

# Dementia

## Current Awareness Newsletter JULY 2016



Respecting everyone Embracing change Recognising success Working together Our hospitals.



### Lunchtime Drop-in Sessions July - December 2016

The **Library and Information Service** provides free specialist information skills training for all UHBristol staff and students.

To book a place, email: library@uhbristol.nhs.uk

If you're unable to attend we also provide **one-to-one** or **small group** sessions. Contact **library@uhbristol.nhs.uk** to arrange a session.

#### **Literature Searching**

An in-depth guide to formulating an effective search strategy and getting the most out of searching key healthcare databases.

#### **Critical Appraisal**

How to assess the strengths and weaknesses of research methods.

Examining different research designs, bias and validity, and frameworks for systematically appraising a medical paper.

#### **Medical Statistics**

A basic introduction to the key statistics in medical articles.

Giving an overview of statistics that compare risk, test confidence, analyse clinical investigations, and test difference.

#### **Information Resources**

A comprehensive overview of Library subscription resources, freely available online resources and 'grey literature'.

<u>July</u> (1pm)		September (1pm)		
	Tue 5th	Critical Appraisal	Fri 2nd	Critical Appraisal
	Wed 13th	Statistics	Mon 5th	Statistics
	Thurs 21st	Information resources	Tue 18th	Information resources
	Fri 29th	Literature Searching	Wed 21st	Literature Searching
			Thurs 29th	Critical Appraisal
August (12pm)				
	Tue 2nd	Critical Appraisal	October (12pm)	
	Wed 10th	Statistics	Fri 7th	Statistics
	Thurs 18th	Information resources	Mon 10th	Information resources
	Fri 26th	Literature Searching	Tue 18th	Literature Searching
			Wed 26th	Critical Appraisal

### Contents

### Your Friendly Local Librarian...

Whatever your information needs, the library is here to help. As your outreach librarian I offer literature searching services as well as training and guidance in searching the evidence and critical appraisal – just email me at <u>library@uhbristol.nhs.uk</u>

OUTREACH: Your Outreach Librarian can help facilitate evidence-based practise for all in the dementia team, as well as assisting with academic study and research. We can help with literature searching, obtaining journal articles and books, and setting up individual current awareness alerts. We also offer one-to-one or small group training in literature searching, accessing electronic journals, and critical appraisal. Get in touch: library@uhbristol.nhs.uk

**LITERATURE SEARCHING:** We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence. Please email requests to <u>library@uhbristol.nhs.uk</u>

### **New from NICE**

#### Baseline characteristics and treatment-emergent risk factors associated with cerebrovascular event and death with risperidone in dementia patients

#### 07 July 2016 - Publisher: British Journal of Psychiatry

...cerebrovascular event and death with risperidone in dementia patients Robert Howard, Sergi G...antipsychotics to treat behavioural symptoms of dementiahas been associated with increased risks...randomised controlled trials of risperidone in dementia patients (risperidone n = 1009, placebo...

#### Read Summary:

https://www.evidence.nhs.uk/document?ci=http%3a%2f%2fbjp.rcpsych.org%2fcontent%2fearly%2f20 16%2f06%2f27%2fbjp.bp.115.177683%3ffromsource%3dnelm&returnUrl=Search%3ffrom%3d01%252f 06%252f2016%26om%3d%5b%7b%22toi%22%3a%5b%22Systematic+Reviews%22%5d%7d%5d%26ps %3d50%26q%3ddementia%26s%3dDate%26to%3d22%252f07%252f2016&q=dementia

#### • <u>Do occupational therapy interventions improve quality of life in persons</u> with dementia? A meta-analysis with implications for future directions

#### Source: PubMed - 24 June 2016

Occupational therapy (OT) interventions have shown positive effects on physical functioning in persons with dementia (PwD). However, their effect on quality of life (QoL) has been inconsistent in individual clinical trials. The present review...

#### Read Summary:

https://www.evidence.nhs.uk/document?ci=http%3a%2f%2fwww.ncbi.nlm.nih.gov%2fpubmed%2f273 38678&returnUrl=Search%3ffrom%3d01%252f06%252f2016%26om%3d%5b%7b%22toi%22%3a%5b% 22Systematic+Reviews%22%5d%7d%5d%26ps%3d50%26q%3ddementia%26s%3dDate%26to%3d22%2 52f07%252f2016&q=dementia

#### Home care for older people - quality standard (QS123)

#### Source: National Institute for Health and Care Excellence - NICE - 22 June 2016

...to adult social care Placeholder 2F Dementia – a measure of the effectiveness of post...Enhancing quality of life for people with dementia 2.6 ii A measure of the effectiveness...2015) NICE quality standard 89 Dementia: independence and wellbeing (2013...

#### Read Summary:

https://www.evidence.nhs.uk/document?ci=https%3a%2f%2fwww.nice.org.uk%2fguidance%2fQS123 &returnUrl=Search%3ffrom%3d01%252f06%252f2016%26om%3d%5b%7b%22toi%22%3a%5b%22Qua lity+Measures%22%5d%7d%5d%26ps%3d50%26q%3ddementia%26s%3dDate%26to%3d22%252f07%2 52f2016&q=dementia

### New from Up-to-Date

#### **Clinical features and diagnosis of dementia with Lewy bodies**

Author: Martin R Farlow, MD

Literature review current through: Jun 2016. | This topic last updated: Apr 04, 2016.

**INTRODUCTION** — Dementia with Lewy bodies (DLB) is increasingly recognized clinically as the second most common type of degenerative dementia after Alzheimer disease (AD).

This topic will describe the clinical and radiologic features and diagnosis of dementia with Lewy bodies. The epidemiology, neuropathology, pathogenesis, prognosis, and treatment of this disorder are discussed separately. Other dementia syndromes are discussed separately.

#### Frontotemporal dementia: Clinical features and diagnosis

Authors: Suzee E Lee, MD, Bruce L Miller, MD Literature review current through: Jun 2016. | This topic last updated: Jan 06, 2016.

**INTRODUCTION** — Frontotemporal dementias (FTD) are a group of clinically and neuropathologically heterogeneous neurodegenerative disorders characterized by prominent changes in social behavior and personality or aphasia accompanied by degeneration of the frontal and/or temporal lobes.

This topic will review the clinical features and diagnosis of the main clinical syndromes of FTD. The treatment of FTD and the genetics, pathology, and pathogenesis of FTD are discussed separately.

#### **Management of neuropsychiatric symptoms of dementia** Authors; Daniel Press, MD, Michael Alexander, MD

Literature review current through: Jun 2016. | This topic last updated: Jun 06, 2016.

**INTRODUCTION** — Neuropsychiatric symptoms in Alzheimer disease (AD) and other types of dementia are extremely common and often much more troubling than amnestic symptoms. This topic will review the causes and treatment of behavioral disturbance and other neuropsychiatric symptoms related to dementia.

#### **Cholinesterase inhibitors in the treatment of dementia**

Authors: Daniel Press, MD, Michael Alexander, MD Literature review current through: Jun 2016. | This topic last updated: Dec 11, 2015.

**INTRODUCTION** — Patients with Alzheimer disease (AD) have reduced cerebral production of choline acetyl transferase, which leads to a decrease in acetylcholine synthesis and impaired cortical cholinergic function..

This topic will discuss the use of cholinesterase inhibitors in the treatment of dementia. Other treatments of dementia are discussed elsewhere.

### **New from the Cochrane Library**

#### <u>Computerised cognition-based interventions for preventing dementia in</u> people with mild cognitive impairment

Authors: Nicola J Gates, Salman Karim, Anne WS Rutjes, Jennifer Ware, Evrim March, First Published: 11 July 2016

Editorial Group: Cochrane Dementia and Cognitive Improvement Group

**Abstract:** This is the protocol for a review and there is no abstract. The objectives are as follows:

To evaluate the effects of computerised cognition-based interventions for preventing dementia in people with mild cognitive impairment.

### <sup>18</sup>F PET ligands for the early diagnosis of Alzheimer's disease dementia and other dementias in people with mild cognitive impairment (MCI)

Authors: Gabriel Martínez, Leon Flicker, Robin WM Vernooij, Paulina Fuentes Padilla, Javier Zamora, Marta Roqué i Figuls, Gerard Urrútia, Xavier Bonfill Cosp

First published: 30 May 2016

Editorial Group: Cochrane Dementia and Cognitive Improvement Group

**Abstract:** This is the protocol for a review and there is no abstract. The objectives are as follows:

To determine the diagnostic test accuracy (DTA) of the <sup>18</sup>F PET ligands for Aβ (<sup>18</sup>F-Florbetapir, <sup>18</sup>F-Florbetaben, and <sup>18</sup>F-Flutemetamol) as the index tests for detecting participants with mild cognitive impairment (MCI) at baseline who would clinically progress to Alzheimer's disease dementia (ADD), or other forms of non-ADD, or any form of dementia at follow-up.

To investigate the heterogeneity of the DTA in the included studies, we will evaluate the spectrum of people, referral centres, clinical criteria of MCI, <sup>18</sup>F PET ligands for A $\beta$  (<sup>18</sup>F-Florbetapir, <sup>18</sup>F-Florbetaben, and <sup>18</sup>F-Flutemetamol) techniques, reference standards used, duration of follow-up, aspects of study quality, and conflicts of interest.

#### Pharmacological interventions for apathy in Alzheimer's disease

Authors: Myuri T Ruthirakuhan,, Nathan Herrmann,, Eleenor H Abraham, Krista L Lanctôt First published: 13 May 2016

Editorial Group: Cochrane Dementia and Cognitive Improvement Group

**Abstract:** This is the protocol for a review and there is no abstract. The objectives are as follows: To assess the safety and efficacy of pharmacotherapies for the treatment of apathy in Alzheimer's disease (AD).



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E-books

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### Current Awareness Database Articles on Dementia

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: <u>library@uhbristol.nhs.uk</u>

#### **Pain Management**

Algoplus performance to detect pain in depressed and/or demented old patients. Citation: European journal of pain (London, England), Aug 2016, vol. 20, no. 7, p. 1185-1193 Author(s): Bonin-Guillaume, S, Jouve, E, Lauretta, R, Nalin, C, Truillet, R, Capriz, F, Rat, P

Abstract: Algoplus detects acute pain in non-verbal old patients (NVOP) with good psychometric properties. However, depression or dementia might modify the Algoplus score and/or item expression. Algoplus performances on demented and/or depressed old populations were tested. This multicentre cross-sectional study included patients  $\geq$ 65 years old with or without pain assigned to depression, dementia, depression & dementia or control groups. Each group was subjected to the Numerical Rating Scale (NRS) and behavioural scales (Algoplus, Doloplus). Depression and/or dementia status was rated and confirmed by blinded experts. Algoplus psychometric properties tested were: discriminant validity, convergent validity, item analysis, sensitivity to change after pain treatment and threshold determination. The analysis included 171 patients (mean age  $82.3 \pm 6.3$  years). Patients with and without pain in each group were comparable for age in all subgroups, except the older dementia subgroup. The mean Algoplus score was significantly higher for patients with than without pain, regardless of group assignment (Wilcoxon signed-rank test, p < 0.001). Algoplus and NRS or Doloplus had high convergent validity (respective Spearman correlation coefficients 0.79 and 0.87). The mean Algoplus score decreased significantly after starting pain management, regardless of group assignment. Some behaviours (i.e. "look") occurred more often in depressed patients, even those without pain. A threshold of 2 yielded respective sensitivity and specificity values of 95% and 96% for dementia patients, 62% and 79% for depressed patients, 96% and 71% for dementia & depressed patients, and 80% and 100% for controls. Algoplus accurately detected pain in depressed and/or dementia patients; and was sensitive to change after pain treatment. WHAT DOES THIS STUDY ADD?: Algoplus accurately detects pain in depressed and/or demented patients. A cut-off score of 2 accurately detects the need for pain management in these populations. Algoplus is sensitive to change after treating pain. © 2016 European Pain Federation - EFIC®

Palliative and end of life care for people living with dementia in care homes: part 1 Citation: Nursing Standard, Jun 2016, vol. 30, no. 43, p. 54-63, 0029-6570 (June 22, 2016) Author(s): Mitchell, Gary, Agnelli, Joanne, McGreevy, Jessie, Diamond, Monica, **Abstract:** The terms palliative and end of life care are often used interchangeably and healthcare practitioners may perceive that palliative care is only appropriate during the terminal stages of an illness. This article, the first of two parts, provides healthcare practitioners with an overview of the concept of palliative care. It explains how this can be differentiated from end of life care and how it should be commenced in a timely manner, so that people who are living with dementia can contribute to the planning of their future care and death. The policies and tools used in the provision of palliative and end of life care are discussed, including advance care planning and The Gold Standards Framework. The article is framed in a care home context; there is little research about how to optimise palliative care for people living with dementia in care homes. The second part of this article will discuss end of life care and the best practices for providing end of life care, including nutrition and hydration, oral hygiene, pain management and spiritual care. [Continuing Professional Development, NS849] [MEDIUM] References

Palliative and end-of-life care for people living with dementia in care homes: part 2. Citation: Nursing standard (Royal College of Nursing (Great Britain) : 1987), Jun 2016, vol. 30, no. 44, p. 54-63

Author(s): Mitchell, Gary, Agnelli, Joanne, McGreevy, Jessie, Diamond, Monica,

**Abstract:** This article, the second of two, provides healthcare practitioners with an overview of best practice in palliative and end-of-life care, including nutrition, hydration, oral hygiene and pain management. Communication and spiritual care are discussed, as well as care after death. Providing support and education for families is an important aspect of palliative and end-of-life care. Care home nurses should ensure that the person living with dementia is at the centre of decision making, and provide care that is inclusive of their needs and wishes. The article is framed in a care home context; there is little research about how to optimise palliative care for people living with dementia in care homes.

### Identifying and Managing Pain in People with Alzheimer's Disease and Other Types of Dementia: A Systematic Review

**Citation:** CNS Drugs, June 2016, vol./is. 30/6(481-497) **Author(s):** Husebo B.S., Achterberg W., Flo E.

**Abstract:** Background and Objective: Pain in patients with Alzheimer's disease is a complex issue; these patients suffer from the common causes of acute and chronic pain, and some also have neuropathic or nociceptive pain. Whatever the mechanism of pain in these patients, their pain will require careful assessment and management, to insure the correct type and level of analgesia is given. The objective of this systematic review was the identification of studies that have investigated the efficacy of different analgesics on pain intensity or pain-related behavior during nursing home stay and at the end of life. Methods: A search using pain, pain treatment, and dementia MESH terms and keywords was conducted (October 15, 2015) in MEDLINE, EMBASE, PsychINFO, CINAHL, and Cochrane libraries. Results: Our search yielded 3138 unique hits, published between 1990 and October 2015. We read titles and abstracts, identified 124 papers for full-text evaluation, and included 12 papers to reflect and synthesize the following questions: (1) Which pain assessment tools for people with dementia are responsive to change in pain intensity

scores? (2) Which analgesics are efficacy-tested by controlled trials including people with dementia living in nursing homes, including at the end of life? (3) Which outcome measures have been used to identify pain, pain behavior, and/or treatment efficacy in people with dementia? Conclusion: Despite increased use of analgesics, pain is still prevalent in people with dementia. Validated pain tools are available but not implemented and not fully tested on responsiveness to treatment. Official guidelines for pain assessment and treatment addressing people with dementia living in a nursing home are lacking. The efficacy of analgesic drug use on pain or neuropsychiatric behavior related to dementia has been hardly investigated.

#### **Mental Health**

Ethnic minority, young onset, rare dementia type, depression: A case study of a Muslim male accessing UK dementia health and social care services.

Source: Dementia (14713012); Jul 2016; vol. 15 (no. 4); p. 702-720

Author(s): Regan, Jemma L.

### A Systematic Review of Metacognitive Differences Between Alzheimer's Disease and Frontotemporal Dementia.

**Source:** American Journal of Alzheimer's Disease & Other Dementias; Aug 2016; vol. 31 (no. 5); p. 381-388

Author(s): DeLozier, Sarah J.; Davalos, Deana

Hydrogen Proton Magnetic Resonance Spectroscopy in Multidomain Amnestic Mild Cognitive Impairment and Vascular Cognitive Impairment Without Dementia.

**Source:** American Journal of Alzheimer's Disease & Other Dementias; Aug 2016; vol. 31 (no. 5); p. 422-429

Author(s): Chen, Shuang-Qing; Cai, Qing; Shen, Yu-Ying; Xu, Chuan-Xiao; Zhou, Hua;

#### Characteristic Profiles of Activities of Daily Living and Relationship with Cognitive Performance in Thai Elderly with Different Stages from Normal Cognitive Function, Mild Cognitive Impairment to Dementia.

Source: Clinical Gerontologist; Jul 2016; vol. 39 (no. 4); p. 307-323

Author(s): Charernboon, Thammanard; Lerthattasilp, Tiraya

#### The mental health and mortality impact of death of a partner with dementia.

**Source:** International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 929-937 **Author(s):** Shah, Sunil M.; Carey, Iain M.; Harris, Tess; DeWilde, Stephen; Victor, Christina R. Abstract Objective: Caring for a partner with dementia and partner bereavement are independently associated with poor health. An understanding of the health effects of living with a partner dying with dementia can help optimise support. We describe health in the year before and after loss of a partner with dementia compared with other bereavements. Methods: In a UK primary care database, 2624 older individuals whose partner died with dementia during 2005-2012 were matched with 7512 individuals experiencing bereavement where the deceased partner had no dementia recorded.Results: Prior to bereavement, partners of the deceased with dementia were more likely to be diagnosed with depression (OR 2.31, 1.69-3.14) and receive psychotropic medication (OR 1.34, 1.21-1.49) than partners from bereavements without dementia. In contrast, psychotropic medication initiation two months after dementia bereavement was lower (HR 0.69, 0.56-0.85). Compared with other bereaved individuals, mortality after bereavement was lower in men experiencing a dementia bereavement (HR 0.68, 0.49-0.94) but similar in women (HR 1.02, 0.75-1.38). Prior to bereavement, those who died with dementia were less likely to receive palliative care (OR 0.47, 0.41-0.54). Conclusion: In the year before bereavement, partners of individuals dying with dementia experience poorer mental health than those facing bereavement from other causes, and their partner is less likely to receive palliative care. In the year after, individuals whose partner died with dementia experience some attenuation of the adverse health effects of bereavement. Services need to address the needs of carers for individuals dying with dementia and improve access to palliative care.

## Estimating the prevalence of Parkinson's disease (PD) and proportions of patients with associated dementia and depression among the older adults based on secondary claims data.

**Source:** International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 938-943 **Author(s):** Riedel, O.; Bitters, D.; Amann, U.; Garbe, E.; Langner, I.

Abstract: Objectives: While the epidemiology of Parkinson's disease (PD) has been extensively studied, data on the prevalence of PD among the older adults in Germany are scarce, based on small samples, and limited to primary data designs. This study estimated the PD prevalence among the older adults in Germany in 2006 using secondary data.Methods: We included 815,573 health insurance members aged ≥65 years from all regions in Germany. PD was identified in case of at least one inpatient or outpatient diagnosis. An outpatient diagnosis had to be confirmed by either a subsequent diagnosis or an antiparkinsonian drug within 12 months. PD was also assumed if a first prescription was confirmed by a diagnosis within 12 months. Cases were checked for a diagnosis of dementia or depression. Results: The standardized prevalence of PD was 1680 (95% confidence interval (CI): 1644-1716) cases per 100,000 persons. The prevalence increased with age and peaked in the age group of  $\geq$ 90 years (4633 cases; 95% CI: 4227-5068) with higher rates in men (1729; 95% CI: 1684-1776) than in women (1644; 95% CI: 1593-1697). Dementia and depression occurred in 26.6% (95% CI: 25.8-27.5) and 32.6 (95% CI: 31.7-33.5) of PD cases, respectively.Conclusions: The age-related increase of PD prevalence and the age-specific prevalence estimates are in line with other European studies, stressing the public health relevance related to PD. In addition to the minimization of biases that might occur in

primary data studies, further strengths of our findings are the large underlying sample size and the coverage of Germany.

### Effects of a high-intensity functional exercise program on depressive symptoms among people with dementia in residential care: a randomized controlled trial.

Source: International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 868-878

**Author(s):** Boström, Gustaf; Conradsson, Mia; Hörnsten, Carl; Rosendahl, Erik; Lindelöf, Nina; Holmberg, Henrik; Nordström, Peter; Gustafson, Yngve; Littbrand, Håkan

**Abstract:**Objectives: The aim of this study is to evaluate the effect of a high-intensity functional exercise program on depressive symptoms among older care facility residents with dementia. Methods: Residents (n = 186) with a diagnosis of dementia, age  $\geq$  65 years, Mini-Mental State Examination score  $\geq$  10, and dependence in activities of daily living were included. Participants were randomized to a high-intensity functional exercise program or a non-exercise control activity conducted 45 min every other weekday for 4 months. The 15item Geriatric Depression Scale (GDS) and the Montgomery-Asberg Depression Rating Scale (MADRS) were administered by blinded assessors at baseline, 4, and 7 months. Results: No difference between the exercise and control activity was found in GDS or MADRS score at 4 or 7 months. Among participants with GDS scores  $\geq$  5, reductions in GDS score were observed in the exercise and control groups at 4 months (-1.58, P = 0.001 and -1.54, P = 0.004) and 7 months (-1.25, P = 0.01 and -1.45, P = 0.007). Among participants with MADRS scores  $\geq$  7, a reduction in MADRS score was observed at 4 months in the control group (-2.80, P = 0.009) and at 7 months in the exercise and control groups (-3.17, P = 0.003) and -3.34, P = 0.002).Conclusions: A 4-month high-intensity functional exercise program has no superior effect on depressive symptoms relative to a control activity among older people with dementia living in residential care facilities. Exercise and non-exercise group activities may reduce high levels of depressive symptoms.

### Depressive symptoms increase the risk of progression to dementia in subjects with mild cognitive impairment: systematic review and meta-analysis.

Source: International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 905-911

**Author(s):** Mourao, Raimundo J.; Mansur, Guilherme; Malloy-Diniz, Leandro F.; Castro Costa,

**Abstract:** Objective: There is a long-standing debate in the literature whether depressive symptoms increase the risk of dementia in older with mild cognitive impairment (MCI). We aim to conduct a meta-analysis of studies that evaluated the risk of dementia in subjects with MCI and depressive symptoms compared with subjects with MCI and no depressive symptoms. Methods: We calculated the relative risk of progression to dementia in subjects with MCI and depressive symptoms compared with subjects with MCI and no depressive symptoms using a generic inverse variance method with random effect models. Results: Eighteen studies were included in the meta-analysis, with a sample size of 10,861 MCI subjects. The pooled relative risk of progressing to dementia was 1.28 Cl95% [1.09-1.52] (p = 0.003) in the group of MCI subjects with depressive symptoms compared with the MCI subjects with no depressive symptoms. Discussion: Our results provide additional evidence that depressive symptoms determine an additive risk effect to the progression to dementia

in subjects with MCI. The comorbidity between depression and cognitive impairment can be an intervention target for prevention of dementia in MCI subjects

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Discussion: Our results provide additional evidence that depressive symptoms determine an additive risk effect to the progression to dementia in subjects with MCI. The comorbidity between depression and cognitive impairment can be an intervention target for prevention of dementia in MCI subjects.

### Effects of a high-intensity functional exercise program on depressive symptoms among people with dementia in residential care: a randomized controlled trial

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Author(s): Bostrom G.; Conradsson M.; Hornsten C.; Rosendahl E.; Lindelof N.

**Abstract:**Objectives: The aim of this study is to evaluate the effect of a high-intensity functional exercise program on depressive symptoms among older care facility residents with dementia. Methods: Residents (n = 186) with a diagnosis of dementia, age > 65 years, Mini-Mental State Examination score > 10, and dependence in activities of daily living were included. Participants were randomized to a high-intensity functional exercise program or a non-exercise control activity conducted 45 min every other weekday for 4 months. The 15-item Geriatric Depression Scale (GDS) and the Montgomery-Asberg Depression Rating Scale (MADRS) were administered by blinded assessors at baseline, 4, and 7 months. Results: No difference between the exercise and control activity was found in GDS or MADRS score at 4 or 7 months. Among participants with GDS scores > 5, reductions in GDS score were

observed in the exercise and control groups at 4 months (-1.58, P = 0.001 and -1.54, P = 0.004) and 7 months (-1.25, P = 0.01 and -1.45, P = 0.007). Among participants with MADRS scores > 7, a reduction in MADRS score was observed at 4 months in the control group (- 2.80, P = 0.009) and at 7 months in the exercise and control groups (-3.17, P = 0.003 and - 3.34, P = 0.002). Conclusions: A 4-month high-intensity functional exercise program has no superior effect on depressive symptoms relative to a control activity among older people with dementia living in residential care facilities. Exercise and non-exercise group activities may reduce high levels of depressive symptoms.

### Improvements in the prescribing of antipsychotics in dementia and psychogeriatric units in New Zealand

**Source:** International Journal of Clinical Pharmacy; Aug 2016; vol. 38 (no. 4); p. 941-949 **Author(s):** Tordoff J.M.; Ailabouni N.J.; Browne D.P.; Al-Sallami H.S.; Gray A.R.

Abstract: Background Despite warnings of possible serious events, and reports of little benefit, antipsychotic agents are commonly prescribed in residential care for older people with dementia. A residential care provider (RCP) in New Zealand sought to examine and improve prescribing in some of their facilities. Objective To examine changes following a range of interventions implemented by a RCP to improve the prescribing of antipsychotics. Setting Thirteen dementia and psychogeriatric units in New Zealand managed by a RCP. Method An audit (n = 228 residents) was undertaken in thirteen dementia and psychogeriatric units in New Zealand in July-September 2011. A modified Best Practice Advocacy Centre (bpac<ovid:sup>nz</ovid:sup>) tool was used to examine antipsychotic prescribing, the administration of "when required" (PRN) antipsychotic doses and antipsychotic-related documentation (e.g. documenting of "target behaviour identified" and "need to monitor for adverse effects"). Prescribing for some central nervous system agents and fractures and fall rates were also examined. Some educational, managerial, environmental, recreational and resident-specific interventions were implemented postaudit. The audit (n = 233) was repeated in July-September 2013. Main outcome measures: (1) Number of residents prescribed and administered antipsychotics (2) Documentation of antipsychotic-related information in residents' notes. Results The administration of antipsychotics and prescribing of regular doses (+/-PRN) decreased about a quarter from 2011 to 2013: 50.4-38.2, and 49.1-36.5 % (ORs 0.60, 0.57 respectively, both p < 0.001), and prescribing for any antipsychotic dose (including PRN only) decreased: 60.5-50.6 % (OR 0.67, p = 0.003). Documenting of "target behaviour identified" significantly increased from 54.3 to 71.2 %, (OR 1.99, p = 0.017) and documenting of the "need to monitor for adverse effects" increased non-significantly (30.4-46.6 %, p = 0.098); both falling short of the 90 % goal set by bpac<ovid:sup>nz</ovid:sup>. Benzodiazepine prescribing significantly decreased [39.0-25.8 %, (OR 0.59, p < 0.001)]. Conclusions Following a range of interventions, antipsychotic prescribing, administration and some related documentation improved in dementia and psychogeriatric units in New Zealand. Future studies should aim to identify the most effective of these interventions so they can be considered for implementing in similar settings.

## Reducing neuropsychiatric symptoms in persons with dementia and associated burden in family caregivers using tailored activities: Design and methods of a randomized clinical trial

Source: Contemporary Clinical Trials; Jul 2016; vol. 49; p. 92-102

Author(s): Gitlin L.N.; Piersol C.V.; Hodgson N.; Marx K.; Roth D.L.; Johnston D.; Samus Q

Abstract: Among over 5 million people in the USA with dementia, neuropsychiatric symptoms (NPS) are almost universal, occurring across disease etiology and stage. If untreated, NPS can lead to significant morbidity and mortality including increased cost, distress, depression, and faster disease progression, as well as heightened burden on families. With few pharmacological solutions, identifying nonpharmacologic strategies is critical. We describe a randomized clinical trial, the Dementia Behavior Study, to test the efficacy of an activity program to reduce significant existing NPS and associated caregiver burden at 3 and 6 months compared to a control group intervention. Occupational therapists deliver 8 in-home sessions over 3 months to assess capabilities and interests of persons with dementia, home environments, and caregiver knowledge, and readiness from which activities are developed and families trained in their use. Families learn to modify activities for future declines and use strategies to address care challenges. The comparison group controls for time and attention and involves 8 in-home sessions delivered by health educators who provide dementia education, home safety recommendations, and advanced care planning. We are randomizing 250 racially diverse families (person with dementia and primary caregiver dyads) recruited from community-based social services, conferences and media announcements. The primary outcome is change in agitation/aggression at 3 and 6 months. Secondary outcomes assess quality of life of persons with dementia, other behaviors, burden and confidence of caregivers, and cost and cost effectiveness. If benefits are supported, this activity intervention will provide a clinically meaningful approach to prevent, reduce, and manage NPS.

### **Cognitive Function**

Cognitive function and disability in late life: an ecological validation of the 10/66 battery of cognitive tests among community-dwelling older adults in South India Source: International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 879-891 Author(s): Krishna M.; Beulah E.; Saroja A.; Karat S.C.; Jones S.; Sundarachari R.; Kumaran K.; Abstract:Background: The 10/66 Dementia Research Group developed and validated a culture and education fair battery of cognitive tests for diagnosis of dementia in populationbased studies in low-income and middle-income countries including India. Aims: This study examined the association between individual domains of the 10/66 battery of cognitive tests and 'disability' and 'functional impairment' in community-dwelling older adults in South India. Methods: One hundred twenty-nine adults aged 60-90 years residing in Karunapura, in the city of Mysore, were interviewed in their own homes. Cognitive functioning was measured by administering the 10/66 battery of cognitive tests that composes of Community Screening Instrument for Dementia (CSI'D' COGSCORE), verbal fluency (VF) and word list memory recall (WLMR). A reliable informant was interviewed to ascertain if the subject's cognitive problems have resulted in functional impairment. Disability was measured by WHO Disability Schedule-II (DAS). Results: The women had significantly lower CSI'D' COGSCORE score when compared with men (p = 0.002). The presence of 'functional impairment' resulting from cognitive decline was significantly associated with lower scores on VF (p = 0.03), WLMR (p = 0.03) and CSI'D' COGSCOREs (p < 0.01). There was a significant inverse association between WHO DAS II score and WLMR (p = 0.004), VF (0.006) and CSI'D' COGSCORE scores (p < 0.001) even after adjusting for selfreported ischaemic heart disease, stroke, chronic obstructive airway disease, hypertension and diabetes. Conclusions: Lower scores on individual domains of the 10/66 battery of cognitive tests are associated with higher levels of disability and functional impairment in community-dwelling older adults. These culture and education fair tests are suitable for use in population-based research in India.

### Mild cognitive impairment in a Spanish representative sample: prevalence and associated factors

Source: International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 858-867

Author(s): Lara E.; Koyanagi A.; Olaya B.; Tyrovolas S.; Haro J.M.; Lobo A.; Miret M.

Abstract: Objective: Given the limitations of treatments for dementia, the characterisation of the early stages of dementia is crucial for the development of preventive programmes and interventions. We aimed to estimate the prevalence of mild cognitive impairment (MCI) and examine its medical and lifestyle correlates in a nationally representative sample of the Spanish population. Methods: A total of 3625 participants (>50 years of age) were interviewed in a cross-sectional study. MCI was defined as the presence of cognitive concerns, the objective evidence of impairment in one or more cognitive domains, the preservation of independence in functional abilities and no dementia. Participants were also asked to provide sociodemographic, health status and lifestyle information. Logistic regression analyses were performed using the overall sample and by age groups. Results: The overall prevalence of MCI was 9.6%, with higher rates in older people and women. In the overall model, after adjustment for potential confounders, depression [odds ratio (OR) = 1.79; 95% confidence interval (CI) = 1.21, 2.66], diabetes (OR = 1.43; 95% CI = 1.05, 1.95), sleep disturbances (OR = 1.66; 95% CI = 1.09, 2.55) and low level of physical activity (OR = 1.71; 95% CI = 1.26, 2.31) were associated with significantly higher odds for MCI. When stratified by age groups, depression (OR = 2.41; 95% CI = 1.35, 4.31), stroke (OR = 3.77; 95% CI = 1.44, 9.83) and obesity (OR = 2.06; 95% CI = 1.20, 3.53) were significantly associated with MCI in middle-aged participants (50-64 years), whereas low level of physical activity (OR = 1.85; 95% CI = 1.32, 2.59) and sleep disturbances (OR = 1.79; 95% CI = 1.05, 3.05) were associated with MCI in individuals aged 65+ years. Conclusions: Significant associations between MCI and psychological, cardiovascular and lifestyle factors were found. Targeting modifiable risk factors might reduce the risk for MCI and subsequent dementia.

#### Cognitive variations among vascular dementia subtypes caused by small-, large-, or mixedvessel disease

**Source:** Archives of Medical Science; Aug 2016; vol. 12 (no. 4); p. 747-753 **Publisher:** Termedia Publishing House Ltd. (Kleeberga St.2, Poznan 61-615, Poland)

#### Author(s): Ying H.; Jianping C.; Jianqing Y.; Shanquan Z.

Abstract:Introduction: Vascular dementia (VaD) is a heterogeneous disease that can vary in clinical presentation and cognitive profile. The cognitive profiles of different VaD subtypes depend on the anatomical distribution of the vascular insults that have been documented. Material and methods: We reviewed demographic, cognitive, and imaging data in 402 patients who were clinically diagnosed with VaD between January 2002 and June 2012 at the First Affiliated Hospital of Gan Nan Medical College in Ganzhou, China. Results: Based on magnetic resonance imaging (MRI) results, patients were classified as having large-(24.1%), small-(70.4%), or mixed-vessel VaD (5.5%). Hypertension was the most prevalent risk factor (81%), followed by smoking (37%), hyperlipidemia (35%), and diabetes (27%). Hyperlipidemia, cardiac risk factors (history of cardiovascular disease, heart valve disorder) and carotid stenosis were more frequent in patients with large-vessel disease compared to those with small-vessel or mixed-vessel disease (p < 0.001). A median of 4 (maximum 11) cognitive domains were impaired in each VaD patient. After memory dysfunction, executive defects were the most prevalent (68.9%), and neurobehavioral dysfunction was the most rare (13.2%). Patients with small-vessel VaD showed more executive dysfunction than patients with large-vessel and mixed-vessel VaD (p < 0.05), whereas patients with largevessel VaD had a higher prevalence of visuospatial or language dysfunction (p < 0.05). Conclusions: The results indicate that specific subtypes and underlying vascular mechanisms will help predict clinical courses and produce more focused treatment and prevention of VaD.

### Vascular contributions to cognitive impairment and dementia: Topical review of animal models

**Source:** Stroke; Jul 2016; vol. 47 (no. 7); p. 1953-1959 **Publication Date:** Jul 2016

Author(s): Madigan J.B.; Hainsworth A.H.; Wilcock D.M.

## Apolipoprotein E\*4 (APOE\*4) genotype is associated with altered levels of glutamate signaling proteins and synaptic coexpression networks in the prefrontal cortex in mild to moderate Alzheimer disease

Source: Molecular and Cellular Proteomics; Jul 2016; vol. 15 (no. 7); p. 2252-2262

#### Publication Date: Jul 2016

**Author(s):** Sweet R.A.; MacDonald M.L.; Kirkwood C.M.; Schempf T.; Garver M.E.; Ding Y.; Jones-Laughner J.; Kofler J.; Yates N.A.; Ikonomovic M.D.; Lopez O.L.; Fitz N.F.; Koldamova R.

**Abstract:**It has been hypothesized that Alzheimer disease (AD) is primarily a disorder of the synapse. However, assessment of the synaptic proteome in AD subjects has been limited to a small number of proteins and often included subjects with end-stage pathology. Protein from prefrontal cortex gray matter of 59 AD subjects with mild to moderate dementia and 12 normal elderly subjects was assayed using targeted mass spectrometry to quantify 191 synaptically expressed proteins. The profile of synaptic protein expression clustered AD subjects into two groups. One of these was characterized by reduced expression of glutamate receptor proteins, significantly increased synaptic protein network coexpression, and associated with Apolipoprotein E\*4 (APOE\*4) carrier status. The second group, by

contrast, showed few differences from control subjects. A subset of AD subjects had altered prefrontal cortex synaptic proteostasis for glutamate receptors and their signaling partners. Efforts to therapeutically target glutamate receptors in AD may have outcomes dependent on APOE\*4 genotype.

### Common Aging Signature in the Peripheral Blood of Vascular Dementia and Alzheimer's Disease

Source: Molecular Neurobiology; Aug 2016; vol. 53 (no. 6); p. 3596-3605

#### Publication Date: Aug 2016

Author(s): Luo H.; Li Y.; Shao S.; Shi X.; Han G.; Wang J.; Song F.; Bai Z.; Peng X.; Lei H.; Zeng F.;

**Abstract:**Alzheimer's disease (AD) and vascular dementia (VaD) are the two most dominant forms of dementia in elderly people. Due to the large overlap between AD and VaD in clinical observations, great controversies exist regarding the distinction and connection between these two types of senile dementia. Here for the first time, we resort to the gene expression pattern of the peripheral blood to compare AD and VaD objectively. In our previous work, we have demonstrated that the dysregulation of gene expression in AD is unique among the examined diseases including neurological diseases, cancer, and metabolic diseases. In this study, we found that the dysregulation of gene expression in AD and VaD is quite similar to each other at both functional and gene levels. Interestingly, the dysregulation started at the early stages of the diseases, namely mild cognitive impairment (MCI) and vascular cognitive impairment (VCI). We have also shown that this signature is distinctive from that of peripheral vascular diseases. Comparison with aging studies revealed that the most profound change in AD and VaD, namely ribosome, is consistent with the accelerated aging scenario. This study may have implications to the common mechanism between AD and VaD.

#### **Medical**

### Quantitative validation of a visual rating scale for frontal atrophy: associations with clinical status, APOE e4, CSF biomarkers and cognition

Source: European Radiology; Aug 2016; vol. 26 (no. 8); p. 2597-2610

Author(s): Ferreira D.; Lindberg O.; Aguilar C.; Wahlund L.-O.; Westman E.; Cavallin L.;.

**Abstract:** Objectives: To validate a visual rating scale of frontal atrophy with quantitative imaging and study its association with clinical status, APOE epsilon4, CSF biomarkers, and cognition. Methods: The AddNeuroMed and ADNI cohorts were combined giving a total of 329 healthy controls, 421 mild cognitive impairment patients, and 286 Alzheimer's disease (AD) patients. Thirty-four patients with frontotemporal dementia (FTD) were also included. Frontal atrophy was assessed with the frontal sub-scale of the global cortical atrophy scale (GCA-F) on T1-weighted images. Automated imaging markers of cortical volume, thickness,

and surface area were evaluated. Manual tracing was also performed. Results: The GCA-F scale reliably reflects frontal atrophy, with orbitofrontal, dorsolateral, and motor cortices being the regions contributing most to the GCA-F ratings. GCA-F primarily reflects reductions in cortical volume and thickness, although it was able to detect reductions in surface area too. The scale showed significant associations with clinical status and cognition. Conclusion: The GCA-F scale may have implications for clinical practice as supportive diagnostic tool for disorders demonstrating predominant frontal atrophy such as FTD and the executive presentation of AD. We believe that GCA-F is feasible for use in clinical routine for the radiological assessment of dementia and other disorders. Key points: \* The GCA-F visual rating scale reliably reflects frontal brain atrophy. \* Orbitofrontal, dorsolateral, and motor cortices are the most contributing regions. \* GCA-F shows significant associations with clinical status and cognition. \* GCA-F may be supportive diagnostic tool for disorders demonstrating regions. \* GCA-F shows significant associations with clinical status and cognition. \* GCA-F may be supportive diagnostic tool for disorders demonstrating predominant frontal atrophy. \* Orbitofrontal, dorsolateral, and motor cortices are the most contributing regions. \* GCA-F may be feasible for use in radiological routine.

## Erratum: Dominant hemisphere lateralization of cortical parasympathetic control as revealed by frontotemporal dementia (Proceedings of the National Academy of Sciences of the United States of America (2016) 113 (E2430-E2439) DOI: 10.1073/pnas.1509184113)

**Source:** Proceedings of the National Academy of Sciences of the United States of America; Jul 2016; vol. 113 (no. 27)

#### Author(s): anonymous

**Abstract:**Correction for "Dominant hemisphere lateralization of cortical parasympathetic control as revealed by frontotemporal dementia," by Christine C. Guo, Virginia E. Sturm, Juan Zhou, Efstathios D. Gennatas, Andrew J. Trujillo, Alice Y. Hua, Richard Crawford, Lara Stables, Joel H. Kramer, Katherine Rankin, Robert W. Levenson, Howard J. Rosen, Bruce L. Miller, and William W. Seeley, which appeared in issue 17, April 26, 2016, of Proc Natl Acad Sci USA (113:E2430-E2439; first published April 11, 2016; 10.1073/pnas.1509184113). The authors note that on page E2430, right column, first paragraph, line 6, "Seeley et al. (17)" should instead appear as "Seeley et al. (17) and see a review by Menon and Uddin (92)." The authors note that Table 1 appeared incorrectly, with a misplaced reference next to the "bvFTD" column heading. The corrected table appears below.

### Clinical and neuropsychological characteristics of general paresis misdiagnosed as primary psychiatric disease

Source: BMC Psychiatry; Jul 2016; vol. 16 (no. 1)

Author(s): Yanhua W.; Haishan S.; Le H.; Xiaomei Z.; Xinru C.; Dong Z.; Yuefen Z.; Yan T.;

Abstract:Background: Neurosyphilis is caused by the invasion of Treponema pallidum into the central nervous system. General paresis (GP) is a type of neurosyphilis. The main manifestation of general paresis is dementia; however, this is different from the other types of dementia, which can be cured by adequate doses of penicillin in the early stage. Neurosyphilis is the "great imitator" because it can mimic many types of medical disorders. In addition, the manifestations of neurosyphilis are not typical. Psychiatric disorders as a cause of general paresis have become more common due to the use of antibiotics. Patients with a psychiatric manifestation are often misdiagnosed. The purpose of this study was to explore the differences in the clinical and neuropsychological characteristics of general paresis between patients misdiagnosed as having a primary psychiatric disease and patients diagnosed correctly upon seeing a doctor. The results may assist clinicians in the early identification of neurosyphilis with a mental disorder. Method: The demographic and clinical manifestations, laboratory tests, and neuroimaging and neuropsychological characteristics were analysed in 55 general paresis patients with psychiatric disorders, including 29 patients misdiagnosed as primary psychiatric disease and 26 patients diagnosed as having general paresis after being seen once by a doctor. Result: All of the patients had positive assay results for cerebral spinal fluid (CSF) Treponema pallidum hemagglutination (TPHA). Only 43.3 % of misdiagnosed patients and 30.8 % of general paresis patients had positive results for the CSF rapid plasma reagin (RPR) test; 96.4 % patients had abnormal neuroimaging. Mood disturbances were the most common psychiatric disorder in the general paresis patients, especially agitation, between the two groups (patients with general paresis who were misdiagnosed as having primary psychiatric disease and patients who had never been misdiagnosed) (p = 0.011). Conclusion: Our findings reinforce the importance of performing serologic testing for syphilis. This should be a part of the evaluation of patients with psychiatric disorders, especially patients with cognitive impairment. When the syphilis serology is positive, the patient should be examined thoroughly for neurosyphilis by lumbar puncture. Brain imaging could also aid the physician in discriminating these patients from those with a functional mental disorder.

#### The mTOR signalling cascade: Paving new roads to cure neurological disease

Source: Nature Reviews Neurology; Jul 2016; vol. 12 (no. 7); p. 379-392

#### Author(s): Crino P.B.

Abstract: Defining the multiple roles of the mechanistic (formerly 'mammalian') target of rapamycin (mTOR) signalling pathway in neurological diseases has been an exciting and rapidly evolving story of bench-to-bedside translational research that has spanned gene mutation discovery, functional experimental validation of mutations, pharmacological pathway manipulation, and clinical trials. Alterations in the dual contributions of mTORregulation of cell growth and proliferation, as well as autophagy and cell death-have been found in developmental brain malformations, epilepsy, autism and intellectual disability, hypoxic-ischaemic and traumatic brain injuries, brain tumours, and neurodegenerative disorders. mTOR integrates a variety of cues, such as growth factor levels, oxygen levels, and nutrient and energy availability, to regulate protein synthesis and cell growth. In line with the positioning of mTOR as a pivotal cell signalling node, altered mTOR activation has been associated with a group of phenotypically diverse neurological disorders. To understand how altered mTOR signalling leads to such divergent phenotypes, we need insight into the differential effects of enhanced or diminished mTOR activation, the developmental context of these changes, and the cell type affected by altered signalling. A particularly exciting feature of the tale of mTOR discovery is that pharmacological mTOR inhibitors have shown clinical benefits in some neurological disorders, such as tuberous sclerosis complex, and are being considered for clinical trials in epilepsy, autism, dementia, traumatic brain injury, and stroke.

Source: BioMed Research International; 2016; vol. 2016

Author(s): Zhang J.; Wang X.; Li J.; Zhang F.; Li Q.; Yan B.; Huang R.; Yu X.; Dong C.; Liu P.;

**Abstract:**Parkinson's disease (PD) is a type of degenerative disorder of the basal ganglia, causing tremor at rest, muscle rigidity hypokinesia, and dementia. The effectiveness of drug treatments gradually diminishes because the conversion to dopamine within the brain is increasingly disrupted by the progressive degeneration of the dopaminergic terminals. After long-term treatment, most patients with PD suffer from disability that cannot be satisfactorily controlled. To solve these issues, stem cells have recently been used for cell therapy of PD. In this review, the characteristics of different stem cells and their therapeutic effects on PD treatment will be discussed.

### Cingulate island sign on FDG-PET is associated with medial temporal lobe atrophy in dementia with Lewy bodies

Source: Annals of Nuclear Medicine; Jul 2016; vol. 30 (no. 6); p. 421-429

Author(s): lizuka T.; Kameyama M.

Abstract:Objective: The cingulate island sign (CIS), which refers to sparing of the posterior cingulate relative to the precuneus and cuneus, has been proposed as an FDG-PET imaging feature of dementia with Lewy bodies (DLB). The sign is reportedly associated with Alzheimer's disease (AD) type neurofibrillary tangle (NFT) pathology in autopsy cases. To confirm this relationship using neuroimaging modalities in vivo, we investigated associations between CIS and the medial temporal lobe (MTL) atrophy in DLB. Methods: Twenty-four patients each of DLB and AD underwent both <ovid:sup>18</ovid:sup>F-FDG-PET and MRI with voxel-based morphometry. Dopamine transporter (DAT) density was also measured by DAT-SPECT in all those with DLB and in five with AD. The accumulation of FDG in the posterior cingulate ROI was divided by that in the precuneus plus cuneus ROI to derive the CIS ratio from the FDG-PET images. Values for cognitive function of Mini-Mental State Examination (MMSE), Frontal Assessment Battery (FAB) and Ray Auditory Verbal Learning Test (RAVLT) and scores for the core-feature triad of fluctuation, hallucination and parkinsonism were also statistically analyzed. Results: The CIS ratio was higher in DLB than in AD (p < 0.001). The degree of MTL atrophy was lower in DLB than in AD (p < 0.001). The CIS ratio and the degree of MTL atrophy were inversely correlated with DLB (p < 0.001) and with AD (p < 0.05). The CIS ratio did not significantly correlate with DAT density in DLB or with MMSE, FAB, fluctuation score and parkinsonism score. However, the CIS ratio significantly correlated with RAVLT and hallucination scores (both, p < 0.05). Conclusions: The CIS on FDG-PET in DLB was associated with MTL atrophy but not with striatal DAT density, suggesting that the CIS is a useful neuroimaging biomarker to evaluate coexisting AD-type NFT pathology in vivo. The CIS was also associated with memory impairment and visual hallucination in DLB.

### Pathogenic mutations in the valosin-containing protein/p97(VCP) N-domain inhibit the SUMOylation of VCP and lead to impaired stress response

Source: Journal of Biological Chemistry; Jul 2016; vol. 291 (no. 27); p. 14373-14384 Author(s): Wang T.; Xu W.; Qin M.; Yang Y.; Bao P.; Shen F.; Xu J.; Zhang Z. Abstract: Valosin-containing protein/p97(VCP) is a hexameric ATPase vital to protein degradation during endoplasmic reticulum stress. It regulates diverse cellular functions including autophagy, chromatin remodeling, and DNA repair. In addition, mutations in VCP cause inclusion body myopathy, Paget disease of the bone, and frontotemporal dementia (IBMPFD), as well as amyotrophic lateral sclerosis. Nevertheless, how the VCP activities were regulated and how the pathogenic mutations affect the function of VCP during stress are not unclear. Here we show that the small ubiquitin-like modifier (SUMO)-ylation of VCP is a normal stress response inhibited by the disease-causing mutations in the N-domain. Under oxidative and endoplasmic reticulum stress conditions, the SUMOylation of VCP facilitates the distribution of VCP to stress granules and nucleus, and promotes the VCP hexamer assembly. In contrast, pathogenic mutations in the VCP N-domain lead to reduced SUMOylation and weakened VCP hexamer formation upon stress. Defective SUMOylation of VCP also causes altered co-factor binding and attenuated endoplasmic reticulum-associated protein degradation. Furthermore, SUMO-defective VCP fails to protect against stressinduced toxicity in Drosophila. Therefore, our results have revealed SUMOylation as a molecular signaling switch to regulate the distribution and functions of VCP during stress response, and suggest that deficiency in VCP SUMOylation caused by pathogenic mutations will render cells vulnerable to stress insults.

#### Other

### Enterovirus causes rapidly progressive dementia in a 28-year-old immunosuppressed woman

Source: Journal of NeuroVirology; Aug 2016; vol. 22 (no. 4); p. 538-540

Author(s): Mantri S.; Shah B.B.

**Abstract:**Enterovirus in the nervous system can present with protean manifestations, including polio-like paralysis, movement disorders, and seizures. This is a report of a single case of a rapidly progressive dementing illness in a young woman with common variable immunodeficiency (CVID). Over the course of several months, she developed profound aphasia, apraxia, and cerebellar signs. She underwent brain biopsy which was suggestive of toxoplasmosis; despite an adequate course of treatment, she continued to decline and ultimately died. Autopsy and PCR testing revealed diffuse coxsackie B3 infiltration in the meninges and brain parenchyma. To our knowledge, this is the first description of enterovirus causing a dementing illness in a young immunosuppressed adult. We highlight the need for a broad differential diagnosis, especially for immunocompromised individuals, who may present in an atypical fashion.

#### A survey of UK services for younger people living with dementia

**Source:** International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 957-959 **Author(s):** Rodda J.; Carter J.

Association between tooth loss and dementia among older people: a meta-analysis

**Source:** International Journal of Geriatric Psychiatry; Aug 2016; vol. 31 (no. 8); p. 953-955 **Author(s):** Shen T.; Wang L.; Zhang D.; Lv J.; Wang W.

#### An ethnographic study of strategies to support discussions with family members on endof-life care for people with advanced dementia in nursing homes

Source: BMC Palliative Care; Jul 2016; vol. 15 (no. 1)

Author(s): Saini G.; Sampson E.L.; Davis S.; Kupeli N.; Harrington J.; Jones L.; Moore K.J.;

Abstract: Background: Most people with advanced dementia die in nursing homes where families may have to make decisions as death approaches. Discussions about end-of-life care between families and nursing home staff are uncommon, despite a range of potential benefits. In this study we aimed to examine practices relating to end-of-life discussions with family members of people with advanced dementia residing in nursing homes and to explore strategies for improving practice. Methods: An ethnographic study in two nursing homes where the Compassion Intervention was delivered. The Compassion Intervention provides a model of end-of-life care engaging an Interdisciplinary Care Leader to promote integrated care, educate staff, support holistic assessments and discuss end of life with families. We used a framework approach, undertaking a thematic analysis of fieldwork notes and observations recorded in a reflective diary kept by the Interdisciplinary Care Leader, and data from in-depth interviews with 23 informants: family members, GPS, nursing home staff, and external healthcare professionals. Results: Four major themes described strategies for improving practice: (i) educating families and staff about dementia progression and end-of-life care; (ii) appreciating the greater value of in-depth end-of-life discussions compared with simple documentation of care preferences; (iii) providing time and space for sensitive discussions; and (iv) having an independent healthcare professional or team with responsibility for end-of-life discussions. Conclusions: The Interdisciplinary Care Leader role offers a promising method for supporting and improving end-of-life care discussions between families of people with advanced dementia and nursing home staff. These strategies warrant further evaluation in nursing home settings.

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#### **Alzheimer's and Dementia**

July 2016; Vol 12, Issue 7

http://www.alzheimersanddementia.com/current

#### Dementia: The International Journal of Social Research and Practice

July 2016; Vol 15, Issue 4 http://dem.sagepub.com/content/15/4.toc

#### **Age and Ageing**

July 2016; Vol 45, Issue 4 http://ageing.oxfordjournals.org/content/current

#### Journal of the American Geriatrics Society

July 2016; Vol 64, Issue 7

http://onlinelibrary.wiley.com/doi/10.1111/jgs.2016.64.issue-7/issuetoc

### Twitter









#### John's Campaign @JohnCampaign

#### https://twitter.com/JohnCampaign

Inspired by Nicci Gerrard's father, John. People with dementia in hospital deserve the right to be accompanied by their carers. It's that simple.

#### Dementia UK @DementiaUK

#### https://twitter.com/DementiaUK

One-to-one support and expert advice for families facing dementia through our renowned Admiral Nurses. We respond to messages 9-5 Monday to Friday.

#### Dementia Friends @DementiaFriends

https://twitter.com/DementiaFriends

Become a Dementia Friend & join the UK's biggest ever initiative to change people's perceptions of dementia. Join at http://bit.ly/DFriends

#### Growing Support @Growing Support https://twitter.com/Growing Support

An award winning social enterprise tackling the issues of loneliness, social isolation and inactivity for older people and people with dementia <u>Bristol, England</u>

#### **Bringing people together in memories**

Posted on 22 June 2016 - By Victoria Treadway



Victoria Treadway et al report on an NHS/public library partnership project between Wirral University Teaching Hospital NHS Foundation Trust and Wirral Council to support the wellbeing of people living with dementia, creating reminiscence boxes which are available in public libraries and in the local acute hospital.

http://www.cilip.org.uk/blog/bringing-people-together-memories



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