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Management guidelines for behavioural and psychotic symptoms in persons with dementia—A review article

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ABSTRACT

This paper is a review article which has systematically gathered contemporary evidence, the best practice guidelines for the management, treatment of behavioural and psychological symptoms of dementia and the various approaches including pharmacological and non-pharmacological approaches. It sets out to outline the various types of behaviour in different subtypes of dementia and a practical approach for clinicians in managing these behaviours.

KEYWORDS

BPSD; Dementia; Mental Capacity Act; Mental Health Act; Medication; Psychotropic; Depression; Psychosis; Aggression

1. INTRODUCTION

Behavioural and Psychological Symptoms of Dementia (BPSD) is a common but often a confusing and challenging area in dementia care and it consists of a variety of different symptoms.

More than 90% of people with dementia will experience BPSD as a part of their illness and nearly two thirds of people living in care homes are experiencing these symptoms at any time.

This paper seeks to review the common types of BPSD and gives a review of the evidence based on practice approaches to manage these challenging behaviours in clinical practice with relevance to the mental health act and practice in the United Kingdom.

2. MANAGEMENT OF BPSD

Mild to moderate BPSD (without imminent risk of aggression/violence or severe distress to themselves or others) often has potentially reversible causes or can be managed in their current care setting given the appropriate social and non pharmacological interactions including environmental manipulation or if identifiable medical causes could be found and treated. Most BPSD of this type will resolve itself within 4 weeks without resort to immediate pharmacological treatment. Please refer to the Alzheimers society guidance (optimising treatment and care for behavioural and psychological symptoms of dementia) for more detailed information on the range of non pharmacological treatment.

Delirium must be excluded based on the clinical picture of a rapid (<1 week) change with decreased attention and often a fluctuant picture. Illusions/hallucinations are a common presentation. The CAMS (confusion assessment method) is a useful adjunct in determining this.

If found follow the NICE guidelines for delirium (1). Contributory physical problems such as dehydration, pain, infection, electrolyte imbalances, constipation, side effects of polypharmacy must be considered and treated appropriately, and if necessary admission to an acute hospital should be considered.

Severe BPSD (with significant distress to the individual, carer and/or aggression that results in significant risk to themselves and others).

Medication should be considered if:

1) Non-pharmacological approaches have failed and the risk to the patient or others is high enough to consider treatment whilst non pharmacological approaches are still tried.

2) If it is required in order to implement assessments and investigations of delirium such as physical examination, BP pulse and blood screen investigations, by primary or secondary care.

3. LEGAL FRAMEWORK

Many individuals at this stage may not have the capacity to consent to treatment for their BPSD and therefore relevance to the Mental Capacity Act, their carer and or IMCA and careful documentation for the indications of the use of medication must be documented prior to initiation of pharmacological treatment and on reviews. There may also be the need to use covert medication which should include relevance to policies of that setting.

In particularly treatment resistant and aggressive patients it may be necessary to admit to an appropriate psychiatric unit for ongoing assessment and treatment of their behaviours

4. SUBTYPES OF DEMENTIA

The following **Tables 1-6** will help guide pharmacological approaches to (mod to severe) BPSD and the main different subtypes of BPSD.

Table 1. Alzheimer's dementia (management of depression).

	First Line	Second Line	Cautions/Interactions
Depression (monitor symptoms with a baseline Cornell's depression inventory and repeat inventory after 2 - 6 weeks to assess response)	**SSRI** Citalopram or Sertraline (ensure therapeutic dose)	**If no response** discontinue SSRI Mirtazepine or Trazadone	**SSRIs are associated with increased risk of SIADH and hyponatremia, particularly with polypharmacy. If symptoms worsen following commencement it is advisable to check electrolytes. If hyponatremia is present, consider interactions with thiazides, carbamazepine and alternatives to these medications. SSRIs have an increased risk with GI bleeding especially with NSAIDS and aspirin, consider addition of PPIs, or an alternative such as mirtazepine.**

Table 2. Alzheimer's dementia (management of psychosis and aggression).

	First Line	Second Line	Cautions/Interactions
Psychosis/aggression (Firstly attempt to objectively\monitor psychotic symptoms with NPI (Neuropsychiatric inventory) and repeat inventory to gauge response)	Risperidone 0.5 mg bd to max 1 mg bd (N.B if no response with risperidone at 1 mg in divided doses consider switching to alternative antipsychotic)	Olanzapine (2.5 - 5 mg bd) or aripiprazole (5 mg to 10 mg), or memantine (N.B max dosage of olanzapine at 10 mg or aripiprazole 10 mg)	• **If patient is already on cholinesterase inhibitor discontinue this as it may be perpetuating agitation or psychosis** • **Risperidone is the only antipsychotic licensed for Alzheimers for up to 6 weeks. All others are out of license** • **For patients with QTc prolongation or epilepsy consider using lorazepam or carbamazepine instead of antipsychotics**

Table 3. Alzheimer's dementia (management of anxiety or agitation).

	First Line	Second Line	Cautions/ Interactions
Anxiety or Agitation (Firstly attempt to objectively monitor symptoms using a CMAI (Cohen Mansfield Agitation inventory)	Citalopram 20 mg or memantine 5 - 20 mg	Memantine 5 - 20 mg and/or carbamazepine 100 mg to 100 mg bd	• **As for depression** • **Carbamazepine is associated with rashes and ataxia if these symptoms occur discontinue**

Table 4. Lewy body dementia (management of depression).

	First Line	Second Line	Cautions/Interactions
Depression (monitor symptoms with a baseline Cornell's depression inventory and repeat inventory after 2 - 6 weeks to assess response)	**Citalopram 10 - 20 mg**	**Sertraline 50 - 200 mg**	**As for Alzheimers Dementia SSRIs can also exacerbate Parkinsonism**

Table 5. Lewy body dementia (management of psychosis and aggression).

	First Line	Second Line	Cautions/Interactions
Psychosis and Aggression (Firstly attempt to objectively monitor symptoms using a Cohen Mansfield Agitation inventory or Neuropsychiatric inventory at baseline and 2 - 4 weeks into treatment)	**Identify if patient is on Dopamine replacement. (With the involvement of neurologist) 1) Consider slowly withdrawing dopamine agonists 2) Consider slow withdrawal of primary replacement e.g. L-Dopa**	**Or memantine [1,2] 5 - 20 mg Or Olanzapine (dose 2.5 mg) Or Clozapine (12.5 mg to 12.5 mg bd)**	**Withdrawing dopamine enhancing medication and the introduction of antipsychotics may precipitate worsening Parkinsonian symptoms and therefore it is recommended that this intervention is considered in controlled settings such as an inpatient ward.**

Table 6. The evidence and cost effectiveness for the different psychotropic treatments. (a) Alzheimer's/Mixed dementia; (b) Dementia with Lewy bodies or dementia in Parkinson's disease.

(a)

Key Symptom	First Line	Evidence type	Second Line	Evidence Type
Depression	Sertaline, Citalopram	2 - 3 £	Mirtazapine	3
Apathy	Sertraline, Citalopram	2 - 3 £	Donepezil, Galantamine, Rivastigmine	2
Psychosis	Risperidone	1	Olanzapine, Aripiprazole	2
Physical Aggression	Risperidone	1	Carbamazepine, Aripiprazole, Olanzapine	2
Moderate Agitation	Citalopram	3	Trazodone, Mirtazapine	4
Severe Aggression	Risperidone	1	Aripiprazole, Memantine [3]	2 - 4
Insomnia	Zoplicone	3 = £	Trazodone	3

(b)

Key Symptom	First Line	Evidence Type	Second Line	Evidence type
Depression	Citalopram or Sertraline	4 + £	Sertraline	4
Apathy	Sertraline, Citalopram	4 + £	Rivastigmine	2
Psychosis	Clozapine	3	Olanzapine or memantine	2 - 3
Aggression	Olanzapine or Clozapine	3	Memantine [3]	3
Moderate Agitation	Citalopram	3 + £	Memantine [3]	2 - 3
REM Sleep Disorder	Clonazepam	1		

Evidence Levels, 1. Metaanalysis/NICE Clinical guidelines; 2. RCT; 3. Other studies; 4. Expert opinion; £ = Relatively cheap treatment.

4.1. Vascular Dementia/Frontotemporal Dementia

There is little evidence base for the treatment of vascular or stoke relate dementia or aggression associated with frontotemporal dementia. The use of anti-cholinesterase inhibitors would be outside the license indications and may even exacerbate aggression or psychosis in these conditions. There is some limited evidence to suggest that memantine has some effects on psychosis and agitation in these dementias, however, it is again outside of its licensing arrangements. However the diagnosis of vascular dementia is not stable and patients often develop signs of Alzheimer's on top of vascular problems. The risk of CVA is higher with anti-psychotics in these dementias.

4.2. Other Types of Behavior

There is no evidence medication helps for vocalisations (shouting, screaming, signing etc.) unless as part of a depressive syndrome.

There is no well evidenced based treatment for physical sexual disinhibition. If either one or both parties do not have capacity it is necessary to make a referral to the local Vulnerable Adults department. Often testosterone lowering medications such as cimetidine or finasteride are used. It is good practice to discuss with secondary care before treatment and this should be used under the rubric of the Mental Capacity Act or the Mental Health Act (England and Wales 2007).

All treatments must be time limited with stop dates considered at time of initiation.

Lorazepam may be used for short term adjunct in managing anxiety, agitation and aggression, however, it has limited evidence base and over longer term use *i.e.* >4 weeks is associated with greater risk of tachyphylaxis and falls.

It has little specific evidence base in people with dementia but is often used for anxiety/agitation/aggression. Tolerance can occur and it is not advised to use longer than 4 weeks. 1/2 mg is the usual dose from once to maximum 4 times a day. Its use can be associated with worsening cognition and falls. There is occasionally a paradoxical disinhibiton. Diazepam has an unpredictable and often longer half life in older people and is not recommended.

4.3. Licensing Issues

Risperidone has a licence for in Alzheimer's disease for up to 6 weeks. All other antipsychotic use would be out of the licence.

Rivastigmine liquid and capsules have a license in dementia in Parkinson's disease

Any treatment should be with the involvement of the patient or under the mental capacity act if the patient dose not has capacity to consent to treatment including as far as reasonably practical to speak to the carer or nearest relative before administering treatment.

4.4. Adverse Effects

4.4.1. Antipsychotics

There is a class effect danger of an increased risk of C.V.A (~3 xs) and longer term use increases mortality rate (~2 xs). The risk is higher if there are other cardio-vascular risk factors including existing evidence of stroke or a vascular component to the dementia.

Quetiapine [4] has been shown to be the least effective of the antipsyhotics in ameliorating BPSD and worsening cogntion and should not be used as an adjunct to treating psychosis or aggression in dementia.

4.4.2. Mood Stabilisers

There is some modest effect to support the use of carbamazepine [5] in the management of agitation. Please note there is a high incidence of side effects such as rash and ataxia. It should be started at a low dose such as 50 mg bd and titrated from 50 mg bd to a maximum maintenance dose of 200 mg bd. There is insufficient evidence to support the use of other mood stabilisers such as Sodium Valproate.

4.4.3. Cholinesterase Inhibitors

If patients are already on this treatment consideration should be given to reduce the dose if it is felt over alertness is promoting the BPSD. Donepezil, galantamine, rivastigmine and memantine can currently only be initiated in secondary care in most NHS facilities.

4.4.4. Hypnotics

In general the use of these drugs should not be promoted in the management of BPSD or insomnia, and where practical sleep hygiene techniques such as the promotion of activities and reduced caffeine intake should be the primary course of treatment [6]. There is a greater incidence of falls, worsening cognition and tolerance over a longer period of time

Z drugs (zopiclone and zolpidem): note tolerance is high and the NNT after 2 weeks is over 20, so recommended as short term treatment up to 2 weeks, then stop and restart if successful for a further 2 weeks, stop and so on.

5. CONCLUSIONS

The area of behavioural and psychological symptoms of dementia (BPSD) is often a confusing and challenging clinical conundrum and can cause significant distress in both patients and relatives. We set out a logical and practical approach to delineate the different types of behaviour and use a systematic approach to help clinicians manage BPSD in their patients

This article summarises the best clinical approaches using both an evidence base and national guidelines from clinical experience for dealing with behavioural and psychological symptoms of dementia (BPSD) in the most common subtypes of dementia.

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