

Managing Challenging Behaviours in Major Neurocognitive Disorders

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Geriatric Psychiatry

Disclosure

- No competing financial conflicts
- Renumeration of presentation time from organizers of this conference only
- All Medications will be discussed with generic names

Objectives

- Understand the critical role of detailed history in treating challenging behaviours
- Develop non-pharmacological treatment framework for challenging behaviours
- Discuss the initial pharmacological treatments for challenging behaviours

Nursing staff complaint

- Mr. X is very agitated and difficult to manage
can we use some medication...
- Ms. Q is aggressive... staff got injured... we
need medication
- Mr. H is sexually inappropriate...

ASK MORE QUESTIONS...

- Description (5ws):
 - Who triggers it? Who is targeted?
 - What do you mean by _____?
 - Can you give me example of what you mean by _____?
 - What has been tried so far to change the behaviour?
 - Where does it happen?
 - When does Mr/Ms do this? (time of day, provoked or unprovoked)

ASK MORE QUESTIONS...

- Associated symptoms:
 - If patient is (verbally / physically) agitated / aggressive, ask about if they are also (verbally / physically) agitated / aggressive
 - If patient is (verbally / physically) agitated / aggressive, is there evidence of psychosis, mania or depression, what about pain?

ASK MORE QUESTIONS...

- Associated symptoms:
 - If patient is sexually inappropriate
 - Are they targeting anyone or group in particular?
 - Do they expose themselves?
 - Do they self-stimulate?

Case 1

- Mr X is agitated and challenging
 - Restless
 - Keeps walking back and forth in the hallways
 - Get into co-resident rooms and sometimes may cause other resident to become agitated
 - Comes into nursing station
 - Hard to redirect
 - Tries to open door and can escalate when he is not able to get door to open

Wandering

Wandering - pharmacological

- **NO** evidence of any **MEDICATION** that is effective
- MEDICATION “effective” in sedating patient
- Leads to falls risk

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Effectiveness and acceptability of non-pharmacological interventions to reduce wandering in dementia: a systematic review

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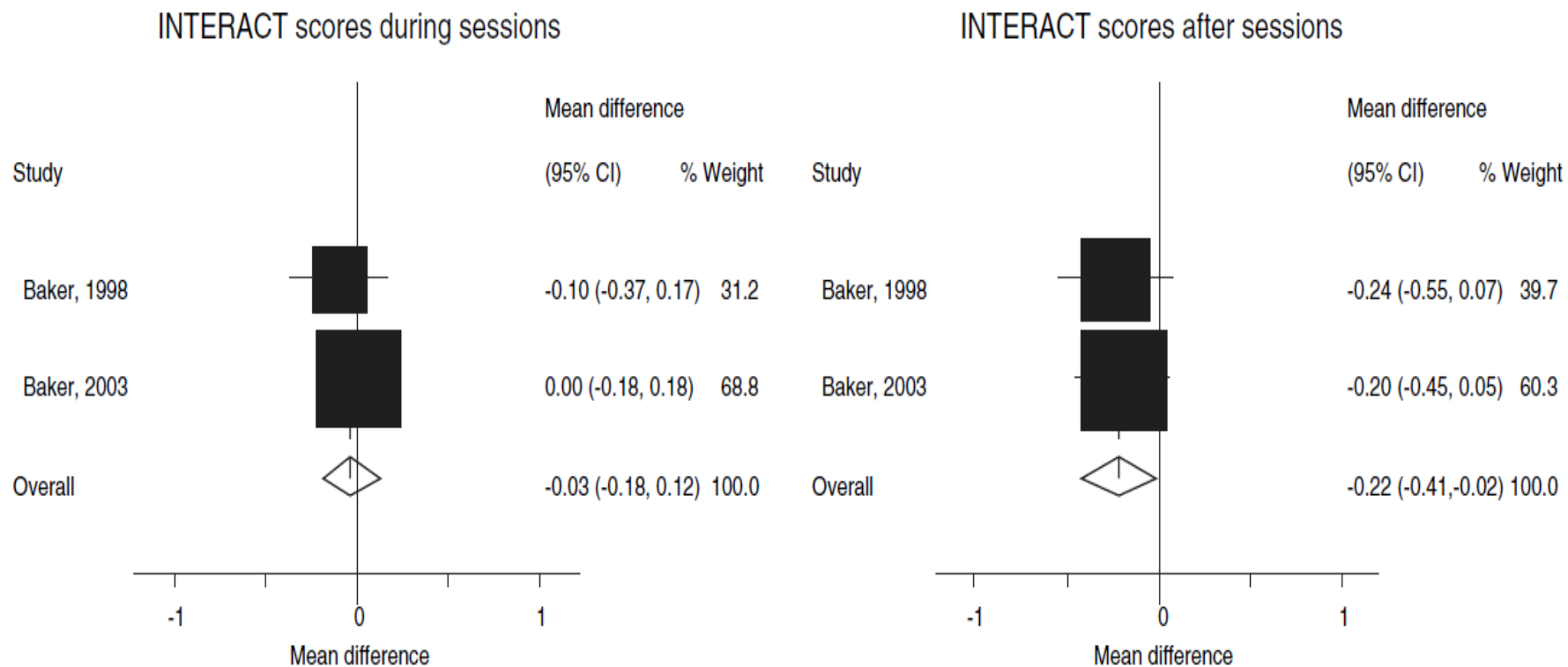
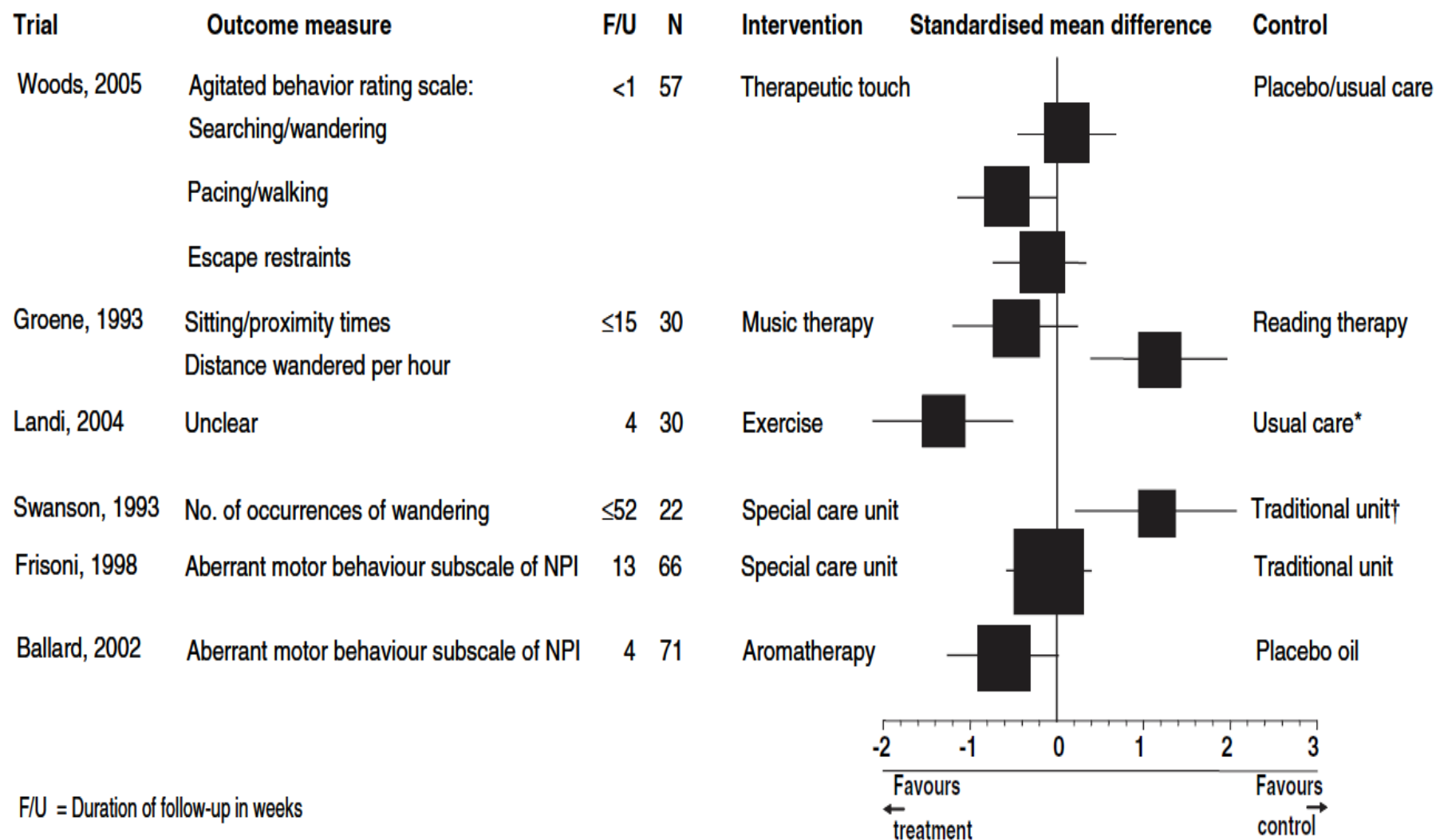


Figure 1. Meta-analysis of studies of multi-sensory environments (Baker *et al.*, 1998; Baker *et al.*, 2003)



F/U = Duration of follow-up in weeks

N = No. of participants assessed at end of follow-up

■ = Mean treatment effect and 95% confidence interval; size of box corresponds to weight of study based on precision of estimated treatment effect

* = 95%CI based on imputed standard deviation

† = This study did not allow for clustering of episodes of wandering within individuals and so the 95%CI may be too narrow.

Figure 2. Forest plot of studies which reported standard deviations of the intervention effects

Table 2. Summary of the effectiveness and acceptability/ethical issues for non-pharmacological interventions to reduce wandering in dementia

Intervention	Effectiveness	Acceptability	Ethical issues
Walking/exercise	Significant reduction in wandering with exercise in one study, of low quality	Acceptable	No ethical issues reported
Music therapy	No evidence for effectiveness	Very acceptable	No ethical issues reported
Multi-sensory environment	Some evidence of effectiveness from pooling of results from two studies, of low quality	Acceptable	No ethical issues reported
Massage/touch	Significant reduction in pacing, but not wandering, in one study	Acceptable	No ethical issues reported
Special care unit	No evidence for effectiveness	No data	No ethical issues reported
Aromatherapy	Significant reduction in wandering in one study	No data	No ethical issues reported
Electronic devices	No relevant studies included	Acceptable	Considerable discussion of ethical issues
Physical barriers	No relevant studies included	Acceptable	Some ethical issues
Environmental modifications	No relevant studies included	Acceptable	Some ethical issues
Behavioural techniques			
Reality orientation			
Collusion	No relevant studies included	Unacceptable	Some ethical issues
Physical restraints	No relevant studies included	Unacceptable	Considerable discussion of ethical issues

Wandering – what can we do?

- Risk reduction:
 - Prevent falls, hip protectors
 - Physically section off risk areas (e.g. kitchen)
 - Moving to different region so will not likely wander into an aggressive patient room

Case 2

- Mr X is agitated and challenging
 - Loud and disruptive
 - Calling out “help me”
 - No particular triggers
 - Seems to get better when engaged

Calling out

Calling out - pharmacological

- **NO** evidence of any **MEDICATION** that is effective
- MEDICATION “effective” in sedating patient
- Leads to falls risk

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY

Int J Geriatr Psychiatry 2005; **20**: 1180–1186.

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The management of inappropriate vocalisation in dementia: a hierarchical approach

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Vocalisation management

- Underlying illness?
 - Pain, depression or anxiety
- Hidden meaning
 - Over stimulation – may need to reduce environmental stimuli
 - Under-stimulation or boredom – need for more social connection
 - Caregiver distress – may need support group / education
- Personality – exacerbation of pre-morbid personality
 - Understand their past triggers

Vocalisation management

- Empirical treatment
 - ABC analysis
 - Some case reports indicate can try trazodone, citalopram, paroxetine
 - ECT may be helpful if there is underlying depression
 - Valproic acid evidence is unequivocal
 - Risperidone, Olanzapine, Aripiprazole tried but side effect profile prevents its use
 - Other considerations: caregiver singing, teddy bears, earphones with music, rocking beds and chairs, gentle touch, amplification device for them to realize their voice level

Table 1. Treatment algorithm and educational tool for the management of inappropriate vocalisation in dementia

1. *Context*

Has a diagnosis of dementia been made?

Is the behaviour/phenomenon described in enough detail to be identified as inappropriate vocalisation?

2. *Physical illness*

Is there evidence of inter-current or underlying physical illness?

Are there any signs or symptoms of undiagnosed or under-treated pain?

3. *Psychiatric illness*

Is there evidence of a clear-cut psychiatric syndrome present or information relating to relevant personal or family history of psychiatric illness?

What features of depression can be identified or inferred?

4. *Environment*

Are there modifiable environmental factors, which might facilitate a behavioural approach?

Is the level of sensory stimulation too high or too low?

5. *Carers*

Are there identifiable carers who might benefit from support or education?

Was the patient previously unduly demanding of, or dependent upon, others?

6. *Personality*

Does available background information provide evidence of previous behaviour patterns or suggest explanations of what is being observed?

Is there any relevant information about interests, which might have a beneficial effect e.g. tastes in music?

7. *Behavioural interventions*

Has the sequence of behaviour been studied and documented in sufficient detail to allow identification of possible antecedents and usual consequences?

8. *Symptomatic psychopharmacotherapy*

Have previous drug trials accorded with general principles of pharmacotherapy in BPSD?

Have trazodone and low dose antipsychotics been tried?

9. *Adjunctive approaches*

What resources and expertise are in practice actually available as potential options for the individual?

To what extent can the patient engage in communal activities?

Case 3

- Mr X is agitated and challenging
 - Gets into shouting matches with co-residents
 - Unkind and profanity to staff when care is provided
 - May approach staff then escalate quickly but no physical aggression

Verbal agitation

Risk and Benefit trade-off

- Antipsychotics (olanzapine, risperidone)
 - Risk >> Benefit
- Sedatives (trazodone, quetiapine)
 - Risk fall vs. Benefit
- Citalopram
 - Risk fall, SIADH vs. Benefit



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Effect of Citalopram on Agitation in Alzheimer's Disease – The CitAD Randomized Controlled Trial

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CitAD study

- NIA/NIMH multicentre, randomized, placebo-controlled, double-blind, two-arm, parallel group trial
- 186 participants randomized to placebo or Citalopram (planned titration over 3 weeks from 10mg starting dose)

	Citalopram	Placebo	p-value
No. randomized	94	92	
No. with any week 9 data	86	83	
<i>Primary agitation outcomes</i>			
Neurobehavioral Rating Scale (NBRs), agitation subscale			
Estimated score at 9 weeks [*] , mean (se)	4.33 (0.31)	5.26 (0.31)	
Estimated treatment effect [*] (citalopram - placebo), mean (95% CI)	-0.93	(-1.80, -0.06)	0.04
Clinical global impression of change in agitation (ADCS-CGIC), n (%)			
Marked improvement	12 (14%)	2 (3%)	
Moderate improvement	22 (26%)	19 (23%)	
Minimal improvement	25 (29%)	20 (25%)	
No change	17 (20%)	23 (28%)	
Minimal worsening	6 (7%)	11 (14%)	
Moderate worsening	3 (4%)	5 (6%)	
Marked worsening	1 (1%)	1 (1%)	
Estimated treatment effect [†] (citalopram vs placebo), odds ratio (95% CI)	2.13	(1.23, 3.69)	0.007

CitAD study

- Worsening cognition (drop in MMSE) and QT prolongation were seen in Citalopram group
- Although there is significant reduction in agitation and caregiver distress; however, cognitive and cardiac adverse effects may limit its practical application at dosage of 30mg

Canadian Clinical Practice Guidelines for Assessing and Managing Behavioural and Psychological Symptoms of Dementia (BPSD)

2024

Recommendation #14

We suggest citalopram for severe agitation in circumstances where the risks and benefits of other pharmacological treatments for severe agitation (e.g., antipsychotics) preclude the use of alternative medications in Alzheimer's disease and related dementias. (Conditional recommendation, very low-quality evidence)



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Case 4

- Ms. Q is aggressive... staff got injured...
 - Kicking, grabbing, screaming, biting
 - Occurs when care is provided
 - Need multiple people assist when care provided
 - Does not seek out staff or co-patient to strike

Provoked Physical Aggression

Provoked Physical Aggression

- Non-pharmacological approaches
 - Greeting patient from afar in field of view
 - Detail description of how patient will be touched or moved and ask for permission / cooperation
 - Distract patient when care provided

Provoked Physical Aggression

- Pharmacological approach:
 - Point of care PRN (i.e. sedation):
 - Trazodone
 - Quetiapine
 - Loxapine (has IM route)
 - Methotrimeprazine (has IM route)
 - Beware of anticholinergic

Case 5

- Ms. Q is aggressive... staff got injured...
 - Physically strike co-residents and/or staff
 - Can be unprovoked or predatory
 - Not confined to care routines

Unprovoked Physical Aggression

Unprovoked Physical Aggression

- Non-pharmacological
 - ABC approach
 - Environmental Modification to allow for territorial behaviour
 - Distraction

Unprovoked Physical Aggression

- Pharmacological
 - Risperidone
 - Olanzapine
 - Aripiprazole

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Recommendation #3

We recommend interdisciplinary approaches to dementia care incorporating health care provider education on BPSD, structured approaches to assessment, individualized care plans, and personalized meaningful activities for the management of agitation in dementia. (Strong recommendation, moderate-level evidence)

Recommendation #4

We suggest robotic pets for the management of agitation in dementia (Conditional recommendation, moderate-quality evidence)

Recommendation #5

We suggest animal-assisted therapy for the management of agitation in dementia (Conditional recommendation, very low-quality evidence)

Recommendation #6

We suggest physical exercise for the management of agitation in dementia. (Conditional recommendation, very low-quality evidence)

Recommendation #7

We recommend music-based interventions using preferred music for the management of agitation in dementia. (Strong recommendation, moderate-quality evidence)

Recommendation #8

We suggest massage for the management of agitation in dementia. (Conditional recommendation, moderate-quality evidence)

Recommendation #9

We suggest aromatherapy for the management of agitation in dementia. (Conditional recommendation, low-quality evidence)

Recommendation #16

We suggest aripiprazole, brexpiprazole or risperidone for the treatment of severe agitation in Alzheimer's disease and related dementia. (Conditional recommendation, moderate-quality evidence)

Recommendation #17

We suggest quetiapine for the treatment of severe agitation for Alzheimer's disease and related dementias if symptoms are refractory to other pharmacological treatments, or in cases where other treatments are not tolerated due to extrapyramidal side-effects. (Conditional recommendation, low-quality evidence)

Recommendation #18

We recommend against using olanzapine for the treatment of agitation except for potential use as short-term emergency treatment of severe agitation in Alzheimer's disease and related dementias. (Strong recommendation, low-quality evidence)

Antipsychotics for the Treatment of Behavioral and Psychological Symptoms of Dementia (BPSD)

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Risperidone

- **Effective** for psychosis and aggression at doses of **1mg and 2mg** per day in three placebo controlled trials
- Studies conducted on patients with Alzheimer's, vascular or mixed dementia on a 12 week time-period

Olanzapine

- **Effective** for psychosis and aggression at **5 to 10mg** per day
- Two randomized placebo controlled trial for 10 and 6 week period

Quetiapine

- 10 week, double-blind, placebo controlled trial shown quetiapine at a fixed dose of **200mg** per day **effective** and well tolerated for treating agitation in institutionalized patients with dementia

Aripiprazole

- Single double blind, randomized, placebo-controlled trial for 10 weeks showed at mean dose of 10mg there is no benefit over placebo for controlling delusions and hallucinations

Cautionary Tale About Medications

- TSDM involvement is CRUCIAL
 - Legally speaking – need consent from TSDM for medication adjustments
 - Psychologically speaking – families are much more likely to work with the care team when they are involved rather than finding out after the fact



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Effectiveness of Cannabinoids for Treatment of Dementia: A Systematic Review of Randomized Controlled Trials

Thammanard Charernboon, Tiraya Lerthattasilp & Thitipon Supasitthumrong

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The Story of Nabilone

- Nabilone 1-2mg show some signs of effectiveness for agitation
 - Levels of evidence is low given sample size and methodological issues
- THC showed no significant difference

Canadian Clinical Practice Guidelines for Assessing and Managing Behavioural and Psychological Symptoms of Dementia (BPSD)

2024

Recommendation #20

We suggest synthetic cannabinoids for the treatment of severe agitation in Alzheimer's disease and related dementias if symptoms are refractory to other pharmacological treatments. (Conditional recommendation, low-quality evidence)



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Case 6

- Mr. H is sexually inappropriate...
 - Can be seen self stimulating
 - Will target and verbally comment on sex of interest
 - Will target and touch inappropriately on sex of interest
 - May expose self in common area

Sexual Disinhibition

Sexual Disinhibition

- Non-pharmacological
 - Clothing modification to discourage exposing and self stimulation
 - Select staff for care based on patient's target of choice

REVIEW

Management of inappropriate sexual behaviors in dementia: a literature review

Inese Tucker

Royal Melbourne Hospital, Melbourne, Australia

Sexual behaviours – pharmacological

- SSRIs/TCAs – using sexual side effects
 - Citalopram, Clomipramine, Paroxetine
- Sedatives – using sedation
 - Trazodone, quetiapine
- Antipsychotics – dopamine prolactin axis
 - Haloperidol, olanzapine, zuclopenthixol, (no report on risperidone)
- ChEI – rivastigmine have some case reports (donepezil may cause behaviour infact)
- Anti-convulsants – reports for carbamazepine and gabapentin
- Beta blocker – Pindolol one case report
- Antiandrogen
 - Hormonal agents: Leuprolide, estrogen, medroxyprogesterone, cyproterone, diethylstilbestrol
 - Non-hormonal agents: cimetidine, spironolactone, ketoconazole)

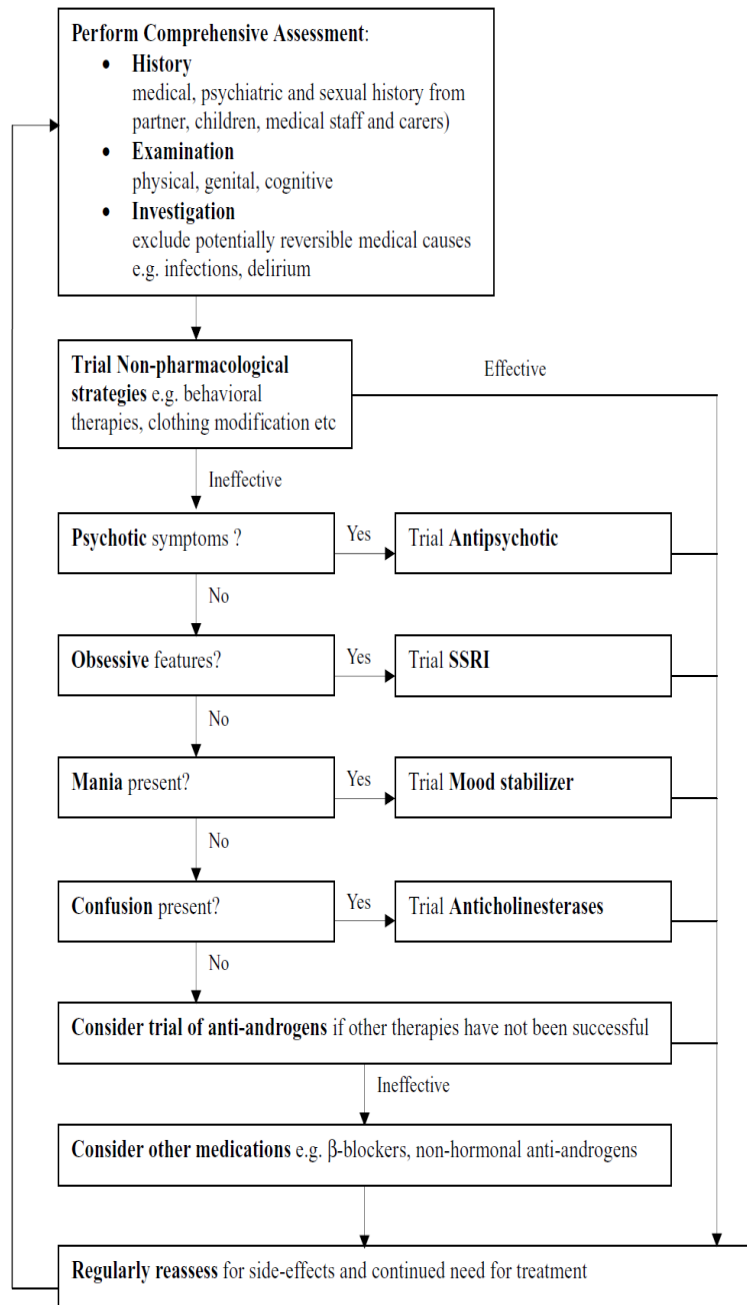


Figure 1. A suggested approach to managing inappropriate sexual behavior in dementia.

Objectives

- Understand the critical role of detailed history in treating challenging behaviours
- Develop non-pharmacological treatment framework for challenging behaviours
- Discuss the initial pharmacological treatments for challenging behaviours

Questions?

- Contact info:
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