase caregivers’ confidence in caregiving abilities and reduce their anxiety. Another study evaluated the feasibility and safety of brain tumor website in patients with HGG and their caregivers, it was found that caregivers were stated that they were satisfied with this program and their questions were answered quickly by specialists. In another study, supportive educational interventions for carers of patients with HGG were evaluated. According to the study, this educational intervention reduces caregiver distress, improves caregiver outcomes and reduces patient healthcare resource utilization and overall costs.

**Conclusion:** This systematic review showed that interventions with an educational program improve information provision and knowledge for caregivers. Besides, satisfaction with these interventions was high. This intervention programs can be increased in caregivers other cancers or neurodegenerative diseases.

### Biography

Şefika Tugba Yangöz completed her Master degree in 2013 at Süleyman Demirel University and pursuing PhD at Akdeniz University Institute of Health Sciences. She participated in many national and international congresses. She is a Research Assistant at Akdeniz University, Faculty of Nursing.

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## **Neurodegenerative Disorders and Stroke**

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# Scientific Tracks & Abstracts Day 2

*Global Stroke 2017*

# Sessions

Day 2 July 06, 2017

**CNS Disorders | Neuro Oncology | Neuro Pharmacology | Stroke Rehabilitation & Recovery**

Session Chair

**Mohammad Nazrul Hossain**

Jalabad Ragib Rabeya Medical College, Bangladesh

## Session Introduction

**Title: Aphasia, Strokes in Broca's and Wenicke's Area**

**Öznur Kaymak**, Kocaeli University, Turkey

**Title: Management of multiple aneurysms**

**Gerardo Antonio Reyes-Jiménez**, Hospital De Especialidades, Mexico

**Title: The Malignant Tuberculosis**

**Priya Sharda**, Penang General Hospital, Malaysia

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# Neurodegenerative Disorders and Stroke

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## Aphasia, strokes in Broca's and Wernicke's area

**Öznur Kaymak**

Kocaeli University, Turkey

We investigated the aphasic strokes that occur in the Broca's and Wernicke's area. Aphasia is divided into different forms that include: Global, anomic, Broca's, Wernicke's and other varieties. In this paper, we analysed Broca's and Wernicke's aphasia that lead to communication handicaps. These kinds of aphasia result in injury to the brain, usually taking place by a stroke, and cause production and comprehension impairment of the speech. Broca's aphasic patients whose frontal lobe of the left hemisphere of their brain has been lesioned have some problems with language production. That is, they generally know what they want to say, but cannot utter more than four words, output is rather limited. For this reason, it is also called as non-fluent aphasia. Wernicke's aphasic patients whose posterior portion of the left temporal lobe which involved understanding the language has been lesioned can produce the speech and utter sentences well, but cannot clutch the meaning of the spoken words. That is, the patient put the sentences provided with no coherence in order irrespectively. The evidence from this study shows that the patients who try to survive with aphasia cannot be treated completely; however, the reversibility of the aphasia is dependent on support of a doctor, speech pathologist, and the people around them.

## Biography

Öznur Kaymak is a student who currently studies English language at Kocaeli University, Turkey. She studied Linguistics at Universität Kassel, Germany for four months. She is interested in Neurolinguistics and Disorders related to strokes. She is planning to pursue Master's degree in Neurolinguistics next year.

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# Neurodegenerative Disorders and Stroke

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## Management of multiple aneurysms

**Gerardo Antonio Reyes-Jiménez<sup>1,2,3</sup> and Orlando Tortolero-Barrón<sup>1</sup>**

<sup>1</sup>Hospital De Especialidades, Mexico

<sup>2</sup>Centro Medico Nacional La Raza, Mexico

<sup>3</sup>Instituto Mexicano del Seguro Social (IMSS), Sonora, Mexico

**Introduction & Aim:** The treatment of multiple aneurysms (MA) constitutes a challenge. The objective of this study is to establish the frequency and results in patient's carriers with MA treated by microsurgery and/or neurological endovascular therapy (NET) in the hospital of specialties at National Medical Center La Raza.

**Patients & Methods:** It is an ambispective, descriptive and longitudinal study that includes patients carriers of MA treated at the National Medical Center La Raza from 1st March 2009 to 30th April 2014.

**Results:** 62 patients' carriers of 151 aneurysms were treated. According to the type of treatment, 30 patients (49%) were included in the surgical group (GQ), 25 (40%) in the endovascular group (GE) and 7 (11%) in the combined group (GC). The number of aneurysms was distributed this way: 69 aneurysms (46%) in the GQ, 61 (40%) in the GE and 21 aneurysms (14%) in the GC. At GQ, it was not possible to exclude all their aneurysms on 21% of the patients, while it was feasible in only 27%. In all GE patients (40%), the exclusion of all aneurysms was achieved. The GC, meaning surgical cases that were not completed by NET, formed 11% of the cases. At GQ, there was a rate of 6% of complications; meanwhile at GE it was 0.5%.

## Biography

Gerardo Antonio Reyes-Jiménez has completed his PhD at the age of 26 years from UAG Medical School and now he is a Neurosurgeon Specialist in Vascular Cerebral Urgency Surgery. He has published more than 10 papers in reputed journals.

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# Neurodegenerative Disorders and Stroke

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## The Malignant Tuberculosis

**Priya Sharda**

Penang General Hospital, Malaysia

Tuberculosis is among the oldest and most devastating infectious diseases worldwide. Cerebral Tuberculomas mimic brain tumor clinically and radiologically. Its presentation may vary in clinical presentations which also dependent on the area of the brain that is affected. In Malaysia, it was the leading cause of death in the 40s and 50s, the scenario got better only to impose a repeating problem in this region. In 2016, there was a significant rise in cases noted. Anti Tb drugs is essential in its treatment however there is no agreement regarding duration of treatment. As Tuberculosis (TB) presents in varying degrees of presentation we present this unique case of a 15-year-old girl without any prior contact with TB. Prior to diagnosis, had multiple history of admissions. She was referred to the Neurosurgical department after noting to have prolonged history of fever, vomiting, generalized weakness with 3rd nerve palsy. CT Scan showing hydrocephalus and multiple lesions causing significant raised intracranial pressure with neurological deficits. As she had a history of Miliary TB 6 months prior, she was presumed to have TB even though Cerebrospinal fluid turned negative, and her lesion negative for Tuberculoma. Challenged by the findings we took a multidisciplinary approach to treat her. Serial Mris showed her lesions both infra and supratentorial regions along with meningeal enhancement. As treatment commenced over a year the child improved and the lesion lessened in severity.

## Biography

Priya Sharda spent her formative years building her career in one of the largest bed occupancy hospital, Hospital Kuala Lumpur, Malaysia. After coming out as a Neurosurgeon from University Sains Malaysia (USM), she spent another year there before embarking into another era in the Northern region of Malaysia's primary tertiary Hospital for Neurosurgery, Penang General Hospital. She has published a few papers in reputed journals along her way despite busy schedule. She is also a keen trainer and spends time teaching post basic nursing as well as medical students.

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Notes:



## Clinical Trials & Case Reports | Stroke Management | Neurological Nursing | Modern Diagnostics

Session Chair

**A.K.M Shoab**

MAG Osmani Medical College, Bangladesh

### Session Introduction

**Title: Hyperaemia symptoms via MR-, CT-perfusion and ultrasound index of brachiocephalic arteriovenous ratio - criteria for arterial/venous ischemic stroke's differentiation**

**Semenov A**, Research Institute for Cardiovascular, Russia

**Title: A New Adaptative Method for Using Mirror Therapy in A Facial Paralysis Patient**

**Hilal Denizoglu Kulli**, Bezmialem Vakıf University, Turkey

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# Neurodegenerative Disorders and Stroke

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## Hyperaemia symptoms via MR-, CT-perfusion and ultrasound index of brachiocephalic arteriovenous ratio - criteria for arterial/venous ischemic stroke's differentiation

Alexander Semenov<sup>1</sup>, Semenov S<sup>2</sup>, Portnov Yu<sup>2</sup> and Yurkevich E<sup>2</sup>

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<sup>2</sup>Research Institute for Complex Issues of Cardiovascular Diseases, Russia

**A**im of this study was to estimate ASL MR-perfusion and brachiocephalic vessels ultrasound index of arteriovenous ratio (IAVR) possibilities in arterial/venous ischemic stroke's differentiation based on reference CT-perfusion correlation. 124 patients with ischemic stroke (22 with venous stroke due cerebral venous sinus thrombosis,  $53.5 \pm 16.7$  y and 102 with atherothrombotic stroke,  $68.3 \pm 12.1$  y) which were verified by conventional MRI and MSCT; CT-angiography, PCT (perfusion CT: CBF, CBV, MTT) for all; ASL MR-perfusion (CBF, ATT; n=17) were examined. IAVR was obtained due duplex scanning of carotid common arteries (CCA) and internal jugular veins (IJV) according to the formula:  $IAVR = V_{pdIJVactual} / V_{pdIJVoptimal} * 100\%$  ( $V_{pdIJV}$  - pick diastolic blood velocity, sm/s;  $V_{pdIJVoptimal} = 2SCCA * V_{psCCA} / 3SIJV$ ;  $V_{psCCA}$  - CCA pick systolic blood velocity, sm/s; S - vessels area,  $sm^2$ ). Hyperaemia in perifocal zone of brain lesion was significant registered on CT-perfusion like moderate hyper-perfusion ( $\geq 30\%$ ) in venous (69%) and arterial (3.9%) stroke. CBF enlarging (both PCT and ASL) and ATT shortening (ASL) were noted in venous stroke. IAVR decreases to  $40 \pm 9.5\%$  (venous stroke) vs.  $67 \pm 10.2\%$ ,  $p < 0.00001$  (atherothrombotic stroke). There were strong correlations IAVR with PCT parameters: 1) with MTT in perifocal zone ( $r = -0.42$ ); 2) with CBV in focus ( $r = -0.62$ ) and perifocal zone ( $r = -0.52$ ) and; 3) with CBF in focus ( $r = -0.42$ ). Logistic model built using headache intensity on visual analog scale ( $7.3 \pm 1.6$  in venous stroke vs.  $0.6 \pm 1.9$  in atherothrombotic stroke,  $p < 0.00001$ ) and IAVR values has a high predictive ability (specificity=98%; sensitivity=95.2%). Significant differentiation criteria of venous or arterial ischemic stroke's besides headache are hyper-perfusion ( $\geq 30\%$ ) on CBF, CBV, MTT perfusion maps and decreasing to 50% IAVR threshold.

### Biography

Alexander Semenov is a practical Radiologist working in Saarlouis (Germany) also a researcher in area of brain stroke. Experience in MRI and CT over 10 years, has about 17 printed works in worldwide issues on the topic of venous stroke, also made the speech presentations in Moscow (Russia), took a part in Radiological congress in Paris (France). As a part of physicians team has won a gold medal of Kuzbass healthcare for a CT-Heart of small children.

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# Neurodegenerative Disorders and Stroke

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## A new adaptive method for using mirror therapy in a facial paralysis patient

**Hilal Denizoglu Kulli, Alpay K and Durgut E**  
Bezmialem Vakıf University, Turkey

Facial paresis (FP) is one of the most common and most significant complications after cerebellopontine angle (CPA) tumor resection. This complication has a major impact on the quality of life. Mirror therapy (MT) is a method which is generally used for motor function recovery of stroke and phantom limb pain among amputees. The aim of our study is to determine the effect of MT on a post-op CPA chronic FP patient. A patient who is 53 year old had FP after CPA tumor resection in 2011. The evidence of reinnervation was seen in electromyographic assessment in one year later. The facial impairment was assessed by using House-Brackmann Facial Nerve Grading System (HBFGS) and Sunnybrook Facial Grading System (SFGS). In the treatment, MT and facial massage and exercise were performed for five times/week during six months. In MT training, two mirrors were used in vertical position to each other and patient was asked to see only the unaffected side on mirror while affected side eye were closed. Pre and post-treatment score of HBFGS were changed three to two. Total scores of SFGS were promoted 31 to 79, resting symmetry scores were 15 to 5, symmetry of voluntary movement scores were 52 to 80, scores of synkinesis were six to one. To our knowledge, there is no study to use MT on a FP patient in the literature. MT treatment appears to provide improvement in a post-op CPA chronic FP patient. Further researches are needed to determine the effect of MT.

### Biography

Hilal Denizoglu Kulli is pursuing PhD in Biomedical Engineering and she is a Teaching Assistant in the Faculty of Health Sciences, Division of Physiotherapy and Rehabilitation at Bezmialem Vakıf University. Her research interests include "Biomechanics of human, cardiopulmonary and neurological rehabilitation especially stroke, exercise sciences.

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Notes:



4<sup>th</sup> International Conference on

## **Neurodegenerative Disorders and Stroke**

July 05-06, 2017 Frankfurt, Germany

# Video Presentation

*Global Stroke 2017*

4<sup>th</sup> International Conference on

# Neurodegenerative Disorders and Stroke

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## Stroke, what is behind the scene? Introduction

**Abbas Alnaji**

Al-Sadir medical city, Iran

As a neurosurgeon it is often being consulted for a patient with stroke on particular, the hemorrhagic. While I am interested in stroke in general due to the link just a fifteen years ago of my work between stroke and head injury in theory and practice which is the mannitol and steroids were / are given for brain edema. Another fact which had been written in textbooks of medicine started with the primary level, it is, some strokes are caused by microorganisms e.g. like Brucella. Can we say something about its incidence!! When you see the standard lines of stroke management every and any where you simply conclude that the later is not in the scene. If somebody say these are lines to manage the acute phase. I reply to say to him or her did you practically went to reveal the next phase?!! So, on earth it is canceled from the basic thinking. This is an introduction to series of cerebro-vascular accident CVA or stroke to analyze and deal with some hidden or underestimated issues and facts medico-surgically.

## Biography

Abbas Alnaji has completed his PhD at the age of 26 years from Iran Medical University .He is the consultant Neurosurgeon, Al-Sadir medical city, Najaf organization. He has published more than 15 papers in reputed journals.

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