A SELECTION OF TEN CURRENT READINGS ON TOPICS RELATED TO DEMENTIA AVAILABLE AS FULL-TEXT (SOME FREE, SOME REQUIRING PAYMENT)

Selection of readings made by Dr Tan Boon Yeow, Adj Asst Professor & A/Prof Goh Lee Gan

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PREVALENCE OF COGNITIVE IMPAIRMENT

Reading 1

Rait G, Fletcher A, Smeeth L, Brayne C, Stirling S, Nunes M, Breeze E, Ng ES, Bulpitt CJ, Jones D, Tulloch AJ. Prevalence of cognitive impairment: results from the MRC trial of assessment and management of older people in the community. Age and aging 2005 May;34(3):242-8.

URL : http://ageing.oxfordjournals.org/cgi/content/abstract/34/3/242 (payment required)

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ABSTRACT

BACKGROUND: cognitive impairment is an important part of the diagnostic criteria for dementia. The Mini-Mental State Examination (MMSE) is recommended to test for cognitive impairment and to monitor medication response.

OBJECTIVES: we examined the prevalence of cognitive impairment in the UK and assessed associations with cognitive impairment.

DESIGN: cross-sectional survey as part of a cluster randomised trial.

SUBJECTS: representative sample of people aged 75 years and over.

METHODS: all subjects had a detailed baseline health assessment including the MMSE.

RESULTS: a total of 15,051 subjects completed the assessment (71.9%). Almost two-thirds of subjects were female (61.5%) and almost half were aged between 75 and 79 years (47.0%). The prevalence of cognitive impairment was 18.3% (95% confidence intervals (CI) = 16.0-20.9) at a cut-off of 23/24, and 3.3% (95% CI = 2.8-4.0) at 17/18. Those with impairment (MMSE 23/24) were significantly more likely to have hearing (odds ratio (OR) 1.7), vision (OR 1.7) and urinary incontinence problems (OR 1.3), have two or more falls in the previous 6 months (OR 1.4), and report poorer health (OR 1.9). Almost half the participants lived alone (n = 7,073; 47.0%) and of these almost one-fifth were impaired (MMSE 23/24; 19.4%).

CONCLUSIONS: there was a high prevalence of cognitive impairment. This representative sample demonstrates the potential burden of disease and service demands. It supports the need for a broader assessment of functioning as recommended by the National Service Framework for Older People, particularly in people with cognitive impairment.

EVALUATION AND DIAGNOSIS OF SUSPECTED DEMENTIA

Reading 2

Adelman AM, Daly MP. Initial evaluation of the patient with suspected dementia. Am Fam Physician. 2005 May 1;71(9):1745-50.

URL : http://www.aafp.org/afp/20050501/1745.html (free full text)

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ABSTRACT

Dementia is a common disorder among older persons, and projections indicate that the number of patients with dementia in the United States will continue to grow. Alzheimer's disease and vascular dementia account for the majority of cases of dementia. After a thorough history and physical examination, including a discussion with other family members, a baseline measurement of cognitive function should be obtained. The Mini-Mental State Examination is the most commonly used instrument to document cognitive impairment. Initial laboratory evaluation includes tests for thyroid-stimulating hormone and vitamin B12 levels. Structural neuroimaging with noncontrast computed tomography or magnetic resonance imaging also is recommended. Other testing should be guided by the history and physical examination. Neuropsychologic testing can help determine the extent of cognitive impairment, but it is not recommended on a routine basis. Neuropsychologic testing may be most helpful in situations where screening tests are normal or equivocal, but there remains a high level of concern that the person may be cognitively impaired.

Reading 3

Barrett AM. Is it Alzheimer's disease or something else? 10 disorders that may feature impaired memory and cognition.Postgrad Med. 2005 May;117(5):47-53.

URL: http://www.postgradmed.com/issues/2005/05_05/barrett.htm (free full text)

ABSTRACT

Patients who have the classic combination of progressive memory loss and problems retrieving stored knowledge that is characteristic of Alzheimer's disease may actually have another, treatable disorder. In these cases, appropriate evaluation can reveal the true diagnosis and guide therapy to stabilize or improve thinking and avert other complications. In this article, Dr Barrett explores 10 conditions that may be mistaken for Alzheimer's disease. These are: depression, stroke, Parkinson's disease, Vitamin B12 deficiency, thyroid disorders, thiamine deficiency, primary gastrointestinal conditions, structural brain lesions, cancer, and neurosyphilis.

DIAGNOSIS AND TREATMENT OF ALZHEIMER'S DISEASE

Reading 4

Desai AK, Grossberg GT. Diagnosis and treatment of Alzheimer's disease. Neurology. 2005 Jun 28;64(12 Suppl 3):S34-9.

URL: http://www.neurology.org/cgi/content/full/64/12_suppl_3/S34 (payment required)

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ABSTRACT

Alzheimer's disease (AD) is a chronic neurodegenerative disorder and the most common cause of dementia. It is one of the principal causes of disability and decreased quality of life among older adults. Progress in our clinical knowledge of AD has led to more reliable diagnostic criteria and accuracy, and research efforts are expanding to uncover the earliest manifestations and even the presymptomatic phases of the disease. The diagnosis of AD is primarily one of inclusion and usually can be made using standardized clinical criteria. There is currently no cure for AD. Current treatment focuses on establishing an early accurate clinical diagnosis, early institution of cholinesterase inhibitors and/or N-methyl-D-aspartate (NMDA) receptor-targeted therapy. Treating medical comorbidities and dementia-related complications, ensuring that appropriate services are provided, addressing the long-term well-being of caregivers, and treating behavioral and psychological symptoms with appropriate nonpharmacologic and pharmacologic interventions also are important. The initiating and propagating pathologic processes and the anatomic location of the earliest changes will become new targets of research and therapeutic development. A possible precursor of AD, mild cognitive impairment (MCI), is under investigation as a possible therapeutic starting point for disease-modifying interventions. This article provides a research update of current understanding in the diagnosis and treatment of AD and in emerging areas of interest such as MCI, detection of AD in the predementia phase, and neuroimaging in AD.

EXERCISE PROTECTS AGAINST DEPRESSION IN AD

Reading 5

Regan C, Katona C, Walker Z, Livingston G. Relationship of exercise and other risk factors to depression of Alzheimer's disease: the LASER-AD study. Int J Geriatr Psychiatry. 2005 Mar;20(3):261-8.

URL: http://www3.interscience.wiley.com/cgi-bin/abstract/109924765/ABSTRACT (payment required)

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ABSTRACT

BACKGROUND: Depression is common in Alzheimer's disease (AD; 5-35%). It is associated with increased disability, cost of care and carer burden. Exercise is known to be associated with a lower prevalence of depression across the age range but little is known about its relationship to depression in AD.

AIMS: To investigate exercise and putative risk factors for depression in a community based sample of people with AD representative of the range of cognitive impairment found in the population with dementia.

METHODS: Information was collected from 224 people with AD and their caregiver using standardised cognitive, psychological and behavioural instruments. Exercise levels were classified into three categories: absent, moderate, and vigorous, using the previous two weeks exercise levels to confirm regularity and recency.

RESULTS: 9/51 (17.6%) depressed participants took exercise compared with 76/173 (43.9%) non-depressed [odds ratio (OR)=2.9, confidence interval (CI)=1.5-5.6, p=0.001]. Not taking part in other activities (hobbies and interests) was associated with depression but less so than lack of exercise. Independent predictors of depression were: lack of exercise (p <0.001, OR=3.4, CI = 1.7-7.2), taking cholinesterase inhibitors (p <0.05, OR=2.4, CI = 1.2-4.9) and having less involvement in hobbies or interests (p <0.05, OR = 1.2, CI = 1.0-1.5).

CONCLUSION: None of the traditional risk factors for depression in older people were associated with depression in AD. Taking regular exercise may protect against depression in AD.

PHARMACOLOGICAL TREATMENT

Reading 6

Kaduszkiewicz H, Zimmermann T, Beck-Bornholdt HP, van den Bussche H. Cholinesterase inhibitors for patients with Alzheimer's disease: systematic review of randomised clinical trials. BMJ. 2005 Aug 6;331(7512):321-7.

URL: http://bmj.bmjjournals.com/cgi/content/full/331/7512/321 (free full text)

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ABSTRACT

OBJECTIVES: Pharmacological treatment of Alzheimer's disease focuses on correcting the cholinergic deficiency in the central nervous system with cholinesterase inhibitors. Three cholinesterase inhibitors are currently recommended: donepezil, rivastigmine, and galantamine. This review assessed the scientific evidence for the recommendation of these agents.

DATA SOURCES: The terms "donepezil", "rivastigmine", and "galantamine", limited by "randomized-controlled-trials" were searched in Medline (1989-November 2004), Embase (1989-November 2004), and the Cochrane Database of Systematic Reviews without restriction for language.

STUDY SELECTION: All published, double blind, randomised controlled trials examining efficacy on the basis of clinical outcomes, in which treatment with donepezil, rivastigmine, or galantamine was compared with placebo in patients with Alzheimer's disease, were included. Each study was assessed independently, following a predefined checklist of criteria of methodological quality.

RESULTS: 22 trials met the inclusion criteria. Follow-up ranged from six weeks to three years. 12 of 14 studies measuring the cognitive outcome by means of the 70 point Alzheimer's disease assessment scale – cognitive subscale showed differences ranging from 1.5 points to 3.9 points in favour of the respective cholinesterase inhibitors. Benefits were also reported from all 12 trials that used the clinician's interview based impression of change scale with input from caregivers. Methodological assessment of all studies found considerable flaws – for example, multiple testing without correction for multiplicity or exclusion of patients after randomisation.

CONCLUSION: Because of flawed methods and small clinical benefits, the scientific basis for recommendations of cholinesterase inhibitors for the treatment of Alzheimer's disease is questionable.

REMINISCIENCE THERAPY FOR DEMENTIA

Reading 7

Woods B, Spector A, Jones C, Orrell M, Davies S. Reminiscence therapy for dementia. Cochrane Database Syst Rev. 2005 Apr 18;(2):CD001120.

URL: http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD001120/frame.html (payment required)

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ABSTRACT

BACKGROUND: Reminiscence Therapy (RT) involves the discussion of past activities, events and experiences with another person or group of people, usually with the aid of tangible prompts such as photographs, household and other familiar items from the past, music and archive sound recordings. Reminiscence groups typically involve group meetings in which participants are encouraged to talk about past events at least once a week. Life review typically involves individual sessions, in which the person is guided chronologically through life experiences, encouraged to evaluate them, and may produce a life story book. Family care-givers are increasingly involved in reminiscence therapy. Reminiscence therapy is one of the most popular psychosocial interventions in dementia care, and is highly rated by staff and participants. There is some evidence to suggest it is effective in improving mood in older people without dementia. Its effects on mood, cognition and well-being in dementia are less well understood.

OBJECTIVES: The objective of the review is to assess the effects of reminiscence therapy for older people with dementia and their care-givers.

SEARCH STRATEGY: The trials were identified from a search of the Specialised Register of the Cochrane Dementia and Cognitive Improvement Group on 4 May 2004 using the term “reminiscence”. The CDCIG Specialized Register contains records from all major health care databases (MEDLINE, EMBASE, PsycLIT, CINAHL) and many ongoing trials databases and is regularly updated. We contacted specialists in the field and also searched relevant Internet sites. We hand-searched Aging and Mental Health, the Gerontologist, Journal of Gerontology, Current Opinion in Psychiatry, Current Research in Britain: Social Sciences, British Psychological Society conference proceedings and Reminiscence database.

SELECTION CRITERIA: Randomised controlled trials and quasi-randomized trials of reminiscence therapy for dementia.

DATA COLLECTION AND ANALYSIS: Two reviewers independently extracted data and assessed trial quality.

MAIN RESULTS: Five trials are included in the review, but only four trials with a total of 144 participants had extractable data. The results were statistically significant for cognition (at follow-up), mood (at follow-up) and on a measure of general behavioural function (at the end of the intervention period). The improvement on cognition was evident in comparison with both no treatment and social contact control conditions. Care-giver strain showed a significant decrease for care-givers participating in groups with their relative with dementia, and staff knowledge of group members’ backgrounds improved significantly. No harmful effects were identified on the outcome measures reported.

AUTHORS’ CONCLUSIONS: Whilst four suitable randomized controlled trials looking at reminiscence therapy for dementia were found, several were very small studies, or were of relatively low quality, and each examined different types of reminiscence work. Although there are a number of promising indications, in view of the limited number and quality of studies, the variation in types of reminiscence work reported and the variation in results between studies, the review highlights the urgent need for more and better designed trials so that more robust conclusions may be drawn.

BEHAVIOURAL TREATMENT IN DEMENTIA

Reading 8

Lichtenberg PA, Kemp-Havican J, Macneill SE, Schafer Johnson A. Pilot study of behavioral treatment in dementia care units. Gerontologist. 2005 Jun;45(3):406-10

URL: http://gerontologist.gerontologyjournals.org/cgi/content/full/45/3/406 (payment required)

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ABSTRACT

PURPOSE: This article reports on the development and use of behavioral treatment as a well-being intervention for individuals with dementia residing at special care units in a nursing home.

DESIGN AND METHODS: The project took place upon the construction and opening of two new home-like units for dementia care in a rural community-care center. Twenty older adults with Alzheimer's disease or related dementia diagnoses participated. One of the units was randomly selected for its residents to receive the behavioral treatment, and the other unit received usual care. A trained nursing assistant implemented the behavioral treatment three times per week for 20 to 30 min each session. The intervention lasted for 3 months. Measures taken before and after the intervention included depression and behavioral disturbance.

RESULTS: Compared with the usual care group, the behavioral treatment group demonstrated reduced severity in behavioral disturbance in terms of being troublesome to caregivers or dangerous to residents. Both the behavioral treatment and the usual care groups demonstrated a reduced frequency of behavioral disturbance overall. There were no differences with regard to depressive symptoms or diagnoses. The behavioral treatment was enthusiastically received by the facility staff and by the family caregivers of the participants.

CAPACITY AND COERCION

Reading 9

Brindle N, Holmes J. Capacity and coercion: dilemmas in the discharge of older people with dementia from general hospital settings. Age Ageing. 2005 Jan;34(1):16-20.

URL : http://ageing.oxfordjournals.org.libproxy1.nus.edu.sg/cgi/reprint/34/1/16 (free text)

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ABSTRACT

Discharge planning of older people with dementia can present difficult ethical dilemmas to the general hospital clinician. These difficulties may be particularly pronounced for those who are moderately severely affected and for whom hazards are anticipated on discharge home. In many cases the wishes of the individual to return home may differ markedly from those of health care professionals, carers or relatives. In order to reduce these tensions and preserve the choice of the individual as far as possible, we try to put into context a number of different issues. We discuss some of the misconceptions regarding the legal powers available in these situations, the limited and sometimes confusing issue of capacity and the role of Community Mental Health Teams in preserving autonomy and independence of older people with dementia in their own homes.

CAREGIVER MANAGEMENT

Reading 10

Tan LL, Wong HB, Allen H. The impact of neuropsychiatric symptoms of dementia on distress in family and professional caregivers in Singapore. Int Psychogeriatr. 2005 Jun;17(2):253-63.

URL : http://www.journals.cambridge.org/action/displayIssue?jid=IPG&volumeId=17&issueId=02

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ABSTRACT

BACKGROUND: Behavioral and psychological symptoms of dementia (BPSD) are a source of distress and burden for caregivers. This study attempts to determine the neuropsychiatric symptoms, demographic characteristics, and referral patterns of outpatients with dementia compared with patients admitted to the acute psychogeriatric wards of Woodbridge Hospital. We also assessed the impact of neuropsychiatric symptoms on distress in family and professional caregivers.

METHOD: Eighty-five consecutive patients with a first-time diagnosis of dementia were recruited. They were assessed using the Neuropsychiatric Inventory Caregiver Distress Scale (NPI-D). The professional caregiver distress questions were rephrased to assess the “occupational disruptiveness” of behaviors in the nursing home version (NPI-NH).

RESULTS: Neuropsychiatric symptoms were common and were positively correlated with caregiver distress. Family caregivers were significantly more distressed than professional caregivers over the delusion, agitation, depression and aberrant motor domains, although the severity of the behavioral disturbances reported was not higher in the sample. The median NPI scores for the agitation and disinhibition domains were significantly higher in the inpatient group, contrasting with a higher score for the depression domain among the outpatient group.

CONCLUSIONS: This study highlights the prevalence of neuropsychiatric symptoms in dementia and illustrates the strong correlation between the severity of behavioral disturbances and caregiver distress.