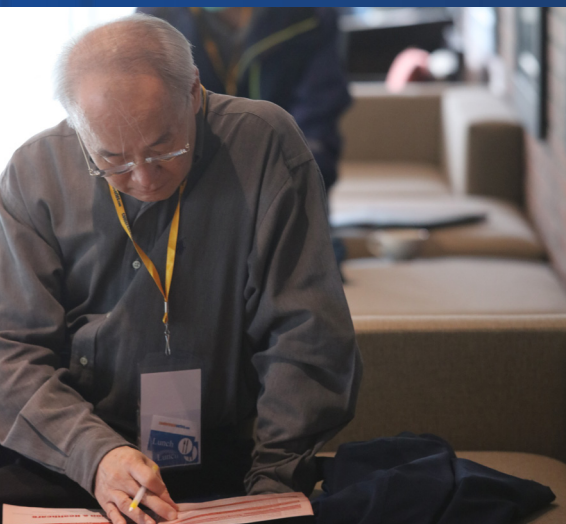


29th International Conference on

PUBLIC MENTAL HEALTH AND NEUROSCIENCE

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Neuroprotective effect of Erythropoietin

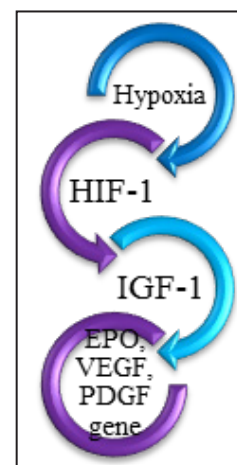
Reza Nejat

Anesthesiologist, FCCM, Iran

Statement of the Problem: During the last 25 years in animal, ex-vivo, *in-vitro* and even in some clinical studies, cell protective effect of erythropoietin, a growth hormone used for erythropoiesis, was clarified even though the German Multicenter EPO Stroke Trial revealed that administration of this growth factor might even be hazardous to humans. On the contrary, huge amount of studies thereafter, like the conclusion achieved in 2010 by Elmahdy and colleagues, could elucidate the anti-inflammatory cell-protective potentials of erythropoietin in neurological injuries and disorders recently categorized as neuroinflammatory entities. The neuroprotective effect of this endo-hormone and its safety, if proved clinically might change the fate of many disabled patients in the future.

methodology & Theoretical Orientation: Near 270 articles including reviews and animal, in-vitro, ex-vivo and clinically case-control studies downloaded from science direct and pubmed websites were studied.

conclusion & Significance: It has long been believed that neural cells do not have the potentials to proliferate nor regenerate in case they encounter diverse sorts of insults including of hypoxic, hypoglycemic, oxidative and even apoptotic origin. A growing number of studies have shown that erythropoietin receptor is distributed extensively in the nervous system on the neurovascular unit cells and erythropoietin participates in many cell-protective anti-apoptotic pathways in the central and peripheral nervous systems. These pathways also have significant contributions to plasticity of the neuronal tissues which by itself shows the probable role of this growth factor in even restoring of memory and intelligence in post-injury period. A recent phase II study in infants with moderate to severe hypoxic/ischemic encephalopathy has demonstrated EPO's effect in diminishing MRI brain injury and improving the motor function of the infants after 1 year. It seems to be a must to conduct more sophisticated methodological case control studies to elucidate the magical effects of this endo-hormone.



Recent Publications:

1. Ehrenreich H, Weissenborn K, Prange H (2009) Recombinant Human Erythropoietin in the Treatment of Acute Ischemic Stroke. *Stroke* 40: e647-e656
2. Elmahdy H, El-Mashad A R, El-Bahrawy H, et al (2010) Human recombinant erythropoietin in asphyxia neonatorum: Pilot trial. *Pediatrics* 125, doi:10.1542/peds.2009-2268.
3. Wu Y W, Mathur A M, Chang T. (2016) High Dose Erythropoietin and Hypothermia for Hypoxic-Ischemic Encephalopathy: A Phase II Trial. *Pediatrics*. 137(6): e20160191. doi:10.1542/ped.2016-191
4. Torun YA, Ozdemir M A, Ulger H, et al (2014) Erythropoietin improves brain development in short-term hypoxia in rat embryo cultures. *Brain Dev*. 36(10): 864-869
5. Bogoslovsky T, Bernstock JD, Kenney K, et al: Erythropoietin and its derivatives: mechanism of neuroprotection and challenges in clinical translation. 4th chapter: *New Therapeutics for Traumatic Brain Injury*, 2017, 4th chapter. Pages 57-77

Biography

Reza Nejat is a board certified Anesthesiologist and FCCM. After graduating from Tehran University of Medical Sciences (TUMS) as a GP, he could achieve the ECFMG certification and also board certification in Anesthesiology from Iran University of Medical Sciences. He passed the fellowship programme in critical care medicine at Sina Hospital, TUMS. During this period he was inclined to study molecular medicine in the field of sepsis, acute heart failure and neurocritical care. Administration of EPO to neurologically injured patients has been one of his field of interests and experience for the past 4 years. He was the chief of few hospitals and associate professor in Shahid Beheshti University of Medical Sciences for 8 years. Dr. Nejat has 4 published books in the fields of cardiology, nephrology, fluid and electrolyte, nutrition, metabolism and endocrinology. Recently, he contributed to the chapter of "Acute Heart Failure" in the reference book "Comprehensive Textbook of Therapeutics" studied by post-doc residents of pharmacotherapy. On his website, rezanejat.com, he publishes his articles.

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Mental health priorities among school aged children, 2018

Kadhim Alabady

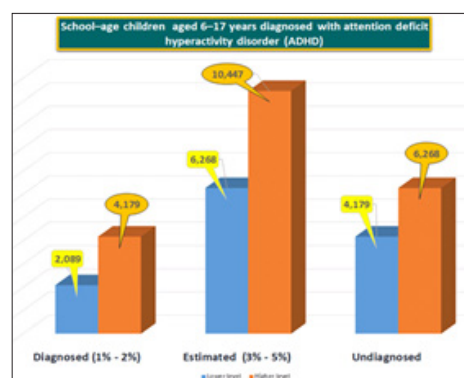
Dubai Health Authority, UAE

Background: Mental health is without doubt one of the most vital aspects of any child's development. It is an essential part of children's overall health and has an impact on the child's physical health and their ability to be successful. Mental health increases children's opportunity to live up to their full potential and do what is best for themselves and the people around them.

Method: In order to carry out this assessment we applied qualitative and quantitative methodology.

Key findings:

- Whilst some child mental health services exist, these are fragmented between the public and private sector. There needs to be a catalogue of comprehensive and coordinated services, which health care professionals can access to improve care delivery and utilization of these services.
- There is a shortage of child mental health professionals such as occupational therapists, speech therapists, mental health nurses and psychologists. There is also a need for on-going training and career development for existing professionals.
- There is an important need to develop and improve mental health services in the Educational system that is tied in with children's mental health services. This will allow provision of effective and timely school interventions for children who require special educational or supportive interventions due to mental health issues.
- 16.4% of children (through their families) seek help for ASD assessment between the age group 6–18+. It is critical to understand and address factors for seeking late-stage diagnosis, as ASD can be diagnosed much earlier and how many of these later presenters are actually diagnosed with ASD.
- It is suggested that half of the children with attention deficit hyperactivity disorder (ADHD) have yet to have the condition diagnosed. This may be due to lack of awareness and stigma



Recent Publications

- Dr Kadhim Alabady, Sue Green, Euan Williamson, Jenny Wright, Clive Rennie, The Improving Access to Psychological Therapies (IAPT) for Norfolk, 2014
- Dr Kadhim Alabady, Update Autism needs assessment for Norfolk and Waveney, 2013,
- Mental Health Needs Assessment for Norfolk and Waveney, 2013: Dr Kadhim Alabady, Linda Hillman, Clive Rennie
- Kadhim Alabady, Gift Ochiba, Linda Hillman; Dementia needs assessment for Norfolk, UK.
- Dr Kadhim Alabady, Suzanne Meredith, Cancer Needs assessment for Norfolk and Waveney, 2015.

Biography

Fellow of the Royal College of Physicians and Surgeons of Glasgow (FRCP – Glasgow). Hold a Doctorate degree in Public Health and Epidemiology, Master degree in Clinical Epidemiology (MSc), Master degree in Public Health (MPH), all from The Netherlands Universities with broad experience in Research and Development (R&D) strategies and operations. Registered as Epidemiologist Grade A with The Netherlands Epidemiological Society. Has numerous publications in the UK in mental illnesses, cancer, cardiovascular diseases, diabetes, Dementia, Autism, COPD, population health, road casualties and others.

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Schizophrenia care pathways health quality Ontario**Tariq A Munshi**

Queens University, Canada

Quality Standards are a new form of evidence-based guidance developed by Health Quality Ontario in topics that are identified as high priority areas for quality improvement in Ontario. Quality Standards are intended to support health care professionals in providing the best care possible, and to help patients, caregivers and the public know what kind of care they should expect. It is with time we have realized that a more comprehensive approach is required to improve the care of those with psychosis. Currently, there is an emphasis on developing and testing care pathways in health. These pathways map the journey of a person with psychosis through the care system. The aim of a care pathway is to enhance the quality of care across the continuum by improving risk-adjusted patient outcomes, promoting patient safety, increasing patient satisfaction, and optimizing the use of resources.” Recently the Health Quality Ontario has taken the initiative to come up with care pathways for individuals with Schizophrenia in attempt to standardize care across the province. There are 11 Quality Standards in this pathway which range from providing comprehensive physical health assessment to discharge planning on the continuum.

Biography

Tariq A Munshi is working as an Associate Professor in the Department of Psychiatry at Queens University, Kingston, Ontario. At present is the clinical director of the Adult Community Division. Held the position of Clinical Director of the Acute Inpatient Unit between 2013 and 2016. Lead Psychiatrist for the Assertive Community Treatment Team since 2009. Had joined the department as an Assistant Professor in March 2009 and was promoted to Associate Professor in July, 2015. Trained in the University College of London, Camden and Islington Training Scheme Rotation. Did Medicine from Karachi, Pakistan practiced in Medicine and Family Medicine before going to the United Kingdom.

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Notes:

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What are top priorities for dementia, 2018?

Kadhim Alabady
Dubai Health Authority, UAE

Background: According to the Ministry of Health, the number of people in the UAE aged over 60 years will increase from 4% to 20% of the population by 2050. Given these population predications, I is expected that dementia and other age-related illnesses will significantly increase as the population grows older. There is a lack of research in the region into dementia. Figures on the number of people affected with Alzheimer’s or other forms of dementia.

Method: In order to carry out the dementia needs assessment we applied qualitative and quantitative methodology.

Results:

- Dementia is a gray zone between three different sectors namely geriatrics, neurology and psychiatry and responsibilities needs to be addressed.
- It was estimated (based on WHO estimates for north Africa and the middle east) around 548 residents in Dubai aged 60 years or more in 2014 had dementia (of which 338 were men and 210 were women). With Dubai’s ageing population, it is clear that these figures are likely to increase in future.
- The most common mental disorders identified among the elderly or disabled were depression, stress, and dementia.
- As the population grows older, it is essential to establish a diagnostic infrastructure and set up long-term care facilities for the elderly including those with dementia and other degenerative mental health conditions.
- The first Dementia and memory clinic in DHA was established on the 8/9/2013. It is based in Al Mizher Primary Health Care Centre and it runs by two Geriatricians. The Clinic is twice per month on Sunday and currently caters for approximately 50 patients.
- There is also Alzheimer support group for the caregivers of the patients with all kinds of dementia to provide them with all the information and give them strong support and confidence in dealing with their patients.

Recommendations:

- Further work is required with primary health care in order to identify patients with undiagnosed dementia.
- Further work is undertaken within primary health care to assess disease registries including dementia with the aim of helping GP practices to improve their disease registers.
- There is a need for more studies into dementia to confirm and expand on these findings and understand local needs.

Recent Publications:

- Dr Kadhim Alabady, Sue Green, Euan Williamson, Jenny Wright, Clive Rennie, The Improving Access to Psychological Therapies (IAPT) for Norfolk, 2014.
- Dr Kadhim Alabady, Update Autism needs assessment for Norfolk and Waveney, 2013,
- Mental Health Needs Assessment for Norfolk and Waveney, 2013: Dr Kadhim Alabady, Linda Hillman, Clive Rennie
- Kadhim Alabady, Gift Ochiba, Linda Hillman; Dementia needs assessment for Norfolk, UK.
- Dr Kadhim Alabady, Suzanne Meredith, Cancer Needs assessment for Norfolk and Waveney, 2015.
- Dr Kadhim Alabady Eye Health and Sight Loss Needs Assessment for Norfolk, May 2014.
- Dr Kadhim Alabady, Dr Shamsher Diu, Cervical Cytology Screening & Cervical Cancer Assessment report for Norfolk and Waveney, March 2014.
- Dr Kadhim Alabady, Stroke needs assessment for Norfolk and Waveney, 2014,

	Numbers				
	60-64	65-69	70-74	75 +	60+
Males	87	52	66	133	338
Females	37	33	51	89	210
Persons	124	85	117	222	548

Estimated numbers of people with dementia aged 60+ years in Dubai by age band and gender, 2014

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- Josh Robotham, Dr Kadhim Alabady, Judy Lomas, Ellie Phillips, Offender Health Profile for Norfolk, Final Report – November 2014.

Biography

Fellow of the Royal College of Physicians and Surgeons of Glasgow (FRCP – Glasgow). Hold a Doctorate degree in Public Health and Epidemiology, Master degree in Clinical Epidemiology (MSc), Master degree in Public Health (MPH), all from The Netherlands Universities with broad experience driving Research and Development (R&D) strategies and operations. Registered as Epidemiologist Grade A with The Netherlands Epidemiological Society. Has numerous publications in the UK in mental illnesses, cancer, cardiovascular diseases, diabetes, Dementia, Autism, COPD, population health, road casualties and others.

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Efficacy and safety of Buspirone in patients with Autism Spectrum Disorder: A systematic review and meta-analysis**Sami Salahia**

Ain Shams University, Egypt

Introduction: Autism Spectrum Disorder is considered one of the most serious developmental disorders that affecting social interactions and communication. However, around 1 out of 160 children are diagnosed with Autism. Hypothesis suggest variety of genes play a role in the etiologic of this disorder. Previous trials tried to use Buspirone as a partial serotonin 5-HT(1A) receptors agonist and dopamine D2 auto receptors antagonist in management motor disorder that's association with Autism. Our aim from this systematic review and meta-analysis is to assess the Safety and Efficacy of Buspirone compared to Risperidone or Placebo in management ASD. To systematically review and conduct a meta-analysis of randomized controlled trials investigating the impact of Losartan as Angiotensin receptor blocker on Hypertrophic Cardiomyopathy Methods: We searched on PubMed, MEDLINE in Process, Scopus and Web of Science (previously ISI) for relevant studies, published up to December 2017. We included randomized controlled trials (RCTs) that comparing buspirone 2.5 mg or 5 mg with Risperidone or Placebo. Data were pooled as risk ratios (RR) or mean differences (MD) with their 95% confidence intervals (CI) between compared groups in a fixed meta-analysis model. Results: From a total of 122 entries identified, 4 RCTs were appropriate for inclusion into the final analysis. Regarding efficacy outcomes, 2.5mg Buspirone shows statistically significant over placebo in terms of Irritability Scale (MD = -0.17, 95% CI [-0.22, -0.12]) and on Inappropriate speech Scale (MD= -0.40, 95% CI [-0.66, 0.14]) while no significant difference was detected between 2.5mg Buspirone and Placebo. However, 5mg Buspirone showed a statistically significant over placebo in terms of Inappropriate speech Scale (MD= -0.30 95% CI [-0.55, -0.05]). On the other hand, The pooled effect size favored placebo over Buspirone in terms of Irritability Scale (MD= 0.14, 95% CI [0.09, 0.20]), and Social withdrawal (MD= 2.00 ,2.00, 95% CI 1.40, 2.60]). No significant difference was detected between Buspirone and Risperidone in term of Irritability (MD= 1.85, 95% CI [-3.12, 6.82]). However, overall evidence was insufficient to suggest a statistically significant difference in the adverse event profile while adequate reporting of adverse events data in future randomized trials of Buspirone is crucial to conclusively judge its safety.

Conclusion: Our findings showed that Buspirone is more Effective in patients with Autism compared to Risperidone or Placebo. No significant difference was observed for adverse events among ASD patients. Further trials are required to clarify the Safety of Buspirone for the treatment of Autism.

Biography

Sami Salahia is co-founder at MRSa Group and Genome Medical Research Association in the UAE. He is a 5th year medical student (Candidate medical Doctor) at Ain Shams University in Egypt with an interest in medical research and have a number of publications in peer reviewed journals. Being a Team Leader, he gives training workshops to Undergraduate Medical Students in Egypt and the UAE Specially for Secondary Research.

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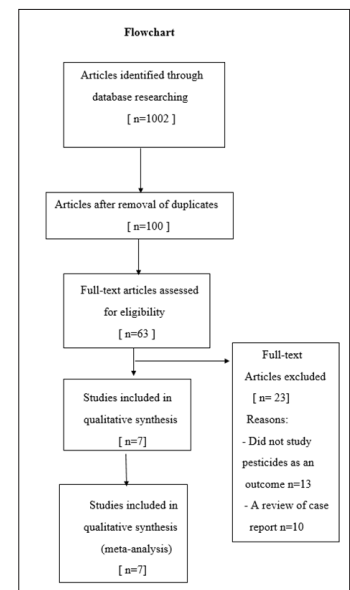
PUBLIC MENTAL HEALTH AND NEUROSCIENCE

July 16-18, 2018 Dubai, UAE

Association of Parkinson Disease with exposure to dietary sources of pesticide residues

Sarah Aggad¹, Tolessa Deksissa² and Thomas Fungwe³
Howard University, USA

Increasing global food demand has elevated the use of pesticides which may compromise human, as well as environmental health. Several studies have linked pesticides to various human diseases such as asthma, birth and fetal defects, cancer, diabetes, Alzheimer’s and Parkinson disease. The objective of this study is to determine the association between Parkinson disease with the dietary sources of pesticides residues. International peer review articles published between 1980 and 2017 were systematically reviewed. The Data bases used for this this review included PubMed and WHO resources. Out of the studies identified (n=1002), 100 articles met the inclusion and exclusion criteria. Compared to other disease, Parkinson disease was found to associate more with pesticides. It is evident from this review that active ingredients of pesticides such as paraquat can cause Parkinson-like symptoms. Rotenone is linked to brain inflammation that can lead to Parkinson's disease; organophosphate pesticides such as chlorpyrifos (Dursban™) and organochlorine compounds such as lindane are very toxic pesticides applied in the U.S. to control insect. In addition to Parkinson’s disease, dichlorvos, trichlorfon, alachlor, cyanazine, and the organochlorine pesticides aldrin, chlordane, and heptachlor are associated with diabetes; midazolinone herbicides, imazethapyr and imazaquin are linked to several types of cancer. To address this issue innovative agricultural food processing and food safety policy is crucial to ensure the sustainability of agriculture and ecosystem services to meet global food demand without compromising environmental and public health integrity.



Biography

Sarah Aggad is a student at University of the District of Columbia. She has completed her study at University of Howard University. She had done many researches in her educational life.

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Docosahexaenoic acid prevents resistance to antiepileptic drugs in two animal models of drug-resistant epilepsy**Morteza Zende hde, Melika Moezifar, and Mohammad Sayyah**
University of Tehran, Iran

Objectives: One-third of epileptic patients are resistant to antiepileptic drugs. Few clinical studies with small sample size indicate that polyunsaturated fatty acids could control drug-resistant epilepsy. We examined the efficacy of acute and chronic administration of docosahexaenoic acid (DHA) in two animal models of drug-resistant epilepsies, i.e. 6-Hz psychomotor seizures in mice and lamotrigine (LTG)- resistant kindled rats.

Methods: Mice received a single injection of DHA (300 μ M, i.c.v.) along with phenytoin (PHT) or LTG (i.p.). Six-Hz electroshock (0.2 milliseconds rectangular pulse width, 3 seconds duration, 44 mA current) was given 15 minutes after DHA, and seizure behaviors were recorded. In LTG-resistant kindled rats, a single dose of DHA (300 μ M, i.c.v.) was administered with LTG, and seizure parameters were measured. In chronic treatment, mice received DHA (0.1 g/day, orally) for 30 days. Then, a single dose of LTG or PHT was administered to mice and 6-Hz-induced seizures were recorded. In rats, DHA (1 μ M, i.c.v.) was administered during kindling development and effect of LTG in DHA-pretreated LTG-resistant kindled rats was verified.

Results: LTG and PHT did not inhibit 6-Hz seizures in mice after single injection of DHA. However, LTG and PHT inhibited 6-Hz seizures in mice that received DHA for 1 month. Acute or chronic administration of DHA to LTG-resistant kindled rats led to the suppression of kindled seizure parameters by LTG.

Discussion: DHA removes the 'inherent resistance' of 6-Hz seizures to PHT and LTG, and prevents the development of pharmacodynamic tolerance to LTG in LTG-resistant kindled rats. DHA might have potential to be used as add-on therapy in patients with refractory epilepsy.

Biography

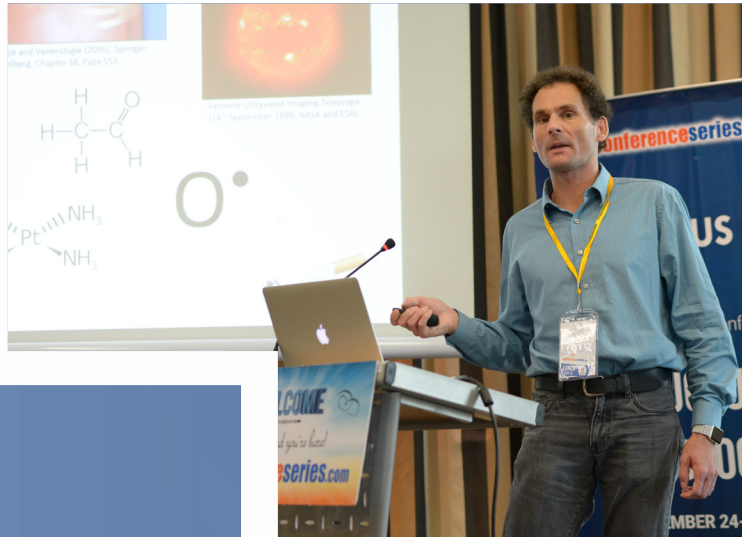
Morteza zende del has completed his PhD at the age of 25 years from University of Tehran and postdoctoral studies from Monash University, School of Medicine. He is academic member of University of Tehran. He has published more than 40 papers in reputed journals and has been serving as an editorial board member of Neurotransmitter Journal.

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Scientific Tracks & Abstracts (Day 2)

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Transcranial direct current stimulation (tdcs) vs. caffeine: A comparison between their effects on cognitive functions**Abdulrahman Alammam**
Saudi Arabia

Background and Objectives: Caffeine is well known to increase arousal and alertness, and subsequently, cognitive functions would increase. Our objective of the present study was to investigate whether anodal Transcranial Direct Current stimulation (tDCS) over the prefrontal cortex could improve performance cognitive function in comparison with caffeine.

Methodology: A prospective study was conducted at the College of Medicine, King Saud University during the period between July and September 2017. A total of 32 subjects performed Cognitrone S4, Reaction Test S3, and Stroop Interference Test S8 in Vienna Test System (WTS NEURO). Tests were designed to assess concentration, attention, reaction, reading speed, and color recognition. Subjects were categorized into two groups, one group was given tDCS, and the other was given caffeine. Subjects performed the tasks once with sham tDCS and a placebo (decaf) espresso shot, and once with active tDCS and an actual espresso shot.

Results: The number of correct reactions significantly improved in the tDCS group (-4.467 ± 5.012 $p=0.004$) while in the caffeine group it did not (-2.294 ± 7.016 $p=0.196$). On the other hand, the reaction time significantly improved in the caffeine group (59.294 ± 95.603 $p=0.021$) while in the tDCS group it did not (14.667 ± 67.248 $p=0.413$). The overall result showed no significant difference between tDCS and caffeine on their general cognitive performance.

Conclusion: This result might be achieved by focally improving executive functions and/or cognitive capacity when tasks are difficult, rather than by improving levels of arousal/alertness. These results indicate that tDCS is a promising tool to improve cognitive function. The variability in response to tDCS protocols is in line with similar studies using other forms of non-invasive brain stimulation. We recommend future studies to explore the effects of tDCS on patients diagnosed with cognitive disorders.

Biography

Abdulrahman Mohammed Alammam is a medical student at King Saud University. He had completed his education in scientific field at "The Modern Institute of The Capital". He got certificates in Basic Course on ECG and Arrhythmias Management, Research Methodology Course at SANS, Radiology Interpretation Course, Antibiotic and Infection Control Course.

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Effect of ramadan fasting on fatigue severity and neurocognitive functions in patients with type 2 diabetes mellitus**Abdulrahman Alfahadi**
Saudi Arabia

Purpose/Objectives: One of the complications of diabetes is the progressive decrease in mental abilities and cognition, in particular; processing speed and verbal memory, ultimately leading to dementia. The purpose of the present study was to see the effect of fasting during the Ramadan month on cognitive functions and fatigue severity in type 2 diabetes mellitus (T2DM) and compare it with control group Muslims using The Cambridge Neuropsychological Test Automated Battery (CANTAB).

Methods: This observational case control study was conducted at the King Khalid University Hospital, Riyadh, Saudi Arabia in control subjects (n=41) and patients with T2DM (n=39). The groups subjects were matched for age, BMI, and gender. The tests included a validated Arabic form of standardized Fatigue severity scale (FSS). The tests selected from CANTAB battery were Motor Screening Task (MOT), Intra-Extra Dimensional Set Shift (IED) and Spatial Span (SSP) which test motor functions, rule acquisition and reversal and working memory capacity respectively. All subjects were metabolically stable without history of cognitive impairment or psychiatric disease (Anxiety and depression).

Results: During Ramadan there were significant differences in IED errors (24.43 ± 20.82 vs 50.73 ± 56.21 $P=0.007$), IED stages completed (7.43 ± 2.43 vs $8.69 \pm .73$, $P=0.003$), MOT (1466.32 ± 559.29 vs 1120.27 ± 343.09 , $P= 0.002$), and SSP SL (4.13 ± 1.36 vs 4.82 ± 1.60 , $P= 0.05$) in diabetics versus control. The differences significantly persisted even in the post Ramadan period among the two groups. IED errors (52.62 ± 60.62 vs 20.95 ± 16.90 $P=0.003$), IED stages completed (7.54 ± 2.50 vs $8.7 \pm .73$, $P=0.003$). Motor Screening Task (MOT) Mean latency significantly decreased after Ramadan (1268.91 ± 297.52 vs 1047.41 ± 375.32 , $P=0.002$). In T2DM there was significant decrease in MOT latency and a significant increase in SSP span length (4.32 ± 1.33 vs 4.71 ± 1.35 , $p= 0.025$). In control subjects the effect on all tests was non-significant. Among the FSS items there were no significant differences in all items of FSS in control while Significant differences were observed in many items that shows T2DM patients have more fatigue symptoms than control

Conclusions: Ramadan fasting significantly affects the fatigue scales and neurocognitive functions in patients with T2DM in terms of (MOT) motor performance, (IED) flexibility of attention & more errors and (SSP) working memory capacity. These indicators remain worse in the post Ramadan period also. Large scale studies with educational counseling and proper management protocols are required to control the effects of Ramadan on cognitive decline in T2DM patients.

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Neurogenesis and functional recovery by exposure to an enriched environment in rodent models of hypoxic-ischemic brain injury

Hoo Young Lee

The Catholic University of Korea, South Korea

Objective: This study aimed to investigate the incidence and predictors of emergence from prolonged disorders of consciousness (DOC) during inpatient rehabilitation and to compare temporal dynamics and prognostic power between six neurobehavioral signs of the JFK Coma Recovery Scale-Revised (CRS-R) scores on emergence from DOC.

Methods: We retrospectively collected the data of 50 patients who were diagnosed with vegetative state(VS) or minimal state of consciousness(MCS) at admission. Subjects were divided into two subgroups that showed emergence from MCS(EMCS) during neurorehabilitation and that remained VS or MCS. We compared demographic and clinical variables to investigate the best prediction model of EMCS. Moreover, we analyzed the temporal dynamics of six CRS-R neurobehavioral signs which were assessed at intervals of one month during the neurorehabilitation, and identified the signs that significantly predicted EMCS.

Results: Out of 50 patients, 46% showed EMCS. The model incorporating shorter lag time from brain injury onset and absence of intra-axial lesion best predicted EMCS. Also, level of consciousness and total CRS-R score at admission individually showed significant prediction. Other variables such as sex, age at injury onset, cause of brain injury, hydrocephalus, ventriculoperitoneal shunt, cranioplasty, anticonvulsant medication, seizure, and education level did not predict EMCS. Among six signs of CRS-R, auditory subscale showed the most significant correlation to EMCS. Patients denoted slower but greater emergence from MCS in the communication subscale than the motor subscale.

Conclusion: This study revealed that significant recovery of consciousness is observed in patients with prolonged DOC during neurorehabilitation. Shorter lag time and absence of intra-axial lesion were significant predictors for EMCS. Patients in DOC with evidence of higher auditory function were most likely to recover consciousness. These findings should be considered regarding assessment tools and rehabilitative programs that best evaluate and maximize the potential for recovery of consciousness.

Recent Publications

1. Lee, H. Y., Hong, J. S., Lee, K. C., Shin, Y. K., & Cho, S. R. (2015). Changes in hyolaryngeal movement and swallowing function after neuromuscular electrical stimulation in patients with dysphagia. *Annals of rehabilitation medicine*, 39(2), 199-209.
2. Lee, H. Y., Kim, S. W., & Kim, H. S (2014) Subacute Upper Abdominal Pain Diagnosed as Bilateral Diabetic Thoracic Polyradiculopathy - A Case Report. *J Korean EMG Electrodiagn Med* 16(2):75-79.
3. Kang, S. W., Choi, W. A., Won, Y. H., Lee, J. W., Lee, H. Y., & Kim, D. J. (2016). Clinical Implications of Assisted Peak Cough Flow Measured With an External Glottic Control Device for Tracheostomy Decannulation in Patients With Neuromuscular Diseases and Cervical Spinal Cord Injuries: A Pilot Study. *Archives of physical medicine and rehabilitation*, 97(9), 1509-1514.

Biography

Hoo Young Lee has her expertise in neurorehabilitation for traumatic brain injury and stroke. Her subspecialty in the clinic field is neuromodulation in acquired brain injury, cognitive rehabilitation therapy and pediatric rehabilitation. Her research areas include development of rehabilitation complexity scale in the ROK, neuromodulation, and enriched environment in adult mouse model in the context of neurorehabilitation. She has been in years of experience in clinic, research, and education in TBI Rehabilitation Center, National Traffic Injury Rehabilitation Hospital, Gyeonggi-do, South Korea and Department of Rehabilitation Medicine, Seoul St. Mary's Hospital, School of Medicine, The Catholic University of Korea, Seoul, South Korea. She in a Combined Program of Master's and Doctoral Degrees in Department of Medicine, The Graduate School of Yonsei University, Seoul, South Korea

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Table1 Effects of the studied predictors on progress of consciousness during inpatient rehabilitation

Variable	EMCS (n=23)	DOC (n=27)	HR (95% CI)	P Value
Sex				
Male	16 (50)	16 (50)		
Female	7 (38.9)	11 (61.1)	0.44 (0.17, 1.15)	0.093
Age				
mean±SD	47.7 ± 18.4	41.2 ± 21.6	1.02 (0.99, 1.04)	0.115
median (range)	46 (14-81)	46 (6-76)		
Level of consciousness at admission				
PVS/UWS	4 (16)	21 (84)		
MCS	19 (76)	6 (24)	4.49 (1.52,13.27)	0.007
Total CRS-R score at admission				
mean±SD	12.6 ± 3.8	6.1 ± 3.8	1.16 (1.06, 1.28)	0.002
median (range)	13 (6-19)	5 (1-15)		
Etiology				
TBI	14 (48.3)	15 (51.7)		
non TBI	9 (42.9)	12 (57.1)	0.8 (0.3, 1.9)	0.61
Injury Type (n=46)				
extra-axial hemorrhage	7 (87.5)	1 (12.5)		
intra-axial lesion	13 (34.2)	25 (65.8)	0.09 (0.03, 0.24)	<0.001
Lag Time (days)				
mean±SD	219.1 ± 232.3	321.5 ± 266.2	0.71 (0.59-0.84)	<0.001
median (range)	133(35-1105)	222(74-1113)		
Hydrocephalus				
Present	11 (40.7)	16 (59.3)		
Absent	12 (52.2)	11 (47.8)	1.77 (0.78, 4.06)	0.174
Presence of VP shunt				
Present	8 (50)	8 (50)		
Absent	15 (44.1)	19 (55.9)	1.28 (0.54, 3.04)	0.573
Cranioplasty (n=45)				
Present	10 (43.5)	13 (56.5)		
Absent	13 (48.1)	14 (51.9)	1.69 (0.73, 3.91)	0.218
Anticonvulsants				
Continue	15 (45.5)	18 (54.5)		
Discontinue/not taking	8 (47.1)	9 (52.9)	1.19 (0.5, 2.86)	0.694
Seizure				
Event	0 (0)	5 (100)		
Non event	23 (51.1)	22 (48.9)		0.997
Education (n=19)				
< 12yrs	3 (25)	9 (75)		
≥ 12yrs	20 (54.1)	17 (45.9)	1.95 (0.58, 6.6)	0.282

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Autistic intensity in relations to the demographic variables of parents**Kazi Saifuddin and Rahman Md. Mostafizur**
Jagannath University, Bangladesh

Autism has been defined as a neuro-developmental disability of the children. A study was carried out to investigate the relationship between the intensity of autistic disorder and the demographic variables of the parents. The data was purposively selected from different special schools for autistic children in the Dhaka city. Intensity of autism was measured by using the concern tools and the demographic variables of the parents were collected from the office record. One hundred autistic children were used as subjects whose age range was 8 to 25 years and their parents' age range was 25 to 60 years old. Almost all the subjects came from poor families. In this study the demographic variables of parents were taken into account are: father's blood group, socio-economic status, living areas, number of siblings, number of autistic child and family planning has positive correlation significantly ($p < 0.05$) to the higher intensity of autism. On the other hand, demographic variables of parents are sex, mother's blood group and physical problem were found significantly ($p < 0.05$) negative correlation with higher intensity of autism. There was negative correlation found between sex and age of parents. The negative correlation was also between mother's blood group and father's blood group. Again there was negative correlation found between physical problem and family planning. Therefore, it was concluded that the demographic variables of the parents more or less related to those of the intensities of spectrum of the autism.

Related book and papers publication:

- * Kazi Saifuddin (2006). Abnormal and Clinical Psychology (A⁺^vfvweK I wPwKrmv g#bvweÁvb) (for post-graduate level). *Abir Publication*, 38/2ka Banglabazar, Dhaka, Bangladesh.
- * Asoke Kumar Saha, Kazi Saifuddin, Fatema-Tu-Zohora Binte Zaman, and Nishat Jahan Nisha (2015). Mental Health Status of Infertile Women in Bangladesh, *Universal Journal of Psychology*, HR Publishing Corporation, 3(2), 51-54.
- * Nilima Bala Mondol, Farjana Ahmed, and Kazi Saifuddin (2017). Relationship of Self-esteem with Social Support, Anxiety and Depression. *Jagannath University Journal of Social Science*.
- * Asoke Kumar Saha, Kazi Saifuddin, and Ruma Shikder (2014). Mental Health Status of Eve-Teased Girls between Pre and Post Counseling Sessions, *Jagannath University Journal of Psychology*, 4(1).

Biography:

Kazi Saifuddin has received PhD from Kobe University, Japan and worked as a research fellow in Cambridge, Lancaster, Tokushima and other Universities. Presently he is a Dean of the Faculty of Life and Earth Science (Former Chairman of Psychology Department) of Jagannath University, Dhaka, Bangladesh. Renowned academic personality Dr. Kazi Saifuddin was the former President and General Secretary of Jagannath University Teacher Association. He also holds the post of Treasurer of Bangladesh Psychological Association, and Treasurer of South Asian Association of Psychologists. He received international award on the research on psychophysics. He has published many research articles and books. Dr. Saifuddin has been editing many research journals and books.

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Stem Cells (SC) therapy as an emerging therapy in neurology**Saeed Shahbeigi**

University of Tehran, Iran

Stem Cells (SC) therapy emerges as a potential new hope for neurological patients as it could accomplish the immunomodulatory as well as the neuroprotective functions. There is a growing body of literature that supports the potential of the SC for immunomodulation and re-myelination. Here we focus on examining the registered published and on-going clinical trials using stem cells especially the Mesenchymal Stem Cell (MSC) therapy in neurological disorders such as MS, ALS, Stroke, spinal cord injuries and also some types of devastating neuropathies like POEMS. There are evidence showing that the MSC can alter the phenotype of NK cells and suppress proliferation, cytokine secretion, and cytotoxicity against HLA-class I-expressing targets. Some of these effects require cell-to-cell contact, whereas others are mediated by soluble factors, including transforming growth factor-beta1 (TGFbeta1) and prostaglandin E2, pointing to the existence of diverse mechanisms for the MSC-mediated NK-cell suppression. The MSC have been reported to block the differentiation of monocytes into dendritic cells (DC) and impair antigen presentation as well as IL-12 production. Also the human MSC (hMSC) alter cytokine secretion and induce more anti-inflammatory responses. Specifically, the hMSC by induction of mature dendritic cells (DC) decrease tumor necrosis factor alpha (TNF-alpha) secretion and increase IL-10 secretion. The hMSC inhibit Th1 cells, decrease interferon gamma, and affect Th2 cells by increasing secretion of IL-4. This causes an increase in the proportion of T-Regulatory cell switches the CD4+ T cell responses from a Th1 to a Th2 polarized phenotype resulting in a decrease secretion of IFN-gamma from NK cells. Generally speaking we are going to discuss the immunomodulatory effects of the mesenchymal stem cells and finally to review some interested data from our experience and other papers around the world.

Biography:

Saeed Shahbeigi is a Neuroimmunology fellow from UBC Division of Neurology, Department of Medicine, Vancouver, Canada. He is an author for Mesenchymal Stem Cells in the Treatment of Multiple Sclerosis: An Overview of Open Labels and Ongoing Studies. J Neurol Neurophysiol.

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Atherosclerosis and changed iron metabolism in chronic kidney disease**Victor Manolov**

Medical University Sofia, Bulgaria

Chronic kidney disease (CKD) involves high number of population worldwide, which on its way increases brain-vascular diseases risk. Among the main reasons for increased brain disorders evidence in patients with CKD is iron homeostasis dysregulation. Impairment of brain cognitive function is an early sign of atherosclerosis development. 65 patients with chronic kidney disease (stages II to V, incl on dialysis) were included; age 48.8 ± 6.9 . Their results were compared to sex and age matched healthy control and with CKD patients with no atherosclerotic changes. Routine blood analyses as CBC, serum iron, ferritin, hsCRP and specific hepcidin were measured in the included groups. IMT, MMSE, CERAD tests were used for atherosclerotic changes evaluation. We found increased serum hepcidin levels in CKD patients with IMT, MMSE, CERAD changes ($201.8 \pm 14.7 \mu\text{g/L}$) compared to healthy controls ($20.7 \pm 1.9 \mu\text{g/L}$) and CKD with no atherosclerotic changes group ($174.4 \pm 11.8 \mu\text{g/L}$); $P < 0.005$. A positive correlation was found in CKD patients with brain disorders between IMT and serum hepcidin levels ($r = 0.838$, $P < 0.01$). Serum hepcidin correlates positively to atherosclerotic evidence changes in patients with impaired kidney function ($r = 0.810$, $P < 0.01$). Brain-vascular disease risk factors are connected to chronic kidney function impairment. Dysregulation of iron homeostasis is one of the main risk atherogenesis factors. Early hepcidin quantification might predict cognitive disturbances as atherosclerosis symptoms in chronic kidney disease patients, which might be very important for better clinical diagnosis and practice.

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Biography:

Victor Manolov has completed his PhD at Medical University in Sofia, Bulgaria. He is working as Assist. Prof. at Department of Clinical laboratory and clinical immunology at the same University. His interests are in neurology, pediatrics, gynecology, endocrinology and clinical laboratory. He has published more than 20 papers in reputed journals.

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Notes:

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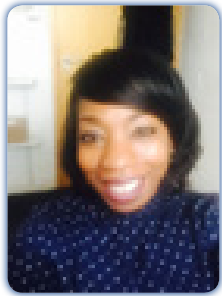


Workshop (Day 3)

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July 16-18, 2018 Dubai, UAE



Michelle Hunter

University of Reoampton, United Kingdom

Strategies to address social anxiety in the workplace: the “hidden” performance killer

Mental health issues impacts working lives too. People struggling with social anxiety place an excessively high standard for themselves within any given social situation, especially the modern day workplace where competence seems to matter most. Research suggests that employees struggling with social anxiety are more acutely aware of how they think and people are going to react to them, as they have a tendency to feel inferior to others, irrespective of their positioning. Some of the questions this workshop will answer include: How does social anxiety impact employee performance? What support can be put in place for employees who are battling with social anxiety? How can a “deep” as opposed to “surface” coaching approach be used to tackle social anxiety? All participants are asked (in small groups) to comment on how issues such as social anxiety are expressed and addressed in their workplace. Other discussions around established and reputable strategies that have been used to tackle social anxiety will be embedded into the discussion. The session will close with a plenary debate and defining the best practices, main problems and prioritisation of the author’s goals for promoting “healthy (in every way) organisations”.

Biography

Michelle Hunter –BSc, MA, MSc, PGCE, PhD, MCIPD, CPsychol, AFBPsS Chartered Occupational Psychologist | Senior Lecturer | Leadership Development Specialist | Executive Coach | Psychometrician.

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