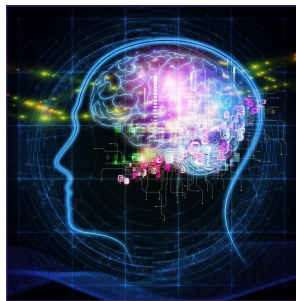
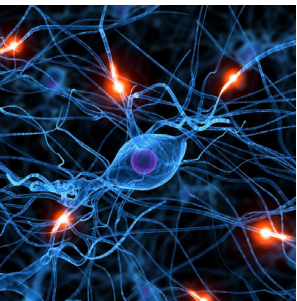


# Workshop

## *CNS 2019*



2<sup>nd</sup> International Conference on  
**Central Nervous System and Therapeutics**

June 10-11, 2019 | Edinburgh, Scotland

## *Naisberg Yakov*

*National Israeli Center for Psychosocial Support of Survivors, Israel*

### **Macro Neurophysiological Biophysical Information Tools (MNPBIT) treat Mental Disorders**

There is no difference between a physical homeostatic health and a mental (biophysical physiological) health and disorder. Both have a unique neurophysiological biophysical mechanism that synchronizes the double, the daily wakeful voluntarily and nighttime automatic circadian cycles function of the organism in health and disrupts both at neuropsychiatric and neuropsychological disorders. Chronic stress that carries threatening material to a personal image or body using macro biophysical neurophysiological units of the processing information produced along sensory neuronal networks a physical distress across membrane ionic channels blocking the flow of ionic information. Distress causes partial or complete physical injury to ion channels blocking them that automatically shifts the current of ionic units that pose a threat from such distress into faulty communication paths at the same time as two problems arrive. First, automatically through the transfer of corrupted data units of biophysical information get delivered into non-specialized working memory centers that triggers the morbid symptoms. Second, it automatically disconnects the voluntary mental regulation thereby stabilizing the neuropathophysiological mechanism being guided by an abnormal neural loop operation (ANLO), automatically regulating a transient homeostatic deregulated (THD) condition (recurrence) to install abnormal body operational

ranges (BOR) generating hypersensitivity and hyperactivity or hyposensitivity and hypoactivity to the outside world. Based on these biophysical neuro-pathophysiological features, the presentation reconfirms the healing process of neuro-pathophysiology by reprocessing neuro-psychotherapy with the same neurophysiological biophysical mechanism that was proactively mobilized in strategies, tooling techniques, and skills that contain continuous placebo effects to neutralize the unfortunate neuro-pathophysiology of THD and gradually replace it with the voluntary regulatory release of the mobile mind operating within the immobile neuronal networks of the brain with transient homeostatic resynchronized (THR) recovery. And for long-term sustenance it must be supported under continuous stress-free interactions.

#### **Speaker Biography**

Yakov Naisberg is M.D, AMCHA- Branch Netanya at National Israeli Center for Psychosocial Support of Survivors of the Holocaust and the Second Generation, Netanya, Mendel Zinger St. 13/2, Haifa, Israel . Yanchun Chi is the Editorial Board Member of many peer reviewed journals and his area of expertise, as a Research Scholar credits him with many publications in national and international journals. He is committed to highest standards of excellence and it proves through his co-authorship of many books.

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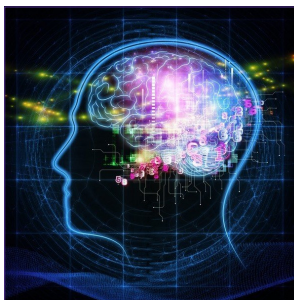
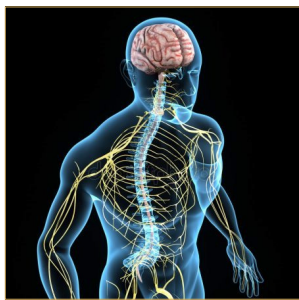
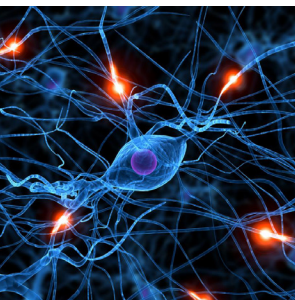
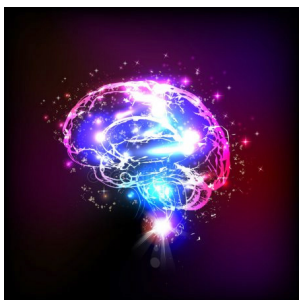
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# Scientific Tracks & Sessions

## June 10, 2019

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### *CNS 2019*



2<sup>nd</sup> International Conference on  
**Central Nervous System and Therapeutics**  
June 10-11, 2019 | Edinburgh, Scotland

## Neuroscience | Neurosurgery | Computational Neuroscience



Chair

**Tamara C McGill Carter**

The Chicago School of Professional Psychology  
USA

### Session Introduction

Title: **Hunova, a total body rehab platform: Clinical experience in Neuro Rehab**

**J A Saglia** | Movendo Technology | Italy

Title: **Nitrite and other NO donors for treatment of Subarachnoid Hemorrhage.**

**Ryszard M Pluta** | National Institute of Health | USA

Title: **Anti-NMDA receptor antibodies and CNS Lupus**

**Czeslawa Kowal** | The Feinstein Institute for Medical Research | USA

Title: **Quality of life in the pre and postoperative periods in Spinal Fusion and Discectomy**

**Gibran Franzoni Rufca** | Hospital Santa Casa de Ourinhos | Brazil

Title: **Blood Pressure management in different types of Stroke - A systemic review**

**Birendra Kumar Bista** | NeuroCardio and Multispeciality Hospital | Nepal

Title: **Dream experience in the absence of vision**

**Shabbir Saifuddin** | University of Dubai | UAE

Title: **Analysis the role of repeat CT Scans in the Traumatic Brain Injury management**

**Md Tofael Hossain Bhuiyan** | Rangpur Medical College Hospital | Bangladesh

## Hunova, a total body rehab platform: Clinical experience in Neuro Rehab

J A Saglia

Movendo Technology, Italy

In the last two years, several studies and clinical trials were run in order to evaluate and validate the use of the robotic rehabilitation system hunova® [1] in different clinical settings such as neurology, orthopedics, geriatrics and sport. In this paper, an overview of clinical experiences and the main results obtained in the field of neuro rehabilitation are presented.

**Parkinson Disease:** In Parkinson's disease, rehabilitation aims to improve patients' quality of life by promoting their independence, safety and well-being [2,3]. To achieve these goals, rehabilitation first aims to prevent and/or delay inactivity, fear of moving or falling and to maintain and enhance physical capacity; as the disease progresses, the goal becomes to improve transfers, posture, balance, walking and functional gestures [2].

A pilot study (ten subjects, 8M, mean age  $72\pm 6.84SD$ ) with a clinical diagnosis of Parkinson's disease were included in this study with hunova®. The study was run in order to verify the feasibility and effectiveness of an integrated traditional-robotic rehabilitation treatment in Parkinson's disease patients.

Main results showed how the integration of traditional and robotic treatment lead, compared to traditional treatment only, to an improvement in the Timed Up and Go Test, to greater pelvis mobility and stability with an improvement in managing the load in sitting position, besides the maintenance of the improvements obtained with traditional treatments on balance, walking speed, stability limits and trunk mobility.

Results obtained highlight how the rehabilitation treatment with hunova® can offer an innovative therapeutic opportunity to be combined with traditional rehabilitation in subjects affected by Parkinson's disease.

**Stroke:** Stroke survivors show greater postural oscillations and altered muscular activation compared to healthy control [4,5]. This altered condition results in difficulties in walking and standing, and an increased risk of falls [6]. A proper control of the trunk is related to a stable gait and to a lower falling risk; to this extent, rehabilitative protocols are currently working on core stability through abdominal, pelvic and

lumbar muscles reinforcement. The carried-out study aimed at assessing the potential of hunova® in stroke rehabilitation, with a focus on core stability and balance. Particularly, a robot-assisted program was compared with conventional rehabilitative treatment to determine whether robot-based protocols can improve the recovery of chronic stroke patients.

An open randomized clinical trial was run, with recruitment of thirty chronic stroke patients, randomly divided in two groups, either underwent a traditional rehabilitative protocol with physical therapists (control group: N=15 age mean  $58.3\pm SD 7.6$  years, 8 females, 8 left side affected), or a robot-based program with hunova® (experimental group N=15 age mean  $63.3\pm SD 10.0$  years, 5 females, 6 left side affected).

Main results showed how hunova® treatment was at least comparable with traditional treatment, leading a better improvement in stroke survivors in the experimental group in standing dynamic balance test (reactive balance, balance on an unstable base) and in proprioceptive control both in standing and sitting positions, compared to the control group. Results showed that hunova® is a promising tool for the rehabilitation of stroke patients.

**Spinal Cord Injury:** In complete Spinal Cord Injury trunk control is essential for daily life activities. When trunk control is impaired the development of less effective compensatory strategies is required. Impaired trunk control functional implications are most evident in neurological conditions such as spinal cord injury [7,8]. A study was carried out with the aim to investigate the use of hunova® for assessment and training of SCI subjects.

Eight subjects (5M 3F, mean time from disease  $12\pm 5.74$ , mean age  $46\pm 10.6$  years) in chronic condition, with complete lesion (ASIA A-B) executed a 20 sessions training with hunova® focused on balance, trunk control, dual-motor-task with movements of the upper limbs, strengthening, core stability.

Main results showed that balance performance and trunk control were correlated with the level of lesion. After the training with hunova® subjects showed improvements in trunk control measured both by clinical scales and by

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hunova<sup>®</sup> during active control tasks and balance tasks in seated position.

Obtained results showed how hunova<sup>®</sup> can be a useful rehabilitation tool for evaluation and training in spinal cord injury.

**Conclusions:** hunova<sup>®</sup> can be a useful and powerful rehabilitation tool for evaluation and training and a considerable number of clinical trials have been set up and will be completed to validate the technology. hunova<sup>®</sup> allows to measure significant parameters of static and dynamic stability and can centralize a complex progression of exercises to recover trunk control and reactive balance after traumatic injuries.

## Speaker Biography

Jody Alessandro Saglia is a mechatronic engineer with 15 years of academic and industrial experience. He graduated in Mechatronics

Engineering at Polytechnic of Turin in 2007 and received his PhD degree in 2010 from King's College London. He also received a Master Degree in Technology Transfer and Management of Innovation from the University of Genoa in 2014. He has been at the Italian Institute of Technology (IIT) since 2010, as a Postdoc researcher in the Department of Advanced Robotics and in 2014 contributed to the creation of the Rehab Technologies Facility and took the role of Principal Investigator, working on the design and development of rehabilitation and assistive technologies. Jody started to work on rehabilitation robotics, in particular on ankle rehabilitation in 2007 and led all the developments of the technology from a proof of concept to the CE marked product. He led a team of engineers and developers to design and build hunova, the first product of Movendo Technology. He is co-founder and Chief Technology Officer of Movendo Technology. Jody has published more than 20 peer-reviewed journal articles and conference papers about robotics applied to rehabilitation and assistive applications and is inventor of 4 patents.

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# Central Nervous System and Therapeutics

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## Nitrite and other NO donors for treatment of Subarachnoid Hemorrhage

**Ryszard M Pluta**

National Institute of Health, USA

Following aneurysmal subarachnoid hemorrhage (aSAH), oxygenated, high-pressure blood forms a clot in the subarachnoid space increasing intracranial pressure (ICP), evoking early brain injury (EBI), ultra-early (<6hr) vasospasm and cortical and/or global cerebral ischemia. During the subsequent week(s), 70% of patients develop delayed vasospasm, and up to 50%-delayed cerebral ischemia (DCI) both portending poor outcome. The exact pathomechanism(s) responsible for those events remains debated. However, it is widely accepted that oxyhemoglobin and its degradation products being neurotoxic and NO scavengers, derail vasodilatory activity of endothelial and neuronal NO-synthases evoking endothelial dysfunction. Decreased NO - availability in the arterial wall endothelium coupled with depletion of brain NO storages by a transient ischemia increasing a local concentration of deoxy-hemoglobin affects conductive arteries and microcirculation, limits perfusion of the cortex, triggers local vasospasm as well as spreading depolarizations leading to spreading ischemia. In experimental and clinical settings an intravenous infusion and local administration of NO gas and different NO-donors demonstrated beneficial effect limiting brain damage, delayed cerebral infarctions, vasospasm and improving the outcome.

This presentation addresses historical data of NO-dependent relief of vasospasm, prevention of delayed brain infarctions, presents its impact on the outcome in the experimental and clinical setting after SAH, and suggests some future venues of NO-related research.

### Speaker Biography

Ryszard M Pluta was born and educated in Warsaw, Poland where I obtained my medical, neurosurgical, doctoral degrees and postdoctoral award in the field of Neurosurgery from the Medical Research Center of Polish Academy of Sciences and the Jerzy and Krystyna Chorobski Foundation. In 1989 I joined the Surgical Neurology Branch at the National Institute of Neurological Disorders and Stroke of the National Institutes of Health, Bethesda, MD, USA, at first as the International Fogarty Fellow then as the Clinical Associate and Clinical Staff Researcher. In 2010 I joined JAMA Editorial Board as the Fishbein Fellow. In 2009 our patent "Nitrite for vascular diseases" got the "Deal of Distinction" Award. In 2013 I retired from the National Institute of Health. Over years of my clinical and research carrier, I presented over 120 lectures at national and international conferences, over 80 invited lectures and workshops at the universities and conferences and published over 130 articles in the leading medical and scientific journals. I am on the Editorial Board of several leading medical journals and the reviewer for numerous scientific and medical entities.

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## Anti-NMDA receptor antibodies and CNS Lupus

**Czeslawa Kowal**

The Feinstein Institute for Medical Research, USA

Cognitive impairment, one of the most prevalent (40-90%) and most debilitating symptoms in neuropsychiatric lupus (NPSLE), is a result of poorly defined pathological processes in the brain of lupus patients. Most of the pathological processes leading to characteristic of lupus multiple organ damage, are mediated by autoantibodies and autoantibodies containing complexes. In our mouse model of NPSLE a subset of such autoantibodies, anti-dsDNA antibodies cross-reactive with NMDA receptor (DNRAbs) mediate acute neuronal damage and subsequent long-term alteration in neuronal arborization and synaptic density, leading to spatial memory impairment. Of interest, DNRAbs are associated with spatial memory impairment in lupus patients. We demonstrated a critical role of activated microglia and C1q in this pathology, as the pathology does not occur in C1Q<sup>-/-</sup> mice, or in mice depleted of microglia. More importantly, we showed in the mouse model, that captopril and perindopril, both centrally acting angiotensin converting enzyme (ACE) inhibitors, can

suppress microglia activation and preserve neuronal integrity and function, including cognitive performance.

ACE inhibitors are widely used to control hypertension and are usually well tolerated. This opens the opportunity to consider the use ACE inhibitors in clinical trials to improve cognitive impairment in NPSLE patients.

Current studies are undertaken to learn more about the mechanisms of neuronal injury and of complement and microglia involvement in these processes.

### Speaker Biography

Czeslawa Kowal has completed her PhD from The Institute of Organic Chemistry of the Polish Academy of Sciences, Warsaw, Poland. She is associate professor of The Feinstein Institute for Medical Research and Zucker School of Medicine at Hofstra Northwell, USA. She has over 40 publications that have been cited over 1500 times, and her publication H-index is 16.

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## Quality of life in the pre and postoperative periods in Spinal Fusion and Discectomy

**Gibran Franzoni Rufca**

Hospital Santa Casa de Ourinhos, Brazil

The current clinical trials and policies of the health sectors have increasingly sought to improve the patient's quality of life. Within this context, assessing the impact of surgical treatment of pathologies of the spine on quality of life has grown in importance. Therefore, due to the epidemiological and functional importance of spine pathologies, and the high number of spine surgeries performed today, the main goal of this study was to evaluate the impact of spinal arthrodesis and discectomy surgeries on patients' quality of life. Methods: This is a retrospective, descriptive, and longitudinal study developed in the neurology and neurosurgery department of a strategic tertiary hospital in the state of São Paulo. Data were collected through a telephone interview, using the Oswestry questionnaire (ODI) to assess lumbar pain in patients submitted to surgery in one year. Results: There was an improvement in the ODI results in all the periods analyzed. When the evaluations were subdivided by surgical type, there was an absolute improvement in the median ODI results in

all procedures, however, only the cervical spine arthrodesis procedure was not statistically significant, probably due to the low number of procedures analyzed (n = 12). Conclusion: It can be concluded that the current surgical technique can contribute to the improvement of patients' quality of life.

### Speaker Biography

Gibran Franzoni Rufca degree in Medicine and Neurosurgery from the School of Medicine of São José do Rio Preto. He live in the State of São Paulo and my main institution is the Hospital Santa Casa de Ourinhos, where my team and He provide neurosurgical treatments, mainly for the pathologies of the vertebral column. They brought to the region that He work the first endoscopic, functional surgeries and the first minimally invasive procedures of the spine. In constant updating, inside and outside the country, He is currently also a master's degree student in the Post-Graduation Program of the University of São Paulo - Campus Botucatu - working in the research of pain and minimally invasive surgeries of the spine, under the coordination of Prof. Dr. Flávio Ramalho Romero.

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## Blood Pressure management in different types of Stroke - A systemic review

**Birendra Kumar Bista**

NeuroCardio and Multispeciality Hospital, Nepal

Stroke alters the cerebral autoregulation as a result blood pressure is elevated in most of the stroke patients. Different stroke types namely, intracerebral hemorrhage, ischemic infarct and SAH (subarachnoid hemorrhage) each require different ranges of BP blood pressure optimization to maintain CPP and MAP. Inappropriate ranges of BP result as rebleed, infarct evolution and cerebral edema. The stroke types require different MAP (mean arterial pressure), CPP (cerebral perfusion pressure), systolic blood pressure (SBP) and diastolic blood pressure (DBP) to maintain adequate cerebral perfusion. Blood pressure optimization is among one of the most important steps in neuroprotection. This systemic review presents the latest updates in BP management in acute stroke. It also stipulates recommended ranges of CPP, MAP, ICP (Intracranial Pressure), SBP and DBP, for acute stroke

management. Emphasis on, injectible antihypertensives only in acute stroke is given and commonly used IV (Intravenous) agents are also listed.

### Speaker Biography

Birendra Kumar Bista, is one of the first neurologists of Nepal. He has been pioneering in field of neuroscience in Nepal and established the first neuroscience center of eastern Nepal. Through years the work of this neuroscience center has been recognized home and abroad. He shows keen interest in medical management and providing state of art services to this impoverished region of Nepal. Recently he added the first stroke center of Nepal. He firmly believes in continuous updated education and its implementation in hospital practices.

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## Dream experience in the absence of vision

**Shabbir Saifuddin**

University of Dubai, UAE

As vision is the predominant sensory modality in the dreams of normally sighted people, it is reasonable to ask do blind individuals have visual dreams? Blindness, particularly when it occurs early in life, is associated with reduced visual imagery and an increased incidence of sleep disturbances including more frequent nightmares. However, the sensory and emotional dream qualities of individuals with differing blindness etiologies remain poorly studied.

The goal of the present study was to further assess the dream experiences of individuals with different times of blindness onset. We examined dream reports collected from 11 blind individuals who reported no light perception, and 11 age- and sex-matched normal-sighted controls. Of the blind individuals, 5 were born blind (congenital blind) and 6 had acquired blindness sometime after birth (late blind). Dream content and themes were examined using daily dream questionnaires collected over a period of 30 days, as well as with the Inventory of Dreams

Experiences and Attitudes (IDEA) questionnaire and the Typical Dreams Questionnaire (TDQ). As expected, the incidence of visual dream elements was much lower in both groups of blind individuals, while other sensory modalities

were more present. Further, congenitally blind individuals, but not late blind individuals, reported more nightmares. Although dream themes were generally similar between blind and normal-sighted individuals, as well as between the congenital and late blind groups, we noted some contents that were characteristic of the blind. Particularly, they reported a greater intensity of positive emotions in their dreams, as well as a more positive attitude towards the dreaming experience.

Blindness not only results in the reduction of visual elements in dream content, but may alter their emotional quality, including a heightened frequency of nightmares among congenitally blind individuals.

### Speaker Biography

Shabbir Saifuddin received post-graduate degree in Ophthalmology in 1987 from Mangalore University in India and has undergone clinical trainings at London MOORFIELDS Eye Hospital) and Munich (University Eye Hospital) and has 35 years of experience as an Ophthalmologist. He has published over 30 papers in journals and at various regional and international conferences. He is presently undergoing training for the MCh Ophthalmology degree.

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## Analysis the role of repeat CT Scans in the Traumatic Brain Injury management

**Md Tofael Hossain Bhuiyan**

Rangpur Medical College Hospital, Bangladesh

**Introduction:** Recently in trauma practice, there are no guidelines on the necessity of repeat CT scan.

**Objective:** Our main aim in this present study was to determine whether serial CT scans demonstrated momentous change from the findings in the first CT scan and whether repeat scans had influence on management possibilities.

**Methodology:** This cross-sectional study was carried out at Department of Neurosurgery, Rangpur Medical College Hospital, and Dhaka from January 2016 to June 2017 where 80 patient's data were evaluated on the basis of their history, clinical examination. The entered data were cross-checked and confirmed.

**Result:** in the study all patients of group I maximum 40% patients belonged to 25 to 34 years age range and most of them were male. Also, most of the patients were students in both the groups.

**Conclusion:** We can conclude that for detecting new lesions or enlargement of existing lesions in traumatic brain injury repeat CT scans were found to be of significance which results in changing of management in a substantial percentage of patients.

### Speaker Biography

Md Tofael Hossain Bhuiyan is a senior Neurosurgeon of international repute with excellent management skills. He has over 19 years of experience in treating complex Brain and Spine problems like brain tumors, spinal disc prolapsed, brain stroke, and subdural hematoma, spinal deformity with a special interest in childhood neurosurgical problems like hydrocephalus and spinal birth defects. After finishing his MBBS and MS, he has undergone many specialized courses in Pediatric Neurosurgery, a better part of which has been rendered in the Italy, USA, and China etc & he had been, Professor Dept. Of Neurosurgery Rangpur Medical College Hospital Rangpur, Bangladesh.

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## Brain Disorders | Neurological Disorders | Psychiatry



**Chair**  
**Karl Sterling**  
PhysioChains Education  
USA

### Session Introduction

Title: **Tardive Dyskenesia and Akathasia: A Dopamine System Theory**

**Tamara C McGill-Carter** | The Chicago School of Professional Psychology | USA

Title: **Evidence-Based practice nursing interventions for improved functional and cognitive outcomes in the Traumatic Brain Injury Patient**

**Judith Kutzleb** | Fairleigh Dickinson University | USA

Title: **The evolution of Clinical, Electrocardiographic, Echocardiographic profile and in patient outcomes among patients admitted for Acute Cardioembolic Stroke at a Tertiary Hospital in the Philippines: A two years study**

**Jose Eduardo DL Duya** | Philippine General Hospital | Philippines

Title: **New Phenotypic and Genotype SOD1 Mutation in dominant familial Motor Neuron Disease: A case report of a family and epidemiology of Motor Neuron Disease in North Malabar**

**Soumya CV** | ASTER MIMS | India

Title: **Conduct Disorder in the South African context**

**Claire Lownie** | University of the Witwatersrand | South Africa

Title: **The Patterns of clinical presentation of Multiple Sclerosis in patients admitted to the National Center of Neurological Sciences, Khartoum, Sudan 2018**

**Eteedal Ahmed A Ibrahim** | National Center of Neurological Sciences | Sudan

Title: **Relationship between Psychological factors and Drug Abuse both in prison and probation population**

**Duygu Altin** | Ministry of Justice | Turkey

**Mehmet Murat Akin** | Ministry of Justice | Turkey

## Tardive Dyskenesia and Akathasia: A Dopamine system theory

**Tamara C McGill Carter**

The Chicago School of professional Psychology, USA

**Statement of the Problem:** Long term use of first-generation anti-psychotics (FGAs) have been theorized in the formation of motion disorders Tardive Dyskenesia and Akathasia and due to the breakdown in the extra pyramidal system (EPS) located in the Basal Ganglia (Lehne, 2013). The second-generation anti-psychotics (SGAs) were sourced to be the “treatment” of TD by blocking dopamine receptors with dopamine agonists of the D2-D5 receptors while also being seen as the genesis of AK. However, the blocking of the receptors in both motion disorders is a theory known as the dopamine blockage theory, despite the intermingle of other neurotransmitters such as Serotonin and Norepineprine (Lieberman, Stroup, McEnvoy, Swartz, Rosenheck, & Perkins, 2005).

The EP system includes theorized Dopamine and Serotonin connections within the Basal Ganglia, the striatopallidongral system, and other structures of the central nervous system that contribute to the regulation of movement, including brainstem nuclei and the cerebellum (Jibson, Marder, & Hermann, 2018). One example of a classical disorder of the pyramidal system is a stroke, resulting in paralysis of an extremity. Cortiospinal lesions above the pyramidal decussation typically result in paralysis of volitional movements of the contralateral half of the body (Patterson, McCahill, & Edwards, 2010). The pathophysiology of EPS

disorders has been disputed because some EPS disorders may not involve lesions of the Basal ganglia. In addition, motions associated with said disorders may not be involuntary (Jibson, et al. 2018; Patterson, et al. 2010). Because of the problems inherited in the concept of the EPS, caution must be exercised in the classification of the EPS due the countless symptoms that mimic other motion disorders as certain neurotransmitters can create the actions of another.

### Speaker Biography

Tamara C McGill Carter expertise is in Neuroanatomy and Neuroscience with a focus on the intricate workings of the Limbic and Memory systems. Her master’s thesis surrounds Human Memory and Encoding, detailing the fundamental changes that creates as well as destroy memories. She is currently is training in to become a licensed Neuropsychologist and is also finishing her final year of the Chicago School of Professional Psychology’s Educational Psychology and Technology doctorate program, due to graduate by next summer. Her dissertation’s focus centers on Autism, Theory of Mind, and Executive Functioning. Her expertise in neuroanatomy further expanded while working with individuals with developmental disabilities/ delays at several Home Health Agencies, which created several projects centering on how autism and developmental delays affect the brain. She currently holds dual bachelor’s degrees in Psychology from Indiana University Northwest in Gary and a Master of Arts degree from the Chicago School of professional Psychology, the concentration focus being Trauma and Crisis Intervention

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## Evidence-Based practice nursing interventions for improved functional and cognitive outcomes in the Traumatic Brain Injury Patient

**Judith Kutzleb**

Fairleigh Dickinson University, USA

**Problem:** Traumatic brain injury (TBI) results in a combination of physical, cognitive, and behavioral impairments with an estimated 1.5 million Americans sustaining a TBI every year. The overall purpose of this program was to implement evidence-based practice protocols for clinical management of traumatic brain injury patients. The routine integration of the EBP protocols of: pulse oximetry and blood pressure monitoring every two hours; toileting and limited distance ambulation (10 to 25 feet) every two hours during the patients wakeful state; baseline Orientation-Log assessment (O-Log) on admission then on a daily basis; physical therapy and speech/cognitive therapy evaluations within 24 to 48 hours of admission were implemented to improve the functional and cognitive outcomes; and reduce bedside patient sitters in the acute care setting.

**Data Source:** This was an exploratory pilot program that implemented RBP protocols for the clinical management of TBI patients. An analysis of trends (pre-EBP of 58 TBI patients Vs. post-EBP of 50 TBI patients) was utilized to evaluate whether change in practice made a significant difference in improving patient's outcome.

**Conclusion:** The EBP protocols decreased sitter sessions by 80% and enabled TBI patients to achieve states of functional and cognitive well-being with a structured approach to clinical management. The finding for sitter session usage

showed a reduction from 30 sessions 3 months before program implementation to 6 sessions during program implementation, with a continued sitter session reduction of 0 sessions for 6 months post program implementation. The results of this program established a structured and sustainable approach to the clinical management of TBI patients. Through the strategic cycle of patient assessment, ambulation, toileting, and hemodynamic status evaluation, patients became less apt to develop confused agitated states, which supported a safer patient environment and reduced the need for sitter sessions.

**Implications for Practice:** Results indicate that the EBP protocol created a structured approach to clinical patient management for the nursing staff. The continuous repetition of patient interventions supported by the protocols in concert with staff education on TBI and its consequences, created skill development in the nursing staff for assessing and managing altered states in this patient population.

### Speaker Biography

Judith Kutzleb, is working in the Fairleigh Dickinson University and in Holy Name Medical center from October 2009. Previously she has worked in Hackensack University Medical Center from May 2006 to March 2010. She has hold Doctorate of Nursing Practice and currently she is doing research in Traumatic Brain Injury.

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## The evolution of Clinical, Electrocardiographic, Echocardiographic profile and in patient outcomes among patients admitted for Acute Cardioembolic Stroke at a Tertiary Hospital in the Philippines: A two years study

Jose Eduardo DL Duya

Philippine General Hospital, Philippines

**Background/ Introduction:** One of 5 ischemic strokes is cardioembolic in nature. Despite the robust data on cardioembolic stroke (CES) in western literature, there is scarcity of local data on Asians. Higher prevalence of rheumatic heart disease (RHD) in developing countries and the growing availability of NOACs may contribute to an evolving patient profile. This study aims to define the profile, management and in hospital acute outcomes of Filipino patients with CES.

**Methods:** A 2-year retrospective study of patients with CES admitted at UP-PGH. Data were obtained through review of records using a standardized data collection form. 126 patients were enrolled. Mean age was 59.9 years. Majority (88%) had a CHADS-VASC Score of >2. Atrial fibrillation remains the most common rhythm abnormality (67%) and 20% has RHD (mitral stenosis). On echo, 92% had LVH and 58% had left atrial enlargement. Interestingly, only 5% had thrombus and merely 8% had rheologic stasis. Majority had moderate-large artery territory infarctions with 40% hemorrhagic conversion within 4 days. Two of 3 patients were given initial anticoagulation. Only half of those who survived were discharged on oral anticoagulation. Only 10% of patients were given NOACs. Mean HASBLED score was  $1.9 \pm 0.96$ . Bleeding complications was 6%. CES were associated with longer hospital stay (16 days) and development of nosocomial pneumonia(46%).

**DISCUSSION:** To our knowledge this is the largest Filipino cohort with CES reported in local literature. The profile of Filipino CES patients was similar to the previous international studies in terms of the patients' age, neuroimaging findings, rate of hemorrhagic conversion, and low anticoagulation rate. Contrary to western data, what is interesting is that Filipino CES patients are younger, with majority of them having RHD in contrast to degenerative causes in the western world.

Prompt and adequate management of RHD is important to prevent CES.

### Speaker Biography

Jose Eduardo Duya earned his Bachelor of Science in Public Health degree from the University of the Philippines Manila in 2005, finishing Class Valedictorian, cum laude. He obtained his Doctor of Medicine degree from the UP College of Medicine in 2010 where he finished First Honorable Mention, cum laude. At a young age, he discovered his passion for Internal Medicine and pursued a straight internship program in Internal Medicine at the UP Philippine General Hospital. He finished his training in Internal Medicine from the same institution in 2013 where he received numerous awards in various inter-hospital competitions and was further named Most Outstanding Internal Medicine Resident for three consecutive years. In 2013, he was named as one of the Most Outstanding Residents in Training by the Philippine College of Physicians. He was elected President of the PGH Physicians' Association in 2011-2013 and the Assistant Chief Resident for Undergraduate Training during his senior year. He pursued his passion in Cardiology as his subspecialty in the same institution where he served as a Chief Fellow and eventually became one of the 10 outstanding performers in the Specialty Board Exam of Adult Cardiology in 2017. He fatefully became the PHA Most outstanding Cardiology Fellow in 2017. Presently, he is a Diplomate and Fellow of the Philippine College of Physicians and the Philippine Heart Association, Philippine College of Cardiology. Armed with beaming determination, due diligence, unwavering willingness to learn and a healthy competitive spirit, he aims to inspire others by being a good example. His vision is to be able to empower and create effective leaders from students/trainees, and peers achieving their full potential through transformative leadership, mentoring and stewardship. His personal advocacies include advancement of medical education, public health service, women empowerment, gender sensitivity awareness and advocating and adopting healthier life style changes. Amidst all these, Joey is a well rounded and multi-talented guy gifted with extra-ordinary artistic, teaching and hosting skills.

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## **New Phenotypic and Genotype SOD1 Mutation in dominant familial Motor Neuron Disease: A case report of a family and Epidemiology of Motor Neuron Disease in North Malabar**

**Soumya CV**

ASTER MIMS, India

**A**nterior horn cell diseases are a group of pure motor disorders involving both upper and lower motor neurons. They are currently untreatable and carry variable course based on the phenotype. The nervous system is vulnerable for oxidative stress due to its high oxygen consumption, low antioxidants, poor regenerative capacity, and presence of metal ions. A 36 year old female had exertion induced cramps of her right lower limb, coldness in the right lower limb, progressive weakness, wasting, and fasciculation; became bilateral within 4 years. She had cyanosis, hypothermia, and decreased sweating of right leg with psoriasis. Her nerve conduction and electromyography studies were suggestive of anterior horn cell disease, which was supported by histopathology. She had severe reduction in total volume of sweat produced and prolonged sweat latency on the right sided limbs as assessed by Quantitative sudomotor axon reflex test. DNA testing showed SOD1 cytogenetic band exon

4 of the SOD1 gene. chr. 21:33039650c>C/T; c. 319c>C/T. We report a new phenotype in dominantly inherited amyotrophic lateral sclerosis, with asymmetrical vasomotor and sudomotor changes and psoriasis. We would also like to present the epidemiologic data regarding the various clinical phenotypes of motor neuron disease in our part of the world.

### **Speaker Biography**

Soumya CV has worked as Consultant Neurologist in AKG Memorial Cooperative hospital, Talap, Kannur for 6 years from January 2013 to December 2018 Attends to around 45 OP patients per day regularly, has more than 30 IP patients per week, has thrombolysed more than 150 acute stroke cases personally, has given botulinum toxin to around 30 patients Working as part - time consultant Neurologist in Dhanalakshmi Hospital, Kannur from March 2018 with regular OPDs twice weekly. Started working in ASTER MIMS Hospital Kannur from February 2019

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## Conduct Disorder in the South African context

**Claire Lownie**

University of the Witwatersrand, South Africa

Conduct Disorder is a serious psychiatric disorder with onset in childhood and adolescence. The antisocial behaviour patterns associated with Conduct Disorder may continue into adulthood. Characteristic externalising behaviours have the potential to negatively impact on the wellbeing of the individual diagnosed with Conduct Disorder, as well as on those with whom such an individual interacts. Aggression to people or animals, destruction of property, deceitfulness, theft and other serious rule violations are some of the broad areas where dysfunction occurs but often result in the affected individual being seen as “bad” or “delinquent” rather than being viewed as a victim of early attachment difficulties and/ or trauma.

During this talk I will present a selection of case examples of children and adolescents diagnosed with Conduct Disorder in order to outline the challenges we are faced with when dealing with these individuals and their families. I will then explore some of the management options and strategies which we are using for these patients.

### Speaker Biography

Claire Lownie graduated with her medical degree (MBBCh) from Wits University in 2003. She completed her internship at Grootte Schuur Hospital (2004) and her community service at a rural hospital in Kwazulu Natal (2005). In 2006, she was diagnosed with a Stage-4 Malignant Melanoma. Thereafter, she worked as a clinical trials coordinator, research programme manager and Trauma Programme Manager at Milpark Hospital. She completed a Master of Science in Emergency Medicine degree (MSc Med Emergency Medicine) and worked clinically in private Emergency Departments. Thereafter, Dr Lownie worked in the corporate pharmaceutical environment. The combination of personal and professional experiences piqued her interest in Psychiatry. She completed her specialist training at Wits University and obtained her fellowship (FC Psych SA) through the Colleges of Medicine of South Africa (2018). Dr Lownie currently runs her private practice in Bryanston. She treats a variety of mental illnesses in patients of all ages.

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## The Patterns of clinical presentation of Multiple Sclerosis in patients admitted to the National Center of Neurological Sciences, Khartoum, Sudan 2018

Eteedal Ahmed A Ibrahim

National Center of Neurological Sciences, Sudan

**Background:** Multiple sclerosis (MS) is an immune-mediated inflammatory disease that attacks myelinated axons in the central nervous system leading to significant disability. Worldwide, approximately 2.1 million peoples around the world are affected by MS. MS is often recognizable clinically by different patterns: relapsing and remitting, MS (80-90%) primary progressive MS (10-20%) secondary progressive MS.

**Objectives:** To study the patterns of clinical presentation of MS in Sudanese patients.

**Methods:** This study is descriptive cross-sectional study conducted at the national center for neurological sciences (NCNS), Khartoum Sudan, conducted for 3 years period from August 2015 to April 2018. The diagnosis was done based on Poser & Mackdonalds criteria two or more clinical attacks with Objective clinical evidence in examination of 2 or more lesions, in patients with two or more attacks with objective clinical evidence of 1 lesion dissemination in space demonstrated by MRI. Sixty-five patients were enrolled. Data was collected using Questionnaire. The diagnosis was confirmed by MRI brain with sagittal FLAIR&MRI cervical spine, serum & CSF oligoclonal band.

**Results:** Females were (90.8%) the majority of them 25 (38.4%) were within the age group from 21-30 years, most of the patients 62 (95.4%) had no family history, 18 patients


(27.6%) had decreased visual acuity 13 patients (20%) had ataxia, 33 patients (50.7%) had past history of similar condition, most of the patients 40 (64.6%) had more than two lesions detectable in their brain MRI, 12 (18.4%) patients were examined for CSF analysis, Oligoclonal band was found in all of them.

**Conclusion:** Females predominated in 91% of the patients, the most affected age group was ranging between 21-30 years. Relapsing Remitting type was predominating. Oligoclonal band was detected in all of the patients. Azathioprine was found to be very effective.

### Speaker Biography

Eteedal Ahmed A Ibrahim is an associate professor of Medicine & Neurology in the Faculty of Medicine Alneelin University. Also she is working in the National Center of Neurological Sciences at Khartoum, Sudan. She is working on the field of neurology.

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## Relationship between Psychological factors and Drug Abuse both in prison and probation population

**Duygu Altin and Mehmet Murat Akin**

Ministry of Justice, Turkey

**Aim:** Addiction, as The American Society of Addiction Medicine (ASAM) defines, is a brain disease. Brain, as the main part of Central Nervous System(CNS) is a target organ for drugs of abuse. Brain chemistry and circuitry is affected, which then leads to compulsive drug-seeking and using behaviors. Cannabis, cocaine, and other illicit drugs can have substantial negative effects on the structure and functioning of the brain. In this study certain psychological factors associated with drug abuse is examined in both prison and probation population, where drug addicts can be accessed more efficiently since addiction is a highly correlated issue with crime and prevalence of drug addiction is high in those cases.

**Method:** The sample includes 200 participants from probation and 102 participants from prison service chosen by random sampling method, following written permission taken from General Directorate of Prisons and Detention Houses.

**Findings:** Statistically significant results are obtained between treatment, suicide, psychiatric disorder history of the person and his drug abuse risk level( $p=0.00$ ;  $p=0.01$ ;  $p=0.01$  respectively  $p<0.05$ ). For prison population it is seen that 4% of participants have reported a suicide attempt depending on drug withdrawal.


**Results:** It is seen that certain psychological risk factors, like suicide history is strongly related to drug abuse. This is an issue which is needed to be taken into account both in prevention and intervention work.

### Speaker Biography

Duygu Altin has completed her MSc from Ege University, Turkey in field of drug addiction and studied in collaboration with World Health Organization. She has also completed addiction counselling education at Capa Medical Faculty, Istanbul and advanced addiction counselling education which lasted for 2 years each. She had her B.A. in field of psychology from Bosphorus University which gives 100% education in English. She works as a probation expert/psychologist/addiction counsellor since foundation of the probation system in Turkey. As an executive member of Turkish Probation Officers Association and an official trainer for colleagues within Turkish Ministry of Justice, she has attended many international study visits, congresses, EU projects as a speaker.

Mehmet Murat Akin, has completed his doctorate degree in sociology department in Pamukkale University. He has been working for Ministry of Justice as a manager in Training Centers, Probation Branches, and several Prisons for 18 years. He also has several academic work on human rights, suicide and offenders. He is a manager at Bitlis closed type prison and has been working on several international and national projects.

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