

Scientific Tracks & Sessions November 21, 2022

Dementia 2022











15th WORLD CONGRESS ON

DEMENTIA AND ALZHEIMER'S DISEASE

NOVEMBER 21, 2022 | WEBINAR

Sessions on

November 21, 2022

Neurocognitive Disorders | Neurodegenerative Disorders | Alzheimer's Disease | Dementia

Session Chair

Sumanth S Hiremath | Rani Channamma University | India

Session Introduction

Title: Cognitive screening for adult psychiatric outpatients: comparison of the Cognivue® to the Montreal Cognitive Assessment

Amanda F Rose | Cleveland Clinic Akron General | USA

Title: Title: Surgical management of Synucleinopathies

Brandon Lucke-Wold | SwiftScience | USA

Title: Title: Interaction between the HSV-1 Glycoprotein B and the antimicrobial peptide Amyloid- β

Tamas Fulop | University of Sherbrooke | Canada

Title: Title: Dementia care, practice and awarness

Ojes Xavier | St. Albert's College | India



DEMENTIA AND ALZHEIMER'S DISEASE

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Cognitive screening for adult psychiatric outpatients: Comparison of the Cognivue® to the Montreal Cognitive Assessment

Amanda F Rose

Cleveland Clinic Akron General, USA

In an editorial published in the World Journal of Psychiatry (2021) we compared the use of the Cognivue® to use of the Montreal Cognitive Assessment (MoCA) as cognitive screening tools. We focused on the importance of utilizing psychometrically valid cognitive screening tools when assessing for cognitive decline in older adults in a psychiatric outpatient setting. A total of 58 patients aged 55 and over participated in this comparison study. Patients completed cognitive screening on Cognivue®, a new Food and Drug Administration-cleared computer screening device, and the MoCA. The results of patient performance using these two instruments were analyzed. Sixteen (28%) patients screened negative for cognitive impairment on both assessments. Forty-two (72%) patients screened positive on one or both of the assessments. There was 43% agreement between Cognivue® and the MoCA in identifying patients with cognitive impairment, and individual subtests were weakly correlated. The MoCA was determined to be the preferred instrument due to its high sensitivity and specificity (100% and 87%, respectively) when screening for cognitive impairment. We propose that the use of Cognivue® cognitive screening tool be closely reviewed until more research proves that the test meets the standards for reliability and validity. It is important for clinicians to remember that screeners should not be used to diagnosis patients with neurocognitive disorders; instead, they should be used to determine whether further evaluation is warranted. Additionally, misdiagnosing of neurocognitive disorders can pose unnecessary psychological and emotional harm to patients and their families and also lead to incorrect treatment and undue healthcare costs.

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Biography

Amanda F Rose completed her Doctorate in Psychology (PsyD) at Wright State University, USA. She is currently a Clinical Psychologist at Cleveland Clinic Akron General, USA and a Psychology Consultant at Akron Children's Hospital working with adult burn patients. She is an Instructor Of Psychiatry at Northeast Ohio Medical University. Her research has focused on neurocognitive functioning in adult psychiatry patients and improving quality of care in outpatient mental healthcare facilities. Additionally, she serves as an editorial board member for Frontiers in Psychiatry.

rosea@ccf.org



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Surgical management of synucleinopathies

Brandon Lucke-Wold

Co-Founder at SwiftScience, USA

Synucleinopathies represent a diverse set of pathologies with significant morbidity and mortality. In this review, we highlight the surgical management of three synucleinopathies: Parkinson's disease (PD), Dementia with Lewy Bodies (DLB), and multiple system atrophy (MSA). After examining underlying molecular mechanisms and the medical management of these dis-eases, we explore the role of Deep Brain Stimulation (DBS) in the treatment of synuclein pathophysiology. Further, we examine the utility of Focused Ultrasound (FUS) in the treatment of synucleinopathies such as PD, including its role in Blood-Brain Barrier (BBB) opening for the delivery of novel drug therapeutics and gene therapy vectors. We also discuss other recent advances in the surgical management of MSA and DLB. Together, we give a diverse overview of current tech-niques in the neurosurgical management of these pathologies.

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Biography

Brandon Lucke-Wold was born and raised in Colorado Springs, CO. He graduated magna cum laude with a BS in Neuroscience and distinction in honors from Baylor University. He completed his MD/PhD, Master's in Clinical and Translational Research, and the Global Health Track at West Virginia University School of Medicine. His research focus was on traumatic brain injury, neurosurgical simulation, and stroke. At West Virginia University, he also served as a health coach for the Diabetes Prevention and Management program in Morgantown and Charleston, WV, which significantly improved health outcomes for participants. He was an active member of the Gold Humanism Honor Society and Alpha Omega Alpha Honor Society. He is currently a member of the Young Neurosurgeons' Committee. He is married to Noelle Lucke-Wold, and has a toddler daughter named Esme. As a family, they enjoy running with their dogs, rock climbing, and traveling the world. In his spare time, Brandon frequently runs half marathons and 10ks together with is wife. Brandon also enjoys reading and discussing philosophy and playing chess. He is excited to join the neurosurgery residency program at University of Florida.

bpwyah@aol.com



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Interaction between the HSV-1 Glycoprotein B and the antimicrobial peptide Amyloid- β

Tamas Fulop

University of Sherbrooke, Canada

Unravelling the mystery of Alzheimer's disease (AD) requires urgent resolution given the worldwide increase of the aging population. There is a growing concern that the current leading AD hypothesis, the amyloid cascade hypothesis, may not stand up to validation with respect to emerging new data. Indeed, several paradoxes are being discussed in the literature, for instance, both the deposition of the amyloid-β peptide (Aβ) and the intracellular Neurofibrillary Tangles (NFTs) could occur within the brain without any cognitive pathology. Thus, these paradoxes suggest that something more fundamental could be at play in the onset of the disease and other key and related pathomechanisms must be investigated. The present study follows our previous investigations on the infectious hypothesis, which posits that some pathogens are linked to late onset AD. Our studies also build upon the finding that Aβ is a powerful antimicrobial agent, produced by neurons in response to viral infection, capable of inhibiting pathogens as observed in in vitro experiments. Herein, we ask what the molecular mechanisms in play are when AB neutralizes infectious pathogens. To answer this question, we probed at nanoscale lengths with FRET (Förster Resonance Energy Transfer), the interaction between A β peptides and glycoprotein B (responsible of virus-cell binding) within the HSV-1 virion. We concluded that A β insert into viral membrane, close to gB, and participate in virus neutralization.

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Biography

Tamas Fulop is a Professor at the Universite de Sherbrooke, Quebec, Canada. He has over 350 publications and his/her publication H-index is 65 and has been serving as an Editor in Chief for Gerontology and on the editorial boards of numerous reputed Journals.

tamas.fulop@usherbrooke.ca



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Dementia care, practice and awarness

Ojes Xavier

St. Albert's College, India

For many families, caring for a person with dementia isn't just one person's job, but the role of many people who share tasks and responsibilities. No matter what kind of caregiver you are, taking care of another person can be overwhelming at times. These tips and suggestions may help with everyday care and tasks.

Communication can be hard for people with Alzheimer's and related dementias because they have trouble remembering things. They also can become agitated and anxious, even angry. In some forms of dementia, language abilities are affected such that people have trouble finding the right words or have difficulty speaking. You may feel frustrated or impatient, but it is important to understand that the disease is causing the change in communication skills. To help make communication easier, you can:

- Reassure the person. Speak calmly. Listen to his or her concerns and frustrations. Try to show that you understand if the person is angry or fearful.
- Allow the person to keep as much control in his or her life as possible.
- Respect the person's personal space.
- Build quiet times into the day, along with activities.
- Keep well-loved objects and photographs around the house to help the person feel more secure.
- Remind the person who you are if he or she doesn't remember, but try not to say, "Don't you remember?"
- Encourage a two-way conversation for as long as possible.

Try distracting the person with an activity, such as a familiar book or photo album, if you are having trouble communicating with words.

References

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- "Learning to Speak Alzheimer's: A Groundbreaking Approach for Everyone Dealing with the Disease", by Joanne Koenig Coste
- "Thoughtful Dementia Care: Understanding the Dementia Experience", by Jennifer Ghent-Fuller

Biography

Ojes Xavier has been appointed as Assistant Professor on 26th July 2022 in the Department of Social Work, St. Albert's College (Autonomous) India, Kerala Ernakulam. He is very actively involved in organizing National and International webinars for the college students. He has presented a paper on "Application of cognitive Behavioral therapy in social work profession" in a National webinar for mental health professionals. His area of specialization in research is "Psycho Somatic Disorder in Middle aged Women: Symptoms, Causes and Treatment". He did his Post Graduation with second Rank in Medical and Psychiatric Social Work from School of Social Work Roshni Nilaya Mangalore and also he completed Post- Graduate Diploma in Human Resource Management (PGDHRM) from Roshni Nilaya Mangalore. He is also interested in various Psycho Therapies. He has been worked as Medical Social Worker at Caritas Hospital Kottayam. He attended a certified course from Coursera on "Positive Psychiatry and Mental Health". He has written an article on "Love, Care and the Treasure to be given to the Elderly People in this Modern Scenario" which was published in Mangalore University College journals.

ojesnedu@gmail.com

Sessions on

November 21, 2022

Cognitive Assessment | Geriatric Care

Session Chair

Laura Ion | Selinus University of Sciences and Literature | Italy

Session Introduction

Title: An association between Norton Scale and MMSE

Nadya Kagansky | Tel-Aviv University affiliated | Israel

Title: Early identification of subtle cognitive-linguistic changes using discourse analysis scale: A pilot study in mild cognitive impairment

Pooja Chandrashekar | All India Institute of Speech and Hearing | India

Title: A web-based support group for Iranian informal caregivers of older adults

Rahimi F | Tehran University of Medical Sciences | Iran

Title: Validation of a new cognitive screening tool; Sudan Cognitive Assessment Test (SuCAT), for

identification of cognitive impairment in a low-income country

Omer Eladil A Hamid | International University of Africa | Sudan



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Is there an association between Norton Scale and Cognitive impairment?

Nadya Kagansky

Tel-Aviv University, Israel

Introduction: Geriatric assessment as an integrative part of assessment is composite of a numerous number of scales. Sometimes it is difficult to transfer all of them. Norton Scale Score (NSS) assesses the degree of risk to develop bedsores. In the previous studies, we found the correlation between Norton Scale and Functional Assessments. Correlation between Norton Scale and Cognitive Assessments was not evaluated yet. The aim of this study was to determine if there is an association between Norton scale score and cognitive impairment. This association can further decrease the number of numerous investigations in frail elderly, especially in elderly with communicative difficulties.

Methods: we have performed an observational cohort study which included hip fracture elderly patients consecutively admitted to the rehabilitation ward of Shmuel Harofe Geriatric Medical Center. The collected data included demographic data, data on chronic illnesses.

Results of cognitive status assessment (Mini Mental State Examination-MMSE) and Norton Scale assessment were received from the computerized patient's charts. We evaluated the association between these two scales.

Results: the study included 224 consecutive hip fracture patients with mean age of 81.78±7.19 years. Norton scores at admission, age, education, and previous stroke, emerged as the only statistically significant parameters differing between those with cognitive decline and without it. After adjusting for confounding variables, lower Norton Scores at admission

(OR 1.303 CI 1.097-1.548, P=0.003) were associated with an increased risk finding cognitive impairment.

Conclusion: Our findings suggest that there is an association between Norton Scale scores and cognitive impairment. Norton score parameters, under certain circumstances, such as speech and other communication difficulties, can be used as a proxy measure for MMSE to indicate cognitive impairment. These finding can be even more helpful in the present time of "Corona", when we have to evaluate elderly patients with facial masks and others defensive suits.

Keywords: cognitive, geriatric, assessment, scales, Norton

Recent publications

- Kagansky N, Stambler I, Mizrahi EH. Is There an Association between Norton Scale and Cognitive Impairment in Hip Fractured Elderly Patients? Dement Geriatr Cogn Disord. 2021;50(6):535-540. Kagansky N, Knobler H, Stein-Babich M, Voet H, Shalit A, Lindert J, Knobler HY. Holocaust Survival and the Long-term Risk of Cardiovascular Disease in the Elderly. Isr Med Assoc J. 2019 Apr;21(4):241-245. PMID: 31032564.
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Biography

Nadya Kagansky is the Director of Shmuel Hatofe Medical Geriatric Center; Specialist in geriatrics, internet medicine, psychogeriatric with 24 publications.

batiakag@gmail.con



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Early identification of subtle cognitive-linguistic changes using discourse analysis scale: A pilot study in mild cognitive impairment

Pooja Chandrashekar

All India Institute of Speech and Hearing, India

Introduction: Indistinct changes in communicative abilities can be noticed before any evident signs in individuals with Mild Cognitive Impairment (MCI). These changes are portrayed in linguistic features linked with a gradual reduction in cognitive aspects.

Need for the study: Studies have been conducted to understand such changes, but only a handful is available to tap the subtle decline in cognitive-linguistic abilities. It is assumed that a decrease in discourse performance is a reflection of the decline in components of Executive Function (EF). However, the evidence is limited.

Aims: The purpose of the study was to investigate if Complex Discourse Production (CDP) can differentiate between MCI and neurotypical adults. The study also aimed to understand the association between CDP and EF.

Methods and Procedures: Five adults with MCI and five individuals with normal cognitive functioning were tested using Montreal Cognitive Assessment (MoCA) to confirm the diagnosis of MCI. The experimental task for all the participants was carried out in two phases: (1) CDP tasks involving conversation, narration and picture description; (2) verbal fluency tasks and design fluency tests using Delis-Kaplan Executive Functions Scale (D-KEFS). The discourse samples were assessed qualitatively using the Discourse Analysis Scale (DAS).

Outcomes and Results: Poor performance of the MCI group on all the genres of discourse confirmed that CDP can differentiate between MCI and neurotypical adults. The neurotypical individuals outperformed the MCI group on EF tasks as well, affirming the association between CDP and EF. CDP requires similar EF abilities, particularly cognitive flexibility and planning. Cognitive flexibility has been explicitly important

for divergent thinking that is essential to produce a rich quality discourse. Although these mechanisms are not directly related to the language system, any disturbance in EF will be reflected in the performance of linguistic tasks, including CDP.

Conclusions: CDP can be an effective tool to detect the early cognitive-linguistic changes in MCI. The simplicity of CDP tasks makes it an effortless tool to be used in everyday clinical situations. Identifying such changes can, in turn, aid in the early intervention of individuals who progress into probable Alzheimer's disease (AD). Also, the simplicity of CDP tasks makes it an effortless tool to be used in everyday clinical situations.

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- Glosser, G., & Deser, T. (1992). A comparison of changes in macrolinguistic and microlinguistic aspects of discourse production in normal aging. Journal of Gerontology, 47(4), 266-272.

Biography

Pooja Chandrashekar completed her Master's degree in Speech-language Pathology at the All India Institute of Speech and Hearing, India. She is currently pursuing her Doctoral Degree in Speech-language Pathology. Her research focuses on normal and abnormal aging, dementia and cognitive communication disorders.

p.chshkr@gmail.com



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A web-based support group for Iranian informal caregivers of older adults

Rahimi F

Tehran University of Medical Sciences, Iran

Background: Iran's elderly population is expected to grow by 10.5% in 2025, indicating an increase in the number of long-term dependent people. In recent years, the mental burden of caregiving has been increasing due to the reduction in household size and the increase in women's jobs. Access to web-based support groups allows informal caregivers to afford peer and professional support in addition to their multiple daily responsibilities.

Methods: Our study is a two-arm randomized controlled trial. A total of 160 informal caregivers were recruited from the southern area of Tehran. Eligible participants were randomly allocated to two intervention and control groups. We are in the middle of the intervention phase. The intervention is in the form of using the Mehrpishegan site. The intervention group can use the Mehrpishegan site's facilities, including educational content for caregivers to care for the elderly and manage their mental health, as well as asynchronous and online chatrooms during the six months period. They interact with each other in an online group once a week, guided by a psychologist and a health educator. They are encouraged to share information, concerns, feelings, experiences, and possible solutions. The participants receive exercises according to the topics of each session and can ask questions about the exercises too. The control group cannot use facilities. Depression, anxiety, and stress were assessed using the DASS-21 questionnaire at baseline and will be repeated at the end.

Discussion: There is no comprehensive national system in Iran to record the information of informal caregivers. Services for caregivers, such as support groups, are now dis-

persed and face-to-face. We hope that our findings can provide an opportunity to address the needs of caregivers and improve their mental health through the provision of webbased support services.

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- Rahimi F, "Presence in virtual social networks and health promoting behaviors of medical students," Journal of Public Health, 1-79 2020

Biography

Rahimi F is a PhD Candidate in Health Education and Promotion at Tehran University of Medical Sciences. She is young researcher interested in researching health issues, and designing, implementing and evaluating health education programs, especially self-care, healthy lifestyle, virtual social networks, and self-help groups. So far, she has authored and translated 5 books in the Persian language related to her major. She has been active in organizing health education campaigns such as antibiotic resistance prevention, national no-smoking week, and risk assessment of non-communicable diseases. She is currently writing a doctoral thesis on the effect of web-based support groups on the mental health of elderly family caregivers.

negarmosafer@yahoo.co.uk



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Validation of a new cognitive screening tool; Sudan Cognitive Assessment Test (SuCAT), for identification of cognitive impairment in a low-income country!

Omer Eladil A Hamid

International University of Africa, Sudan

Cognitive impairment affects low-income and limited technology countries by its magnitude but and the consequent impact. In Sudan, no real estimates of dementia, yet WHO listed Alzheimer/Dementia for 4,756 deaths (1.78% of 41.8 million the total population, 2018 Sudan census). It is expected to increase where Sudan carries many dementia potential risk factors. This necessitates a valid neurocognitive Test for the early detection where other advanced investigations might not be reachable.

In Sudan, research proved the unsuitability of Mini-Mental State Exam (MMSE) and the Montreal Cognitive Assessment (MoCA) to detect Mild Cognitive Impairment (MCI). This is explained by two main facts; the diversity of Sudan's cultural, educational, and linguistic background where Arabic with three informal dialects (colloquial Arabic; El-Darigia) and the literacy dependent nature of MMSE and MoCA. Sudan Cognitive Assessment Test (SuCAT) is developed in an attempt to overcome those limitations by modifying MMSE and MoCA to assess the known SEVEN cognitive domains.

This analytical cross-sectional study was composed of four piloting and validation phases.

Phase I; two studies; the first concluded that the Arabic version of the MMSE was not suitable for Sudan, while the second showed that MoCA and MMSE scores have a strong association with educational level (P. value 0.000). Phase II was conducted as a pilot test of the validity and reliability of SuCAT as a Literacy independent adapted Arabic version. It concluded that SuCAT is a potential test for cognitive impairment among Sudanese patients. Phase three was for SuCAT standardization at a larger, in which it significantly surpassed

MMSE and MoCA in five of the seven domains, neutral in one and inferior in "Coping" (P. value 0.000). Phase IV is to validate SuCAT for specifying the cognitive disorders.

In conclusion, SuCAT is a promising neuropsychological test with expected good health impact in a low-income country like Sudan. This might pave the way for similar countries worldwide.

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Biography

Omer Eladil A Hamid is an Associate Professor of Internal Medicine and Neurology International University of Africa IUA, and Sudan Medical Specialization Board for Higher Education and Postgraduate clinical qualification SMSB. He is a Consultant Physician and Neurologist; Neurology Center-Bashayr University Hospital and Khartoum Teaching Hospital; Medical Educationalist IUA, SMSB. He is also an accredited trainer for Internal Medicine, Neurology and Psychiatry. His interests are in Dementia and cognitive impairment research. He established with colleagues dedicated neurology clinics and neuroscience centers in Sudan. Conducted and presented many researches; locally regionally and internationally including PanArab and WCN.

omereladil@gmail.com