Parkinson 2017

3rd International Conference on

PARKINSON'S DISEASE AND MOVEMENT DISORDERS

September 25-26, 2017 Chicago, USA

Keynote Forum

Day 1

Susan Scanland, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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Susan Scanland

Dementia Connection® LLC, USA

Management of psychosis in Parkinson's disease

Psychosis occurs in over 50% and dementia in approximately 80% of persons with Parkinson's disease. Treatment with non-selective atypical and typical antipsychotics significantly increases mortality rates in Parkinson's disease; as well as other dementias. Research on the most commonly used antipsychotic in Parkinson's, quetiapine, has not revealed significant reduction in Parkinson's psychotic symptoms. Antipsychotic use, due to dopamine antagonism, is associated with unsteady gait and motor dysfunction; which exacerbates pre-existing Parkinsonian symptoms. Persons with Parkinson's disease are already at risk for falls with gait asymmetry, short strides and increased stride duration. Parkinson's patients have an increased hip fracture risk. The newly FDA-approved selective serotonin inverse agonist, pimavanserin, offers targeted treatment at the 5-HT2A receptor site responsible for Parkinson's psychosis; without affecting dopaminergic receptor binding. Research reveals a decrease in hallucinations and delusions in Parkinson's psychosis without worsening of motor symptoms. An evidence-based/case study format will present management of Parkinson's psychosis with or without dementia, using FDA-approved treatment; as opposed to antipsychotics with full black box warnings that are commonly prescribed. Clinical outcomes, cost-effectiveness, quality of life, decreased risk for emergency room visits, hospitalizations and mortality and will be discussed.

Biography

Susan Scanland is a Gerontological Nurse Practitioner and Certified Dementia Practitioner and national Alzheimer's and Dementia Expert with 34 years of experience. She received her MSN from University of Pittsburgh and BSN from Wilkes University. She has been nationally certified as a Gerontological Nurse Practitioner since 1984 and is also a Certified Dementia Practitioner. She holds a Nursing Faculty Specialist position at the University of Scranton. She taught in geriatric faculty positions at Binghamton University (SUNY) from 1999-2004 and the Wyoming Valley Family Practice Residency in Kingston, Pennsylvania from 1987-1999. She is Founder of Dementia Connection® LLC. She is one of two nurse practitioners in the world to receive the Certified Speaking Professional award (CSP) through the National Speakers Association. She presented to geriatric psychiatrists from 15 countries at the American Association for Geriatric Psychiatry Annual Meeting in Washington DC in March 2016. She is Dementia Consultant to a long-term care facility in northeastern Pennsylvania and also provided rural nursing home consults via telehealth. She co-authored two articles on antipsychotic reduction recently in consultant pharmacist and geriatric nursing.

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Srinivas Avathvadi Venkatesan, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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Srinivasan Avathvadi Venkatesan

DR.M.G.R.Medical University, India

The impact of wearing off on quality of life in patients with Parkinson's disease

Introduction: By the year 2040, neuro degenerative disorders are expected to surpass cancer as the second most cause of death in the elderly. One of the most common neuro degenerative disorder is Parkinson's' disease with over 4 million victims identified in the world. Motor and non-motor symptoms tend to return during wearing off phenomenon in levodopa treated Parkinson's patients. The development of wearing off is due to Parkinson's disease progression and the rapid break down of levodopa in the body resulting in a feeling that levodopa effects are fading out. This results in the disturbances of the quality of life. In this study ten steps approach to improve quality of life and wearing off phenomenon are discussed: Disability and quality of life are assessed; research tools to assess quality of life; early signs and symptoms of wearing off; staging of Parkinson's disease and the emergence of wearing off ; management of wearing off; impact of non-motor symptoms on HRQOL (Health Related Quality of Life); Parkinson's disease well-being map and paper version and management of non-motor symptoms improved quality of life in Parkinson's disease than motor symptoms; living a full life with Parkinson's disease; helpful hints in daily life, managing stress with exercise, foot teeth care with diet and nutrition; and creative and complementary therapy.

Conclusion: Depression, fatigue, sleep problems and excessive day time sleepiness require special consideration when trying to optimize Parkinson's management, due to their strong correlation with negative health status and HRQ-ol. Quantifying Parkinson's symptoms provide an important basis for optimizing treatment and care.

Biography

Srinivas Avathvadi Venkatesan is the President of Indian Academy of Neurology and also he is the emeritus Professor of The Tamilnadu DR.M.G.R.Medical University. Srinivas Avathvadi Venkatesan, driven by his quest for excellence and the latest discoveries on human brain related disorders, joined Madras Medical College (MMC) and received MD(General Medicine) in 1978.Later he pursued and received DM in Neurology from his alma mater.He is First Neuro physician of his state Tamil Nadu in India in government service to be conferred, the Fellow of the Royal College of Physicians (FRCP) in London in 2012, fellowship of the Indian Academy of Neurology 2004 and fellowship by the American Academy of Neurology, in 2003.He Is the First Indian to receive American Indian Neurology Award (AINA) in USA in 2001, for the best paper presentation IN STROKE during annual American Academy of Neurology meeting in 2001 in PHILADELPHIA. ByTheT-amil Nadu DR. MGR Medical University. Currently serving as a Member –in the ACADEMIC COUNCIL of National institute of Mental health and Neurosciences, Deemed University, Bangalore.

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Jayakumar Rajadas, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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Jayakumar Rajadas

Stanford University, USA

Novel pharmaceutical interventions to relieve L-DOPA induced dyskinesia in Parkinson's disease

Parkinson's disease (PD) is a neurodegenerative disease caused by the death of dopaminergic neurons in the basal ganglia. The golden standard for the treatment of PD is the dopamine (DA) replacement therapy with L-DOPA. DA acts on DA receptors which belong to the superfamily of G Protein coupled receptors (GPCRs). However chronic treatment with L-DOPA results in super sensitivity of DA receptors and unwanted side effects commonly known as L-DOPA induced dyskinesia. Here we screened different formulations of L-DOPA oral route delivery which could result in a slow, sustained and timely delivery of L-DOPA along with repurposed GPCR receptor antagonists that can up regulate two of the G protein coupled receptor kinases GRK3 and 6 in brain that are down regulated in experimental animal models of PD. Our *in vitro* data in striatal neuronal culture in the presence of DA and GPCR receptor antagonists showed an upregulation of GRK3 and 6 after 24 hours of treatment at lower doses of DA. The behavioral studies in unilateral PD mice with DOPA formulations showed oral delivery of DOPA relieved the akinesia seen in Parkinson's disease and at the same time had less dyskinetic effects as revealed by mouse cylinder test and AIMS respectively. Together our behavioral and signaling data demonstrate that L-DOPA delivered orally in a sustained release form along with the peripheral DOPA decarboxylase inhibitors carbidopa and benserazide could relieve the dyskinetic effects due to L-DOPA therapy in Parkinson's disease.

Biography

Jayakumar Rajadas is the Founding Director of Biomaterials and Advanced Drug Delivery Laboratory at Stanford University. He is also an Adjunct Professor at UCSF School of Pharmacy, University of California. He is currently working on the molecular mechanism of neurodegenerative disorders involved in Alzheimer's and Parkinson's diseases. His research has also been involved in transforming nano science ideas into biomaterials and drug delivery technologies. Before moving to Stanford, he served as the Founding Chair Person of the bio-organic and neurochemistry division at one of India's national laboratories. He is a recipient of several awards including Young Scientist award in Chemistry for the year 1996 from the Government of India. He has also won the Best Scientist award from the Tamil Nadu state Government India in the year 1999. He is co-recipient of nine SPARK transnational awards in Stanford University. He has published over 194 papers with numerous granted/disclosed patents.

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Day 2

Rajendra D Badgaiyan, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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Rajendra D Badgaiyan
University of Richmond, USA

Novel neuroimaging technique to study Parkinson's disease

Diagnosis of Parkinson's disease is mostly clinical. As a result, it is difficult to make an accurate diagnosis at an early stage. Because of the subjective nature of clinical diagnosis, many patients are misdiagnosed at an early stage. Because of this, treatment gets delayed and the disease progression cannot be slowed down. It is therefore important to have a diagnostic technique that helps us make an early diagnosis. A new imaging technique that we recently developed could be useful. The technique called single scan dynamic molecular imaging technique (SDMIT) uses positron emission tomography (PET) to detect, map and measure dopamine released acutely during a cognitive or behavioral processing. It exploits the competition between dopamine and its receptor ligand for occupancy of the same receptor site. In this technique after patients are positioned in the PET camera, a radio-labeled dopamine ligand is injected intravenously and the PET data acquisition started. These data are used by a receptor kinetic model to detect, map and measure dopamine released dynamically in different brain areas. The patients were asked to perform a behavioral or cognitive task while in the scanner and the amount of dopamine released in different brain areas measured. By comparing this data with data acquired previously in age-matched healthy volunteers during performance of a similar task, it is possible to determine whether dopamine neurotransmission is dysregulated in the patients and whether the dysregulation is responsible for clinical symptoms. Finding of a significant dysregulation in dopamine neurotransmission would confirm diagnosis of Parkinson's disease. Since this technique measures dopamine released under conditions of cognitive and behavioral stress, it can detect changes at a very early stage, when dysregulation of dopamine neurotransmission is not expressed at rest but manifests under conditions of cognitive/behavioral overload.

Biography

Rajendra D Badgaiyan, MD, is a psychiatrist and cognitive neuroscientist. He is Chairman of the Department of Psychiatry and Behavioral Sciences at Richmond University Medical Center, and Professor of Psychiatry at Icahn School of Medicine at Mount Sinai in New York. He received formal training in psychiatry, psychology, cognitive neuroscience, molecular imaging and neuroimaging. He was awarded the prestigious BK Anand National Research Prize in India and Solomon Award of Harvard Medical School. His research is focused on the study of neural and neurochemical mechanisms that control human brain functions. He developed the single scan dynamic molecular imaging technique (SDMIT) to detect, map, and measure neurotransmitters released acutely in the human brain during task performance. This technique is now used in laboratories all over the world. Using this technique, he studies dopaminergic control of human cognition and behavior. He is also interested in learning the nature of dysregulated dopamine neurotransmission in psychiatric and neuropsychiatric conditions. His research is funded by NIMH, NINDS, VA, and various foundations. Previously he served in the faculty of Harvard Medical School, SUNY Buffalo and University of Minnesota. He has published extensively in peer-reviewed journals.

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John M Baumann, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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John M Baumann

University of Louisville, USA

Complete communication of the potential medical and non-medical effects of parkinson's on newly diagnosed patients by neurologists and movement disorder specialists

Most people are not prepared to do what they need to do when they are told that they have a progressive, degenerative, incurable chronic disease (for example, Parkinson's). Doctors should take on a meaningful role in the discussion of not just all possible medical ramifications, but also non-medical issues. These include encouraging patients to locate and obtain information from a Parkinson's support center in your area. Discuss with your support center how to tell your family (one of the emotional heartbreaking things you will ever do). If you are still working, ask your support center if they have the names of employment lawyers that have experience with Parkinson's. Discuss what rights you now have and which ones you think you might have, but don't. You should discuss if, when, and how you will inform your employer. Ask the local center if they have a list of benefits lawyers. Realize that you are experiencing a shock to your system and you may not be able to make decisions as well as you did before. This is a hard one to accept. You may need to run your decisions by someone you trust before taking action. Meet with your, or find a, financial advisor. You will need to plan ahead so that you don't run out of money after you are unable to work in your profession. This should be balanced with enjoying the limited number of years that you will have to ability to do the things that you always wanted to do: travel, etc. Parkinson's may have an effect on your ability to multi-task and your short-term memory. Maybe turn some responsibilities over to your trusted care partner or financial advisor. Recognize that, although Parkinson's is a progressive, degenerative disease, eating a healthy diet and extensive exercise appears, in some individuals, to slow the manifestations of the disease. So, get a plan together, maybe with the assistance of your local support center, nutritionist and fitness trainer to improve your lifestyle and stick to it. Finally, it is time to deal with the feelings that you repressed in order to get through the practical issues. You will need a good therapist. Again, contacting your local support center for a list of doctors familiar with PD is a great start.

Biography

John M Baumann graduated from Cornell Law School in 1986 and, in 2002, at 41 years old, he was diagnosed with Parkinson's. John worked as an Attorney until 2012 and, from 2004 to 2012, taught at the University of Louisville. In 2008, he reinvented himself into a inspiring success speaker. He has inspired audiences in France, Malaysia, and across the United States and Canada. His book is entitled, *Decide Success–You Ain't Dead Yet.* He also collaberated on a book with Deepak Chopra.

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Tyrone Genade, J Alzheimers Dis Parkinsonism 2017, 7:5 (Suppl)
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Tyrone Genade

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Nothobranchius furzeri: A new model organism of alpha-synucleinopathy

Nothobranchius furzeri are short-lived fish from Zimbabwe and Mozambique (Africa) that inhabit ephemeral water bodies. Their captive lifespan is 12 to 40 weeks. Previous experiments have demonstrated lifespan extension by ambient temperature reduction, dietary restriction, resveratrol-treatment, hermetic small molecule inhibition of mitochondrial complex I, and, as presented here, NT-020-treatment. NT-020 is a proprietary mixture that has been demonstrated to stimulate stem cell proliferation and retard neurodegeneration in rats and humans. Western blotting of Nothobranchius brain extracts using the SNL-4 antibody showed an accumulation of monomeric and oligomeric ¸alpha-synculein (asyn) protein. Neurodegeneration was confirmed with the observation of GFAP accumulation in the brain. Histological analysis revealed formic acid resistant SNL-4 immunoreactivity in the olfactory bulb, pallium, nuclei associated with the locus coeruleus and other nuclei in the midbrain, optic tectum and periventricular nucleus of the posterior tuberculum as well as the retina. The human equivalents of these central nervous system regions are associated with Parkinson's Disease pathology. Analysis of extracted PARK7 protein (DJ-1) demonstrated increased redox sensitivity and propensity to aggregate. Inspection of the gene, which is associated with a lifespan-determining locus in Nothobranchius, revealed four PARK7 alleles as well as several interesting point mutations. Mutations within two critical DJ-1 regions associated with dimer formation may underlie the observed protein accumulation and consequent variation of lifespan phenotypes. N. furzeri could prove a valuable model organism for idiopathic age-associated¸ alpha-synucleinopathy based on its age-associated changes in asyn protein content, accumulation in certain Parkinson's Disease associated brain regions together with the possible role of PARK7 mutations in effecting lifespan.

Biography

Tyrone Genade completed his PhD and Post-doctoral studies at the University of Cape Town, South Africa, in the Department of Human Biology. His research subject is neurodegeneration and aging of the short-lived Nothobranchius killifish. He currently teaches Anatomy, Physiology and Zoology at Northwestern College (Orange City, Iowa). He is Executive Editor of Killi-Data News: A quaterly review of killifish research.

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