CHALLENGING BEHAVIOUR IN DEMENTIA

Content

- Definition – What are challenging behaviours?
- Prevalence – How common are they?
- Aetiological considerations and prevention
- Assessment – Bio-psycho-social approach; Rating scales
- Management – what works and what doesn’t? What are the risks of treatments?
- Prognosis

BPSD = Neuropsychiatric symptoms = Challenging behaviours

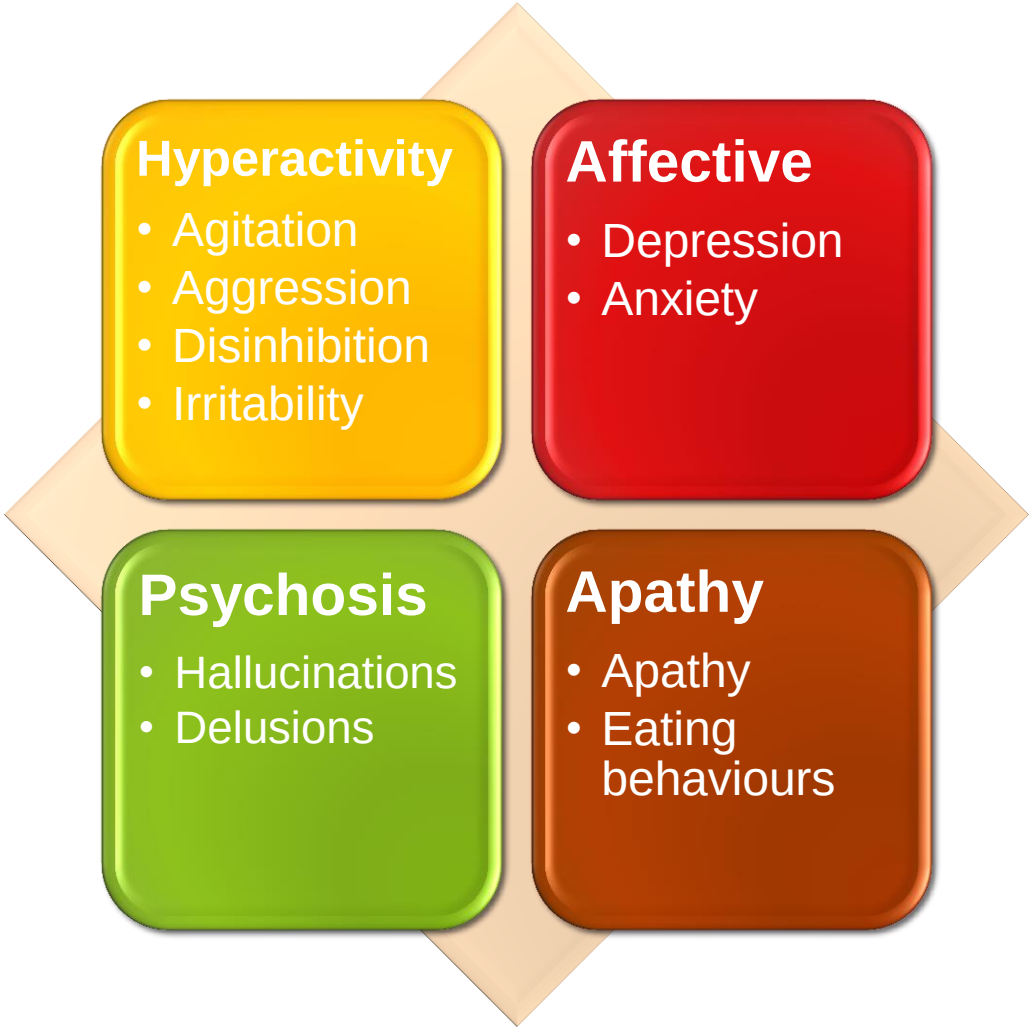
Behavioural

- Aggression
- Agitation
- Apathy
- Wandering / Restlessness
- Hoarding
- Screaming
- Sexual Disinhibition
- Changes in sleep and appetite

Psychological

- Anxiety
- Depression
- Psychosis

Syndrome approach to Classification



TRUE or FALSE?

Neuropsychiatric symptoms in dementia are nearly universal

Prevalence estimates

- **Cache County Study (1999)** population based study
  - 61% of those with dementia had had 1 or more neuropsychiatric symptom (based on the NPI) in the month prior to interview
  - Apathy, depression, agitation and aggression were the most common symptoms reported
  - Those with Alzheimer's disease: 23% had delusions (most commonly misidentification and jealousy delusions), 13% had hallucinations (80% visual vs 20% auditory)
- **Maryland Assisted Living Study (2004)** residents in nursing homes based study
  - 83% of residents with dementia had neuropsychiatric symptoms (based on NPI).

Influence of the Dementia Subtype

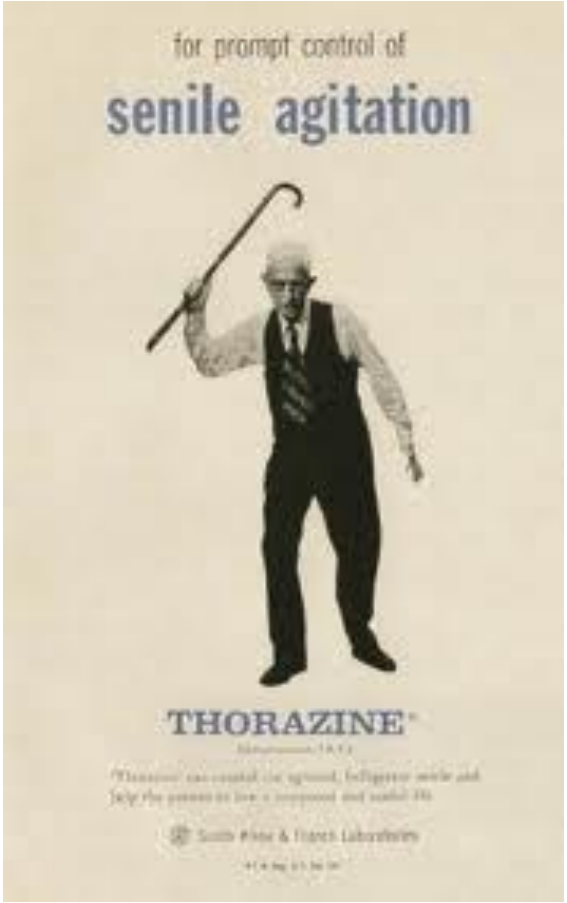
Neuropsychiatric manifestations are embedded in some diagnostic criteria:

- **Frontotemporal dementia (FTD)**
  - gradual and insidious decline in social functioning and regulation of personal conduct; emotional blunting; stereotypic behaviours
- **Semantic Dementia**
  - Compulsive behaviours
- **Lewy Body Dementia**
  - 76% experience visual hallucinations
- **Parkinson's disease dementia**
  - 54% experience visual hallucinations

Agitation and Aggression

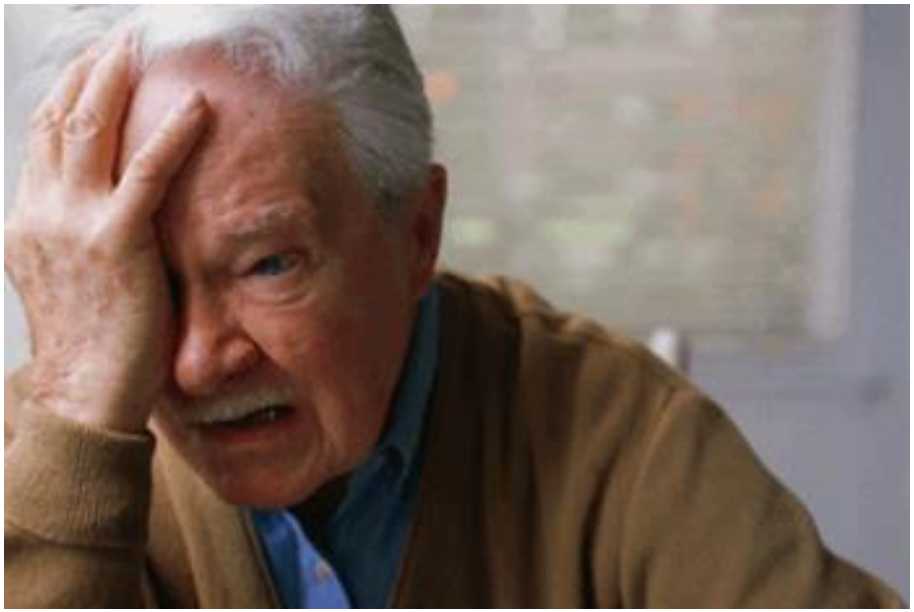
Possible underlying neurobiology:

- Glutamatergic system disrupted by formation of neurofibrillary tangles in frontal and cingulate cortices (Tekin et al 2001) resulting in exaggerated response to triggers



Depression

- Recurrence of depression
- Emotional reaction to cognitive deficits
- Cerebrovascular damage
- Direct consequence of neurodegenerative process
  - Noradrenergic neuronal loss in locus coeruleus and serotonergic neuronal loss in dorsal raphe nucleus (Forstl et al, 1992)



Psychosis

Delusions

- Common, especially in early stages and in those who are older (Leroi et al, 2003)
- Associated with presence of neurofibrillary tangles, and with frontal hypoperfusion (Cummings, 2000)

Hallucinations

- Associated with lower choline acetyltransferase levels in parietal and temporal lobes (Perry et al, 1990)
- Note: Relative efficacy of CEIs in treating hallucinations in dementia

Apathy

- Most common BPSD and stable across several dementia subtypes (AD, VaD, DLB, FTD)
- Can be prodrome of AD
- Lesion along the frontal-subcortical network
  - Mesiofrontal circuit – lack of drive
  - Dorsolateral frontal cortex- loss of goal-directed behaviour

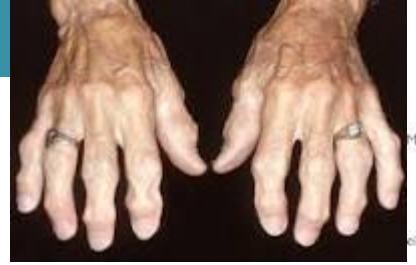
BUT- consider first

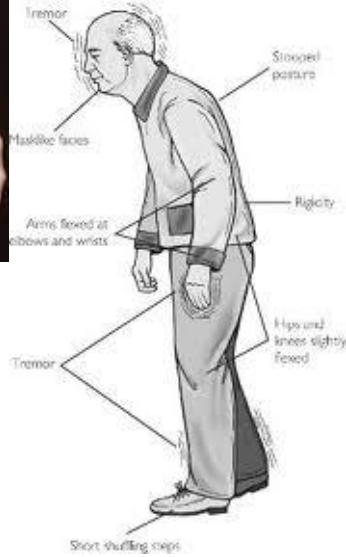
- **P**ain
- **I**nfection
- **N**utrition
- **C**onstipation
- **H**ydration
- **M**edication
- **E**nvironment

Pain is Common, Missed and Increases Suffering

- **40 – 83%** of residents in nursing homes are affected by pain.
- Pain is **under-reported** and **under-treated** in older people, even more so in people with dementia.
- Pain is the **highest** issue affecting **quality of life.**

Why do people with dementia have pain?





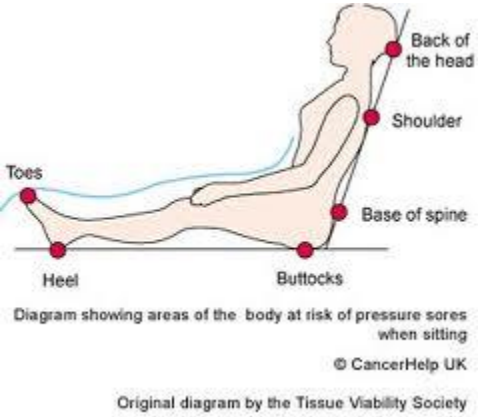
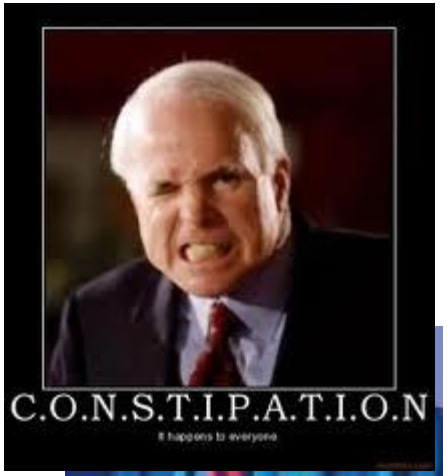
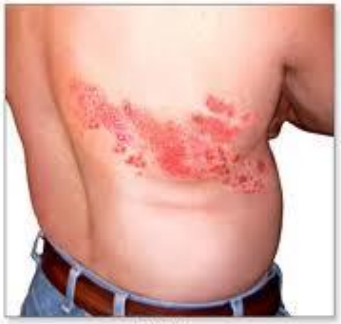


Diagram showing areas of the body at risk of pressure sores when sitting

© CancerHelp UK

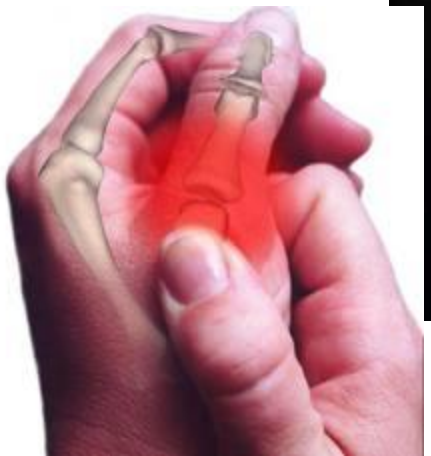
Original diagram by the Tissue Viability Society

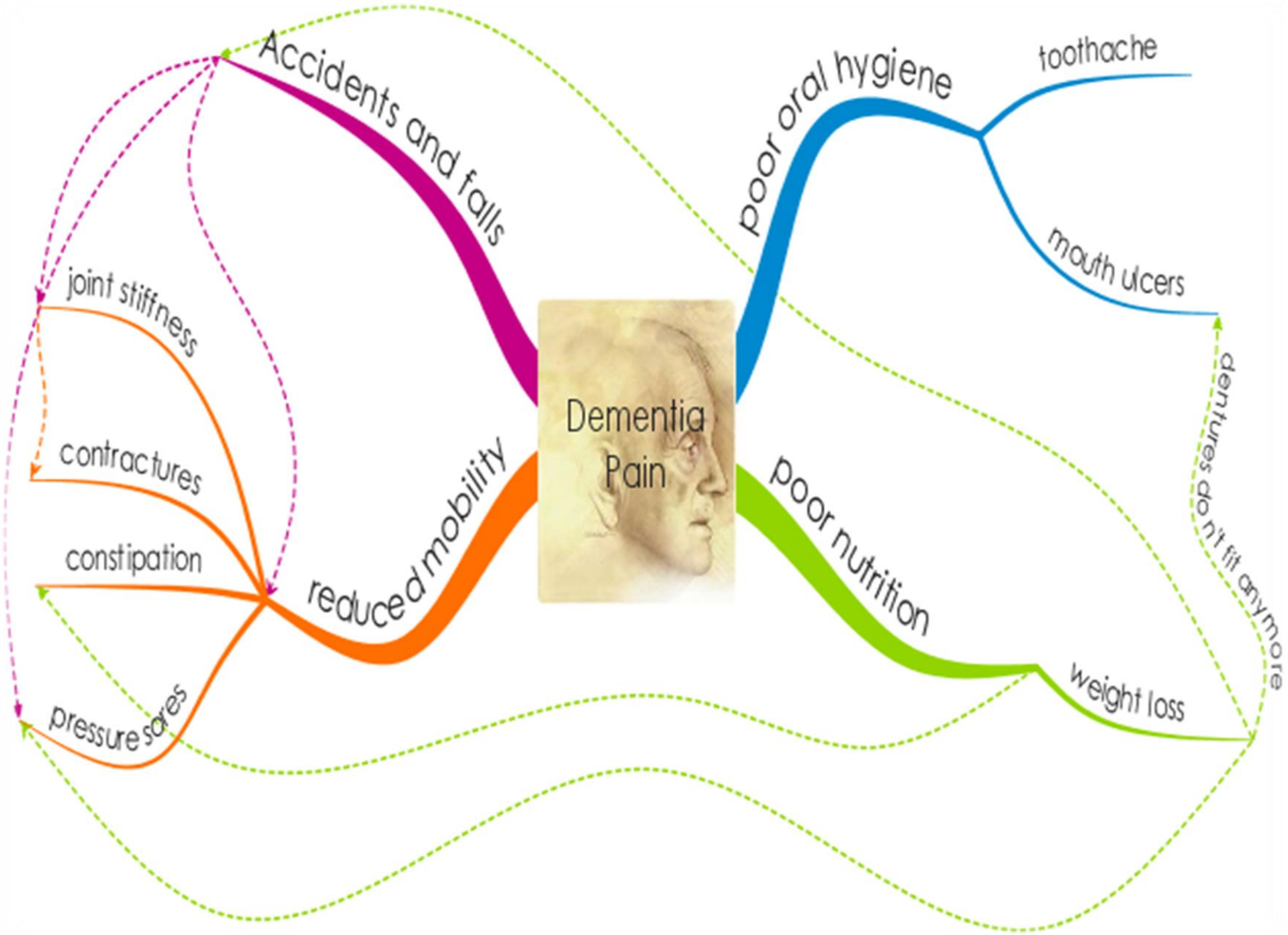




Shingles

ADAM.




Accidents and falls
joint stiffness
contractures
constipation
pressure sores
reduced mobility
Dementia
Pain
poor oral hygiene
toothache
mouth ulcers
dentures don't fit anymore
poor nutrition
weight loss

Prevention of BPSD

- Show respect to the person with dementia
- Maximise communication
- Prevent pain
- Engage in meaningful personalised activity
- Encourage choice and independence
- Ensure persons fundamental needs are met

Assessment

Initial questions to ask:

- **Is it really a problem?**
- Who is it that finds the behaviour problematic?
- Are there external factors that are challenging to the person with dementia?
- Is the behaviour compromising the safety of the person or others?

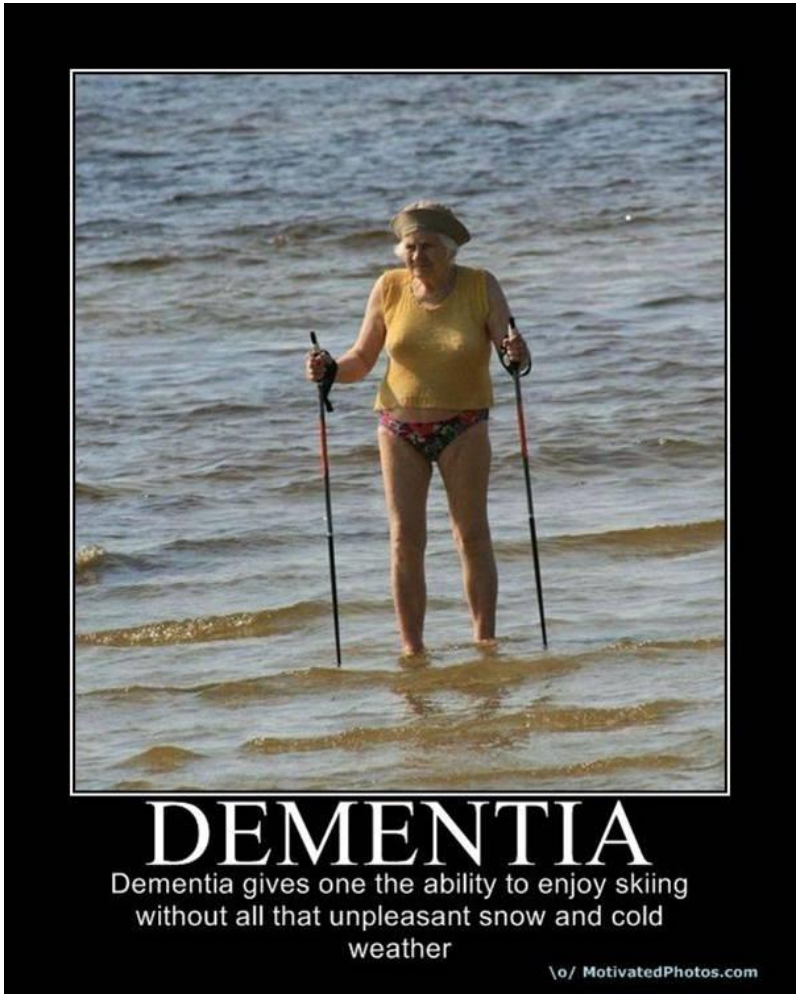
What Information do you need

- What is the person's previous behaviour and personality
- What has changed – nature, degree and frequency?
- When did it change?
- What are the triggers?
- Understand the biopsychosocial context – i.e. **Rule out PAIN, DELIRIUM, ENVIRONNMENTAL and INTERPERSONAL FACTORS**

- What has been tried to date?

Management: Psychosocial approaches first line

- **Personalised activities with social interaction**
- 40-45% Placebo response in RCTs – suggests that **good clinical practice** provides clinically meaningful benefit



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A systematic review of the clinical effectiveness and cost-effectiveness of sensory, psychological and behavioural interventions for managing agitation in older adults with dementia

Gill Livingston, Lynsey Kelly, Elanor Lewis-Holmes, Gianluca Baio, Stephen Morris, Nishma Patel, Rumana Z Omar, Cornelius Katona and Claudia Cooper

No Evidence	Some Evidence	Best Evidence
Light therapy	Training family carers	Activities (whilst they are in place)
Aromatherapy	Music therapy without protocol	Music therapy following a protocol
Home-like care	Exercise	Sensory interventions (involving touch at least) – benefit even for severe agitation
	Staff training without supervision	Training staff in PCC/Communication skills *with supervision*
	Environmental intervention	Dementia Care Mapping (even for severe agitation; sustained benefits)
	Pet therapy	
	Cognitive stimulation and validation	

Management

Medications in the treatment of BPSD – Worth the risk?

2 Recent Systematic Reviews

Other reviews include:

- Gauthier et al 2002
- Gauthier et al 2005
- Gauthier et al 2008
- Schneider et al 2006
- Ballard and Waite 2006

BUT:

- Not many studies
- Not many well-designed studies
- Evidence-base remains slim

International Psychogeriatrics (2013), 25:2, 185–203
doi:10.1017/S1041610212001627

REVIEW

Pharmacological treatments for neuropsychiatric symptoms of dementia in long-term care: a systematic review

Dallas P. Seitz,[1] Sudeep S. Gill,[2] Nathan Herrmann,[3,4] Sarah Brisbin,[1] Mark J. Rapoport,[3,4] Jenna Rines,[1] Kimberley Wilson,[5] Ken Le Clair[1] and David K. Conn[3,6]

[1] *Department of Psychiatry, Queen's University, Kingston, Ontario, Canada*
[2] *Division of Geriatric Medicine, Queen's University, Kingston, Ontario, Canada*
[3] *Department of Psychiatry, University of Toronto, Toronto, Ontario, Canada*
[4] *Department of Psychiatry, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*
[5] *Canadian Coalition for Seniors' Mental Health, Toronto, Ontario, Canada*
[6] *Department of Psychiatry, Baycrest Centre, Toronto, Ontario, Canada*

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Neuropsychiatry

RESEARCH PAPER

Pharmacological treatment of neuropsychiatric symptoms in Alzheimer's disease: a systematic review and meta-analysis

Jun Wang,[1] Jin-Tai Yu,[1,2] Hui-Fu Wang,[2] Xiang-Fei Meng,[1] Chong Wang,[1] Chen-Chen Tan,[1] Lan Tan[1,2]

Pharmacological Rx of BPSD

Medication	Evidence
Cholinesterase inhibitors	• Modest benefit on NPI • Especially apathy, depression and anxiety but NOT agitation • ?Especially galantamine (Wang et al, 2014)
Memantine	• Modest benefit for agitation/aggression, delusions and disinhibition (Gauthier et al 2005 and 2008) • Wang et al – favours but not statistically significant
Antipsychotics	• Most studied medications for BPSD Rx • Risperidone 1-2mg daily: modest benefit on aggression, more limited benefit for psychosis. No benefit from quetiapine (Schneider et al, 2006) • Small benefits for risperidone, olanzapine and aripiprazole (Seitz et al, 2013) • Small benefits of olanzapine and aripiprazole (Wang et al, 2014)

Pharmacological Rx of BPSD

Medication	Evidence
Antidepressants	• Modest benefit of citalopram 30mg but QTc prolongation - CitAD (Porsteinsson et al, 2014) • No benefit of antidepressants (Seitz and Wang)
Anticonvulsants	• Small single study support for carbamazepine (Seitz et al, 2013) • No benefit of valproate (Seitz) *and clinical worsening* (Wang et al, 2014)
Others	Single small study support for: • Oestrogen • Cyproterone acetate • Propranolol • Prazosin
Pain relief	• Improvements in agitation after stepped treatment with analgesics (Husebo et al 2011; Corbett et al 2012)

Antipsychotic in Dementia – Considerable Risk of Adverse Events

- Antipsychotics increase the risk of **death** (1% attributable risk over 12 weeks of Rx)
- And risk of **cerebrovascular events** increased 3 fold
- And **somnolence**, **falls**, and fall-related injuries including **hip fractures**
- They also accelerate **cognitive and functional decline**
- Other problems: EPSE, peripheral oedema, DVT/PE, prolonged QTc, chest infections

Antipsychotics in Dementia

Licensed use

- **Risperidone only** for use in dementia for up to **6 weeks** in patients with **severe aggression** (causing risk or severe distress, which has not responded to other treatments)

Guidelines

- **NICE** and American Psychiatric Association (**APA**) recommend:
  - **Atypical antipsychotic** treatment for maximum of **12 weeks**, except in exceptional circumstances

Prognosis

- BPSD in early stages of dementia predict a worse outcome
- Most BPSD will stop after 4 weeks without any pharmacological treatment
- Long term prescriptions of antipsychotics can be discontinued without a detrimental effect on Neuropsychiatric symptoms (Declercq et al 2013)