

8<sup>th</sup> Global Experts Meeting on

**Advances in Neurology and Neuropsychiatry**

August 27-28, 2018 Tokyo, Japan

**Posters**

8<sup>th</sup> Global Experts Meeting on

## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

August 27-28, 2018 Tokyo, Japan

**The neuroprotective effect of glutamate receptors group II agonists in an animal model of birth asphyxia is connected with inhibition of caspase independent apoptosis**

Ewelina Bratek, A Ziembowicz and E Salinska

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**Statement of the Problem:** Hypoxic-ischemic encephalopathy is one of the leading causes of neonatal mortality and permanent neurological disability worldwide. It was shown recently that mGluR2/3 activation before or after ischemic insult results in neuroprotection, but the exact mechanism of this effect is not clear.

**Aim:** The aim of present study was to investigate whether glutamate receptors group II agonists (mGluR2/3) activation after hypoxia-ischemia reduces brain damage and inhibits apoptotic processes.

**Methodology:** We used an animal model of Hypoxia-Ischemia (H-I) on 7-day old rat pups. Animals underwent unilateral common carotid artery ligation combined with 75 min hypoxia at 7.4% oxygen. Control pups were sham-operated (anaesthetized and left common carotid artery dissected, but not ligated). Animals were injected intraperitoneally with mGluR2 (LY 379268) and mGluR3 (NAAG) agonists, 1 hour or 6 hours after H-I (5 mg/kg of body weight). We examined the weight deficit of the ischemic brain hemisphere and the expression of caspase independent apoptosis factors (AIF, HTR/OMI and endonuclease G). The expression of trophic factors GDNF, BDNF and TGF-beta was also measured.

**Results:** Our results show that application of each agonist decreased brain tissue weight loss in ischemic hemisphere independently on the time of application (from 40% in H-I to 15-20% in treated). Both agonists of mGluR2/3 applied 1 hour or 6 hours after H-I decreased expression of AIF, HTR/OMI and endonuclease G proteins compared to untreated H-I. The mGluR2/3 agonists application decreased expression of TGF-beta and increased BDNF and GDNF in the ischemic hemisphere compared to H-I.

**Conclusion:** This study demonstrated the neuroprotective effect of mGluR 2/3 agonists on neonatal hypoxic-ischemic brain injury. Presented data suggest that this effect is connected with decreasing apoptosis.

**Biography**

Ewelina Bratek is PhD student in Dept. of Neurochem at Mossakowski Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland. Ewelina Bratek has published more than 3 papers in reputed journals.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

August 27-28, 2018 Tokyo, Japan

**Anxiety in patients with diabetic peripheral neuropathy**Katerina Stambolieva<sup>1</sup> and D Petrova<sup>2</sup><sup>1</sup>Institute of Neurobiology-BAS, Bulgaria<sup>2</sup>National Transport Hospital "Tzar Boris III", Bulgaria

**Background:** Diabetic Peripheral Neuropathy (DPN) is one of the most common complications of diabetes mellitus which usually affects peripheral nerves and leads to the tingling, pain and loss of sensation in the legs and postural instability that worsen the quality of life and often provokes anxiety and depression on some of patients with DPN.

**Aim:** The aim of this study was to evaluate the prevalence rate of anxiety in the patients with DPN before and after combined therapy with Alpha-Lipoic Acid (ALA) and benfotiamin, pyridoxine and cyanocobalamin together.

**Patients & Methods:** Sixty-four (64) patients with main duration of DPN 8.5±4.7 years and aged between 50 and 65 years took part in this investigation. All patients were treated with combined therapy. The degree of anxiety in patients was evaluated by Hospital Anxiety and Depression Scale (HADS) and the postural stability-by using static posturography. The investigations were made on the first and 60<sup>th</sup> day after the therapy.

**Results:** Before treatment all patients demonstrated high postural instability. Middle level of anxiety (HADS\_A mean score 12.2±1.9) persisted in 47.8% of patients with DPN. The correlation between duration of diabetes and DPN and anxiety are not observed. After treatment with combined therapy the symptoms of DPN such as tingling, and pain of legs decrease. An improvement of the postural instability and decrease of the level of anxiety (HADS\_A mean score 8.6±1.3) were observed.

**Conclusion:** Treatment with combined therapy decrease the neuropathic symptoms and level of anxiety caused to improve the quality of life of patient with DPN.

**Biography**

Katerina Stambolieva is an Associate Professor of Physiology at the Institute of Neurobiology at the Bulgarian Academy of Sciences. Her scientific interests are in the field of neurophysiology, posture and equilibrium, prevention and treatment of diseases of the peripheral nervous system, motor and cognitive behavior and vestibular rehabilitation.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

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**Building health research capacity in Africa for UHC: The profile of stroke in Jos, north-central Nigeria**

Osaigbovo Osawaru Godwin, Amusa G A, Salaam A, Imoh C L and Sagay A S Malgorzata M Bala

Jos University Teaching Hospital, Nigeria

**Background:** Stroke is the second leading cause of death worldwide. Stroke mortality has been shown to be higher in blacks in multiracial studies; it is also a very important cause of disability with its attendant deterioration in the quality of life in survivors. The profile of stroke in north-central Nigeria has been sparsely described despite the fact that it constitutes about 50 to 60% of neurological admission in this part of the world.

**Objectives:** To determine the risk factors associated with stroke, assess the case fatality 90 days post stroke, determine the bad prognostic factors of stroke and assess the sensitivity and specificity of clinical sub-typing of stroke using the WHO and Siriraj stroke scoring tools.

**Method:** A longitudinal cohort study with a 90 day follow up for secondary outcome was carried out on stroke patients admitted into the Neurology Unit of Jos University Teaching Hospital over a 2-year period, September 2016 to August, 2018.

**Results:** A total of 246 stroke patients were admitted during the study period. Males were 131 (53.3%) and females 115 (46.6%) with an age range of 59.5±13.1 for males and 56.7±14.2 for females. Hypertension (81.7%), obesity (80.9%), dyslipidemia (54.5%), alcohol consumption (24.8%), carotid plaques (19.5%), cardiac disease (19.1%) and diabetes mellitus (18.5%) were the commonest risk factors for stroke. The 90 days fatality for stroke was 22%; however, 37% became disabled and unable to carry out activities of daily living without support. Significant predictors of mortality and morbidity were coma, elevated glycated hemoglobin, cardiac disease, HIV infection and high National Institute of Health Stroke Score (NIHSS). WHO clinical stroke sub typing showed a sensitivity of 54.3% and a specificity of 86.3% while Siriraj has a sensitivity of 87.9% and specificity of 84.9% for ischemic stroke, however, for hemorrhagic stroke, WHO sub typing revealed a sensitivity of 86.3% and a specificity of 54.3% while Siriraj was found to have a sensitivity of 84.9% and specificity of 87.9%, showing that Siriraj is a better tool for stroke categorization for appropriate management in areas where neuroimaging are either not readily available or not affordable.

**Conclusion:** Stroke is a major cause of mortality and morbidity in north central Nigeria. Community screening for risk factors should be pursued aggressively and identified risk factors managed promptly in order to reduce the burden of this pandemic. Siriraj stroke sub typing can be used in resource limited setting like ours where neuroimaging facilities are either not available or are too expensive.

**Biography**

Osaigbovo Osawaru Godwin is presently working at Jos University Teaching Hospital, Nigeria.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

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**Alcohol exposure suppresses neural crest cells generation and differentiation during early chick embryo****Ping Zhang**

Jinan University, China

It is now known that excess alcohol consumption during pregnancy can cause Fetal Alcohol Syndrome (FAS) in which several characteristic craniofacial abnormalities are often visible. However, the molecular mechanisms of how excess ethanol exposure affects Cranial Neural Crest Cells (CNCCs), the progenitor cells of the cranial skeleton, is still not clear. In the study, we investigated the effects of ethanol exposure on CNCCs migration both in early chick embryo and *in vitro* explant culture. First of all, we demonstrated that ethanol treatment caused alizarin red-stained craniofacial developmental defects including parietal defect. Second, immunofluorescent staining with neural crest special markers indicated that CNCCs generation was inhibited by ethanol exposure. Double immunofluorescent stainings (Ap-2 $\alpha$ /PHIS3, HNK1/BrdU and AP-2 $\alpha$ /c-caspase3) revealed that ethanol exposure inhibited CNCCs proliferation and increased apoptosis. In addition, it inhibited NCCs production by repressing the expression level of key transcription factors which regulate neural crest development by altering expression of Epithelial-Mesenchymal Transition (EMT)-related adhesion molecules in the developing neural crests. In sum, we have provided experimental evidence that excess ethanol exposure during embryogenesis disrupts CNCCs survival, EMT and migration, which in turn causes defective cranial bone development.

**Biography**

Ping Zhang is a graduate student in Jinan University, China, currently working in the Key Laboratory for Regenerative Medicine of the Ministry of Education and Division of Histology & Embryology. Maintaining a high degree of enthusiasm and professional research attitude, she is been devoted into the program "Alcohol exposure induces chick craniofacial bone defects by negatively affecting cranial neural crest development" and has published the research results on Toxicology Letters.

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**Intraspinal ependymomas and their association with metastasis/disseminations in patients over a period of 22 years**Elixena Lopez Savon<sup>1</sup>, Francisco Goyenechea Gutiérrez<sup>2</sup> and Zenaida Hernández Díaz<sup>2</sup><sup>1</sup>Juan Manuel Marquez Hospital, Cuba<sup>2</sup>Institute of Neurology and Neurosurgery of Havana, Cuba

**Introduction & Aim:** Ependymomas are neuroepithelial tumors of variable morphological appearance whose treatment of choice is surgical. They represent 13% of intraspinal tumors and constitute 40% of spinal tumors in adults. In Cuba there are few studies about this pathology, hence the main objective is to evaluate the behavior of intraspinal ependymomas in the Neurology and Neurosurgery Institute.

**Patients & Methods:** A retrospective descriptive study of 47 patients operated on with a histological diagnosis of intraspinal ependymomas in a period of 22 years was carried out.

**Results:** In the patients studied, 51% started with a radicular syndrome. In ependymomas, the most frequent histology was myxopapillary (34%) and the terminal filum was the location that prevailed (48.9%). A total resection was achieved in 51.1%, postoperative complications were not frequent, being the cerebrospinal fluid fistula (19.1%) the most frequent. Half of the subjects evolved favorably. 40.4% of the intraspinal ependymomas studied were from intracranial tumors and of these 73.7% recurred. Primary spinal tumors did not disseminate in 92.9% of cases.

**Conclusion:** Intraspinal ependymomas may be primary of the spine or disseminations/metastases of other locations of the neuraxis. The disseminations do not depend on the degree or histological type. Spinal ependymomas have a high rate of tumor recurrence. The adequate postoperative functional recovery depends on an early diagnosis of intratracheal ependymomas and the degree of surgical resection.

**Biography**

Elixena Lopez Savon has graduated as a Doctor in June 2006 and started working in Primary Care in rural areas of her country, in 2008. She has worked in Bolivia as an Intensivist Doctor in the town of Villa Tunari. Later she received a master's degree in Emergency and Medical Emergencies and started the speciality of Neurosurgery in 2015. She started working as a Neurosurgeon in the Pediatric Hospital "Juan Manuel Márquez" in Havana city. She had a certified course on Spinal Surgery, Carotid Doppler, Trans-Fontanel Ultrasound. She also had an Interventional Imaging Research course. She is a Member of AOSPINE since 2013 and she has participated in five congresses held in Havana.

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**Neuroprotective, anti-inflammatory and immunomodulatory activities of *Ozoroa pulcherrima* and *Sida pilosa* extracts on murine model of neuroschistosomiasis**Ulrich Femoe Membe<sup>1,2</sup>, Hermine Boukeng Jatsa<sup>1,2</sup>, Théophile Dimo<sup>1</sup> and Louis Albert Tchuem Tchuenta<sup>1,2</sup><sup>1</sup>University of Yaoundé, Cameroon<sup>2</sup>Centre for Schistosomiasis and Parasitology Yaoundé, Cameroon

**Background:** Schistosomiasis (bilharziasis) is an infectious parasitic disease caused by blood flukes of the genus *Schistosoma*. Schistosomiasis is an important public health problem in Africa. After malaria, it is the second most prevalent tropical disease, affecting at least 258 million people worldwide and 90% in Africa (WHO, 2017). The eggs released by the adult female worm are mainly responsible to the pathology where they are deposited in the liver, intestine, uro-genital or Central Nervous System (CNS). The most severe clinical outcome associated with this parasite is the infection of the CNS known as Neuroschistosomiasis (NSM) and can affect the brain or the spinal cord occurring during all phases of schistosomiasis and resulting to severe complications. Chronic neuroschistosomiasis results from the host's immune response to the eggs and the resultant granulomatous reaction and fibro-obstructive disease. Once deposited into CNS, the mature embryo secretes immunogenic substances that causing inflammatory reaction leading to a periovular granulomatous reaction. In the early phase of schistosomiasis (the first 110 days) the immune response reaches maximum intensity. The granulomas successfully destroy the ova but result in fibrotic deposition in the host tissue. The mass effect of thousands of eggs and the large granulomas concentrated within the brain or spinal cord leads to symptoms such as headache, focal or generalized seizures, ataxia, nystagmus, nausea and vomiting, intracranial hypertension and neurological deficit.

**Purpose:** Many clinical cases have been reported by several authors and many experimental studies have been performed to evaluate the immunopathology and diagnosis during CNS invasion by *Schistosoma*. Moreover, there is no definitive consensus regarding therapy of NSM. Therefore, the search for alternative or complementary drugs has become a priority. *Sida pilosa* and *Ozoroa pulcherrima* are good drug candidate against *Schistosoma* infection. These plants have been studied in our research team and showed schistosomicidal effects (*in vitro* and *in vivo*), antifibrotic and anti-inflammatory activities (*in vivo*) on mice liver infected by *Schistosoma mansoni*.

**Objective:** We aimed for our PhD research to evaluate neuroprotective and neuroimmunomodulatory effects of these to plants extracts on mice model of neuroschistosomiasis induced by *Schistosoma mansoni*.

**Experimental design:** The research design will consist to infect mice with *Schistosoma mansoni* cercariae (80 cercariae per mouse). Twelve weeks after untreated and treated mice will go through the behavioral and neurocognitive tests (Open Field, Traction test and T maze) and sacrificed. Histological and immunohistochemical analyses performed to evaluate inflammation and necrosis in brain and spinal cord tissue as well as inflammatory and profibrotic biomarkers (INF- $\gamma$ , TNF- $\alpha$ , IL-10; IL-13, NF $\kappa$ -b, BDNF and C-reactive protein) in serum and brain tissue.

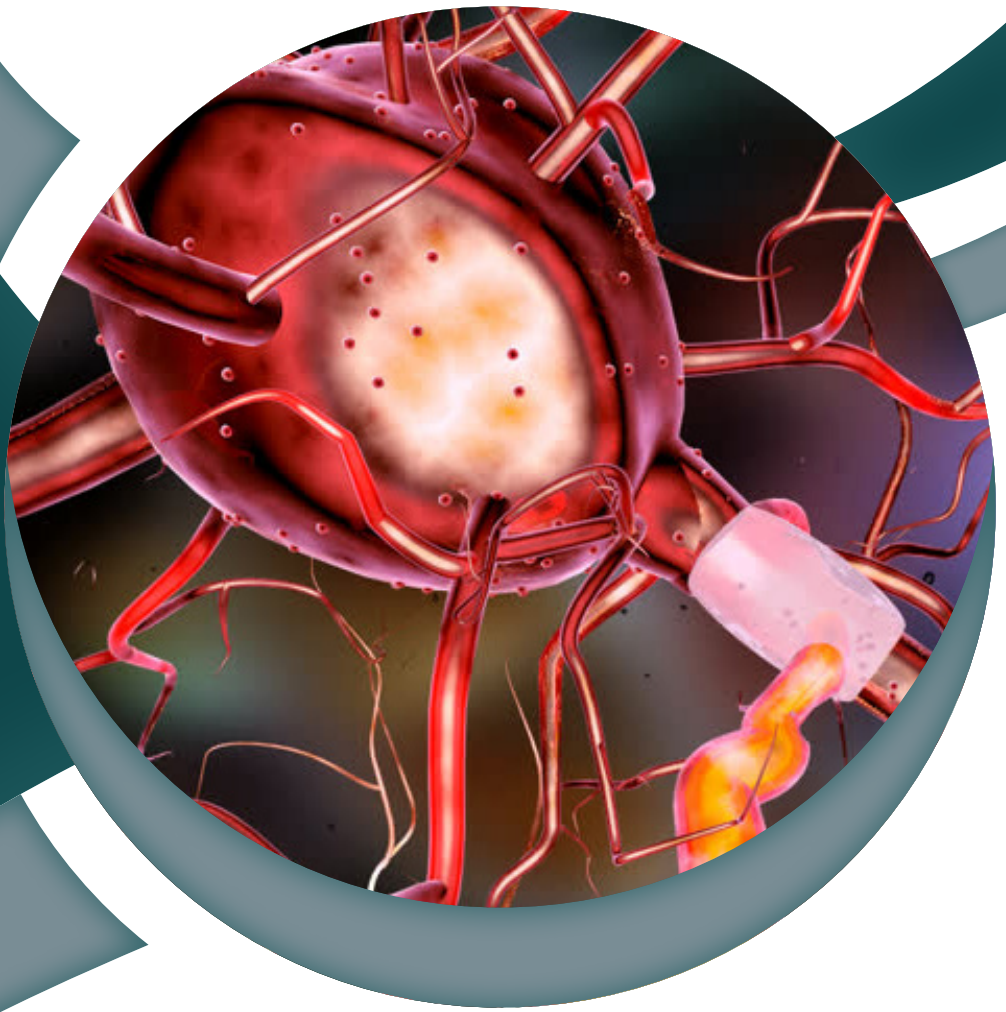
**Biography**

Ulrich Femoe Membe is currently doing his doctoral degree at University of Yaounde, Cameroon.

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## **Advances in Neurology and Neuropsychiatry**

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# **Accepted Abstracts**



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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

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**A possible link between circadian rhythm disorders and mood disorders****William W McDaniel**

University of Kentucky College of Medicine, USA

Seasonal affective disorder and all the circadian rhythm disorders are related to a discrepancy between the duration of the solar day and the circadian cycle. The circadian cycle of humans and other mammals is close to one hour longer than the 24 hours period from sunrise to sunrise. Interestingly, birds show a circadian cycle of less than 24 hours and close to 23 hours. Terrestrial invertebrates, the insects provide the key to understanding this discrepancy. The earliest identifiably mammalian fossils are from the Permian era strata. Insect orders that first appeared in the Permian era include the Hemiptera (bugs), Orthoptera (crickets and grasshoppers), Coleoptera (beetles) and the Neuroptera (lacewings). All of whose modern survivors show a circadian cycle longer than 24 hours in at least some stage of the life cycle. The insects whose ancestors first appeared in Mesozoic strata with the birds include Hymenoptera (bees, wasps and ants) and Lepidoptera (butterflies and moths). Their modern survivors, like the birds, demonstrate a circadian rhythm shorter than 24 hours. It is proposed here that the duration of these animal classes' circadian day may reflect the duration of the solar day at the time of their origin. There is now evidence for three large meteorite impacts on Pangea near the end of the Permian era, one in Wilkes Land of Antarctica, one near the Falkland Islands, and one just west of Australia. The eastward movement of the Australian, African, and Eurasian continent/plate and the southeastward movement of the Antarctic continents/plates suggest that those meteorites were moving eastwards and struck the planet obliquely. Having done so, they might have imparted momentum to the planet's rotation and so accelerated it. This may mean that circadian rhythm disorders are the consequence of a change in the duration of the solar day due to a disaster and that daytime lethargy and depression may have had adaptive value to the mammals who survived that disaster. If this is true, it adds context to our treatment of these disorders with bright light and melatonin.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

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**Traumatic brain injury: Secondary brain injury management and the mitigation of cognitive, psychological and physical impairment****Helen Fernandes**

Addenbrooke's Hospital, UK

Trauma is the most common cause of death for those under the age of 45. Trauma also results in millions of non-fatal injuries leading to life-long disability. Of all the types of injuries, Traumatic Brain Injuries (TBI) are the most likely to result in death or permanent disability. About 90% of injury-related deaths occur in Low and Middle-Income Countries (LMICs). Public health policy and safety prevention measures are necessary in order to address primary injury, which occurs at the time of impact. Secondary brain insults occur following the impact and include amongst other problems, hypoxia, and hypotension, further injury from compression (e.g. expanding hematoma), elevated intracranial pressure, seizures and infection. High quality neurotrauma care is necessary in order to address secondary insults. Such high-quality care relies on a multidisciplinary approach with integrated prehospital, emergency, neurosurgical, intensive care and rehabilitative pathways. Current research efforts utilize a variety of methods, such as randomized trials (decompressive craniectomy in TBI), non-experimental comparative effectiveness research and large collaborative programs aiming to improve neurotrauma care in LMICs.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

August 27-28, 2018 Tokyo, Japan

**Social media and addiction****Khurram Sadiq**

The Greater Manchester Mental Health NHS Foundation Trust, UK

Well we live in a dynamic world of social media. The world is divided into two paradoxes, real world and online which is now declared a domain. We know the advantages of social media, how connected we are, how easy it is to communicate however what we disregard is the unknown dark realm of the social media with a dynamic interface which is very engaging and addictive in nature. With the expansion of social media and advent of smart phones, our universe is in our hands and just a touch away. Screen time has increased considerably, real time has decreased substantially, and there is a false perception of anonymity, closeness, proximity and security. This leads to a lot of deviant behaviors. Outdoor activities have been replaced with gaming consoles, VR gismos and ever engaging social media. Social isolation is on the rise, there has been an increase in the mental health disorders amongst children, adolescents and adults. Social media is now deemed as an addiction. There is a significant withdrawal, craving and dependence on social media, working on rewards, surges, highs and pleasure system. The conundrum is to counter this addiction which impacts the young, impacting not only the social values but institutions affecting skill sets and endangers the societal fabric.

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## ADVANCES IN NEUROLOGY AND NEUROPSYCHIATRY

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**The effects of high frequency repetitive transcranial magnetic stimulation in patients with multiple sclerosis****Violeta Kateva**

St. Naum Hospital, Bulgaria

**Aim:** We studied the effect and safety of 10-day treatment with high frequency (15 Hz) repetitive Transcranial Magnetic Stimulation (rTMS) applied bilaterally over the primary motor cortex in patients with Multiple Sclerosis (MS) in clinical settings. We investigated a heterogeneous group of 35 patients with MS-31 with spasticity, 32 with decreased muscle strength, 14 with mood disturbances, 23 with bladder control impairment, 11 with bowel control impairment and 13 with fatigue.

**Methods:** We used the modified Ashworth spasticity scale, the five-point scale for muscle strength, timed 25-foot walk test, Beck's depression inventory and bladder and bowel control scales from the multiple sclerosis quality of life inventory and fatigue severity scale. The patients were evaluated on the first and on the last day of treatment. For statistical comparison of the results before and after treatment we used Wilcoxon signed rank test.

**Results:** All the symptoms, excluding fatigue, were significantly improved. Twenty-four patients did the timed 25-foot walk test and 16 (67%) had clinically significant improvement. None of the patients had any serious adverse events.

**Conclusions:** Repetitive TMS is beneficial in the management of motor, affective, bladder and bowel symptoms in patients with MS. The procedure has excellent safety profile.

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**Relationship between violence and mental health in the Afghan refugees: Plight of the Internally Displaced Person (IDP)****Fawad Kaiser**

Shifa Tameer-e-Millat University, Pakistan

**Statement of the Problem:** Inside Afghanistan, thousands have become internally displaced. Internally Displaced Persons (IDP) are at a greater risk for physical and mental health problems. Pakistan, home to 1.3 million registered Afghan refugees and some 700,000 undocumented Afghans, resulting in significant personal, social and economic cost and the impact of all three may have on their mental health. Studies have investigated relationship factors between mental health of displaced person and refugee person. Relationships might include relationships between individuals, groups and communities. In a study with a 30-month follow-up, PTSD, depression and somatic complaints reduced with time in internally displaced and non-displaced children, but psycho-social adaptation did not improve in displaced children and remained worst with time. The relationships between violence and health need further investigation, might it be the impact of war on mental health or the impact of family relationships, physical abuse and early adversities. The purpose of this study is to describe the experience of IDP Afghan Refugees seeking help for mental health disorders.

**Method:** A review of individual, family, community and societal risk and protective factors for mental health among Afghan refugees who are settled as Internally Displaced Person in Pakistan.

**Findings:** Exposure to violence was found to be a key risk factor, whereas stable settlement and social support in the host country have a positive effect on the mental health and well-being.

**Conclusion:** Timely, but fair and thorough assessment and resolution of refugee status had positive effect on mental health. Early intervention access for mental and physical health and provision for good housing and schooling were central to adjusting and positive mental health. Further research is needed to enquire into the effects of prolonged uncertainty about refugee status which seems to have a negative effect on mental health. Since mental health problems originating among refugees in forced migration are often long lasting, recommendations are made that host countries must implement immigration, health-care and social policies that support IDP family units and keep deleterious consequences for mental health to a minimum.

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**A Singapore eating disorders treatment program: What is available and what has worked?****Ng Kah Wee**

Singapore General Hospital, Singapore

We are the only dedicated treatment program in Singapore. We are a multi-disciplinary team which offers inpatient and outpatient treatment for patients with eating disorders. The number of patients presenting to us has risen significantly over time. Our clinical services have expanded, with addition of family-based therapy in 2012. Majority of our patients are diagnosed with Anorexia Nervosa (AN), followed by Bulimia Nervosa (BN) and Eating Disorders Not Otherwise Specified (EDNOS). From 2013, diagnoses include Other Specified Feeding/Eating Disorder (OSFED) and Avoidant/Restrictive Food Intake Disorder (ARFID). Clinical profile of our patients with AN has changed over time with lower presenting body weight and body mass index. Patients with BN scored higher in eating disorder psychopathology subscales than those with AN and EDNOS. Malay patients remain under-represented over the years. Treating patients with eating disorders in our program is challenging, in view of our multi-racial population. Cultural factors influence the eating disorder psychopathology, eating disorder literacy and willingness for treatment. There are significant ethnicity differences between the diagnoses of eating disorders. Outcome measures such as weight restoration and return of menstruation are the established markers, however psychopathology such as fat phobia may not be measured adequately in an Asian population.

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**Neurophysiological monitoring during epilepsy in surgeries****Sergio E Kosac**

University of Buenos Aires, Argentina

Epilepsy surgery originates in the early 20<sup>th</sup> century since the discovery of functional areas, by Broca, Hitzog, and many others, on one hand. On the other hand, Jackson's findings, describing the irritative cortical foci and proposing their excision, until the experiences of W Penfield, who generated a most complete functional cortical map, until that time, specifying motor and sensitive/sensorial areas, allowed surgical techniques to advance significantly. Nowadays, surgeries for reduction or elimination of cortical irritative foci are carried out in cases of: Cortical dysplasia, cortical tumors, vascular malformations, etc. Although more and more accurate and satisfactory surgical techniques were developed, in some cases it is imperative to preserve functional areas, whenever they are near or over the surgical area. To prevent or minimize damages to such functional areas, it is necessary to perform intraoperative neurophysiologic techniques. In cases of epilepsy surgeries, there are two ways: One is the electroencephalogram over the cortex, named electrocorticogram. The other one is the Neurophysiologic Intraoperative Monitoring (IOM). It is possible through a technique that applies somatosensory evoke potentials, recorded with a strip of electrodes. Through this technique, we can map out cortex areas, allowing the surgeon to know, before opening the dura, where those functional areas are. Another technique is, once motor and sensory areas are located to find some functions over and into the motor area more accurately. This is made with a stimulator given to the surgeon, connected to the neurophysiologist' equipment, through which, we can map out more accurate areas i.e., hand area, leg area, etc., applying the stimulator over some points, and the neurophysiologist delivering stimuli to activate cortical motor neurons, and recording in the corresponding muscles.

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**Microsurgical resection versus stereotactic guided Ommaya reservoir drainage of cystic craniopharyngioma****Mohamed Hasan Mansour**  
Al-Azhar University, Egypt

**Background:** Craniopharyngioma is often associated with cystic components. Although these tumors are histologically benign, recurrence rates up to 57% have been reported even after surgical gross total resections, due to their invasiveness.

**Objective:** To compare the outcome of invasive and less invasive surgeries of cystic craniopharyngioma.

**Methods:** This study included 20 patients diagnosed and managed in Al-Azhar University Hospitals and Al-Mansoura University Hospital between May 2015 and April 2017. Ten patients were treated by surgical modalities, 10 patients were treated by a less invasive maneuver by superior fenestration and insertion of Ommaya reservoir. The craniopharyngioma was predominately cystic.

**Conclusion:** Ommaya reservoir insertion and drainage of cystic craniopharyngiomas is safe and effective for symptom relief and might be associated with a better outcome than microsurgical treatment.

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**Introducing an artificial quick language for targeted behavioral modification during sleep****Mohammad Reza Saebipour and Kazem Ghaemi**  
Birjand University of Medical Sciences, Iran

**Introduction & Aim:** Ability to change an undesired behavior at the individual level has a great importance not only for health, but also for personal and social development of humankind. Changing behavior is the basis of treating eating disorders, obesity and different kinds of addictions such as drug, smoke and recently addiction like mobile phone dependence. Improving a lifestyle with low physical activity is helpful in prevention of metabolic syndrome. Moreover, many psychiatric disorders benefit from behavioral modifications. Unfortunately, these simple changes in behavior cannot happen easily. An innovative solution to this problem can be found through sleep manipulation. For example, researchers have reported successful intervention for smoke cessation by reactivating smoking behavior memories with an unpleasant smell during sleep. This study highlighted the value of using appropriate cues as potential approaches for communicating with a sleeping person with considerable after effect. But for complex behaviors the capacity of such meaningful cues for offering during sleep needed to be expanded. Our purpose in this study was designing and assessment of novel linguistic methods for behavioral changes during sleep.

**Methodology & Theoretical Orientation:** We have designed a new Artificial Quick Language (AQL) consisted of a bank of short sounds conditioned with most commonly used words with a musical simple grammar. This specific language after montage and playing with specific software can be heard and understood by volunteer subjects after a period of training. Mechanism for sound selection was based on the shortest equivalent verb in any natural language as a result we have a combination of very short verbs from different languages. This platform enables us to compose our targeted phrases.

**Conclusion & Significance:** A new sophisticated approach for control of undesired behaviors based on verbally communication during early stages of sleep is introduced.

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**Combined effect of Baclofen and Acamprosate in experimental models of peripheral neuropathic pain in Wistar rats****Varun Vikas Vij**

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**Background & Aim:** Neuropathic Pain (NP) is defined as pain associated with damage or permanent alteration of the peripheral or central nervous system. Current drug treatment for the management of neuropathic pain associated with various adverse effects. The present study was designed to investigate the combined effect of Acamprosate and Baclofen in experimental model of peripheral neuropathic pain in Wistar rats.

**Material & Methods:** Neuropathic pain was induced by Chronic Constriction Injury (CCI) of sciatic nerve in rats. Acamprosate (100 and 200 mg/kg p.o) and Baclofen (10 and 20 mg/kg p.o) was given in different groups for 14 days starting on 7<sup>th</sup> day post sciatic nerve ligation. Further combination of Acamprosate (100 mg/kg p.o) and Baclofen (10 mg/kg p.o) was also given to one group. On 1<sup>st</sup>, 3<sup>rd</sup>, 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day behavioral parameters like mechanical allodynia and thermal hyperalgesia were assessed. Then animals were sacrificed on 22<sup>nd</sup> day and biochemical parameters (GSH, LPO, Catalase, Nitrite and SOD) were assessed.

**Results:** Ligation of sciatic nerve significantly induced mechanical allodynia and thermal hyperalgesia with increase in oxidative stress (increase in LPO and Nitrite) and decline of anti-oxidant enzyme levels (Catalase, SOD and GSH) in sciatic nerve homogenate. Acamprosate (100 and 200 mg/kg p.o) and Baclofen (10 and 20 mg/kg p.o) attenuated all the behavioral and biochemical parameters alone and/or combination.

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