Managing BPSD

Treating Agitation and Aggression in the Elderly Demented Patient

Anne Sclater, MD, FRCPC, FACP

Presented at the Memorial University of Newfoundland Faculty of Medicine Wednesday at Noon CME, September 2009

You are on call over a long holiday weekend covering the patients in a community nursing home, for your colleague who is on leave. You are paged at four o'clock in the morning by staff at the facility requesting a prescription for an antipsychotic drug for one of the residents who is demonstrating aggressive behaviour. What would be your approach and response to this request?

Definition

Behavioural and psychological symptoms of dementia (BPSD) is the term used to describe a diverse range of psychological reactions, psychiatric symptoms and behaviours occurring in people with dementia of any etiology. The International Psychogeriatric Association (IPA) Consensus group on the Behavioural Disturbances of Dementia, comprised of 60 experts from 16 countries in the field of dementia care, produced a consensus statement and definition of BPSD as symptoms of disturbed perception, thought content, mood or behaviour that frequently occur in patients with dementia.[1]

Classification of BPSD

There are many ways to classify and group BPSD. The participants of the consensus group suggested the utility of organizing symptoms into specific clusters (*e.g.*, behavioural symptoms and psychological symptoms), as seen in Table 1.

Table 1:
Symptom Clusters

Behavioural (Usually identified by observing patient)	Psychological (Usually assessed by interviewing patients, caregivers, and relatives)
• Physical Aggression • Screaming • Restlessness • Agitation • Wandering • Culturally Inappropriate Behaviours • Sexual Disinhibition • Hoarding • Cursing • Shadowing	• Anxiety • Depressive Mood • Hallucinations • Delusions

Neurotransmitter changes in the brains of people with dementia are associated with neuroendocrine dysfunction in the hypothalamic-pituitary-adrenal axis. Some of those affected in dementia include acetylcholine, dopamine, norepinephrine, serotonin and glutamate. Observed and reported behaviours can be classified into BPSD clusters by using behavioural logs. The "ABC" method characterizes the behaviour

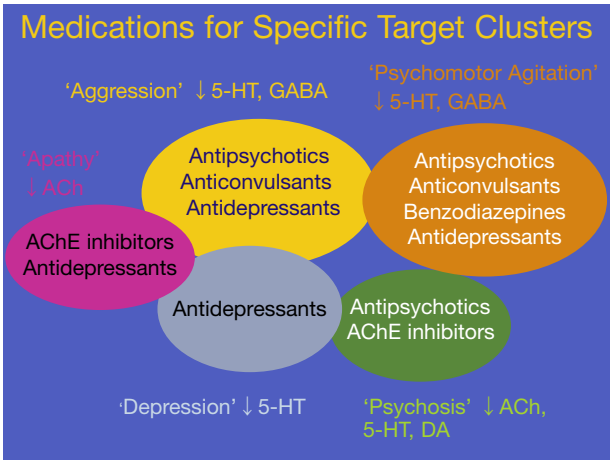

Figure 1: Medications for Specific Target Clusters

precisely with special attention to the circumstances under which it occurs, when it started, and whether the onset was gradual or sudden. It involves inter-professional team review and documentation in a user-friendly, one page format of the **A**ntecedent(s) or potential trigger(s) of the behaviour, the **B**ehavioural description, and a review of the **C**onsequence(s), or what exactly happens or is seen when the patient is agitated.

The recently reported Behavioural Vital Signs (BVS) tool allows clinicians to identify, track, and monitor the response(s) of target symptom clusters to pharmacologic and/or behavioural interventions in even greater detail.

When the observed and reported behaviours are classified into BPSD symptom clusters by using behavioural logs such as the ABC and/or BVS Tool,[2,3] it becomes apparent to the caregivers that there is a neurotransmitter basis and a rationale for both behavioural and pharmacological interventions (Figure 1).[4]

It is noteworthy that many BPSD behavioural symptoms are unlikely to respond to antipsychotic and related medications, and environmental and behavioural approaches are often more successful (Table 2).

Agitation and Aggression

Some patients have symptoms that do not fit neatly into these BPSD cluster complexes, and thus are frequently described by caregivers as 'agitated'. Agitation is defined as inappropriate verbal, vocal or motor activity that, in the opinion of an outside observer, does not directly result from the needs of the person.

The term 'aggressive' is often used by caregivers in an attempt to describe behaviours ranging from episodic mild verbal irritability to more frequent combative behaviours or physical assault.

Recommended Approach for the Management of BPSD

Current International and Canadian Consensus Guidelines are easily accessible and support the following step-wise approach:[5,6]

1. Establish the Diagnosis and Consider Possible Comorbidities

Begin with an attempt to rule out new and potentially treatable medical and psychiatric causes. A newly onset behavioural problem should be considered delirium until proven otherwise. The brain is as sensitive and vital an organ as the immune (temperature), cardiac (pulse, blood pressure), and respiratory (respiratory rate) systems for heralding that something is wrong. In the demented and frail older patient, a change in behaviour and mental status often occurs before a change in temperature, pulse, blood pressure, or respiration rate.[8]

2. Define the Behaviour

Write a doctor's order in the patient's chart for a behaviour log that you can review with the facility staff. Consider using the ABC and/or BVS Tool.[2,3] It would be prudent to keep accurate written records of

the behaviour logging and all discussions with the substitute decision makers. It is often necessary to book a care-planning conference with the patient's family and staff to agree on the goals in your management strategy.

The BVS tool is valuable in the identification and documentation of target cluster(s) or symptom(s). It is standard practice to adjust the dosage of warfarin based on the INR, or the dosage of insulin based on the blood glucose level. Similarly, behavioural and pharmacological interventions can be assessed, monitored and titrated over the ensuing weeks and months, based on the charting of the behavioural responses to your interventions.

3. Consider Environmental Causes and Institute Non-Pharmacologic Strategies

Charting in the behaviour log may indicate that behavioural and environmental strategies are the first-line approach in the management of BPSD. It is essential to obtain a full description of behaviour from caregivers using the ABC tool. This includes an account of the predisposing factors and precipitants, the behaviour itself that includes the nature, severity, frequency, motivation and setting, and any perpetuating factors and resulting consequences.

When using caregiver-led, non-pharmacologic interventions, continue to monitor these closely in association with ongoing behavioural logging. The actual process of behaviour analysis may in itself have beneficial effects as well, often through changes in staff behaviour that can follow from increased documentation, discussion, and understanding.[2]

4. Consider pharmacotherapy

Alternatively, behaviour logging may indicate initiation of pharmacological treatments if target symptom(s) persist and are dangerous to the patient, other residents of the facility and caregivers.

Table 2:
Responsivity to Various Interventions

Symptoms Most Responsive to Behavioural Approaches	Symptoms That May Respond to Pharmacological Intervention
• Wandering • Pacing • Repetitive Questioning or Mannerisms • Inappropriate Urination/Defecation • Inappropriate Dressing/Undressing • Annoying Repetitive Activities (Perseveration) or Vocalization • Hiding/Hoarding • Eating Unedibles • Tugging at/Removal of Restraints • Pushing Wheelchair Bound Co-residents	• Depression • Apathy • Paranoid and Delusional Ideation • Hallucinations • Activity Disturbances • Aggression • Diurnal (Sleep) Rhythm Disturbances • Affective Disturbances • Anxieties and Phobias

The use of psychotropic agents can be associated with risks and adverse effects that may outweigh any benefit obtained from treating the symptom. These can include sedation, disinhibition, depression, falls, incontinence, extrapyramidal symptoms, tardive dyskinesia, Parkinsonism, sensitivity to postural hypotension,

cardiac arrhythmias and metabolic side effects involving serum glucose and lipids.

Continue to monitor the efficacy and side effects of the medications, and if agreed upon therapeutic goals are not being met, consider switching medications and consultating a geriatric specialist.

While antipsychotics can be effective for the short-term control of dangerous BPSD, their continued use should be re-evaluated at least every three months. If medications are used, the lowest effective dose of the selected agent should be used for the shortest time possible. If an antidepressant is used, the preferred choice would be an agent with minimal anticholinergic activity, such as a selective serotonin reuptake inhibitor (SSRI).

Conclusions

In their recent systematic review of published clinical trials of the pharmacotherapy used to treat neuropsychiatric symptoms of Alzheimer disease, Herrmann and Lanctôt observed that, despite the number of randomized clinical trials on the pharmacotherapy of BPSD, clinicians are left with many unresolved questions and little direction regarding the correct pharmacologic interventions in the treatment of BPSD.[9] They concluded that currently, antipsychotics have the best evidence of efficacy for severe BPSD, but are problematic due to reported safety concerns.

Based on the strength of their systematic review, the authors suggest that patients with mild to moderate BPSD should be treated at the outset with a cholinesterase inhibitor and/or memantine.

For the more severe forms of BPSD, which include aggression and psychosis that present a danger to the patient and others in their environment, the atypical antipsychotics risperidone and olanzapine may be prescribed after consideration of their relative risks and benefits, and an informed discussion with substitute decision makers.

Possible second-line agents may include carbamazepine, citalopram, and trazodone. SSRIs can be used to treat depression in patients with Alzheimer's disease, and benzodiazepines should be used infrequently, for example, when sedation is required for procedures.

It would be prudent for the attending physician to keep accurate written records of the behaviour logging and all discussions with the substitute decision makers.

BPSD represents a significant challenge for the patient, their family and caregivers, and further research is required to find safer and more effective behavioural, environmental and pharmacological therapies for this complex syndrome. Dx

Dr. Sclater is a Professor of Medicine, Memorial University, St. John's, Newfoundland.

References:
1. Sanford, I. International Psychogeriatric Association: Behavioural and Psychological Symptoms of Dementia Online Education Pack. Finkel, MD, Project Editor. <http://www.ipaonline.org/ipaonlinev3/ipaprograms/taskforces/bpsd>. Accessed 2010 Jan 1.
2. Nilsson K, Palmstierna T, Wistedt B. Aggressive Behaviour in Hospitalized Psychogeriatric Patients. Acta Pyschiatr Scand 1988;78(2):172-5.
3. Passmore M, Gardner D, Polak Y, et al. Alternatives to Atypical Antipsychotics for the Management of Dementia-Related Agitation. Drugs Aging 2008;25(5):381-98.
4. McShane, R. What Are the Syndromes of Behavioural and Psychological Symptoms of Dementia? Int Psychogeriatr 2000;12(1):147.
5. National Guidelines for Seniors' Mental Health: The Assessment and Treatment of Mental Health Issues in Long-Term Care Homes (Focus on Mood and Behaviour Symptoms). <http://www.ccsmh.ca/en/natlGuidelines/ltc.cfm>. Accessed 2010 Jan 1.
6. Conn D, Gibson M, Feldman S, et al. National Guidelines for Seniors' Mental Health: The Assessment and Treatment of Mental Health Issues in Long-Term Care Homes (Focus on Mood and Behaviour Symptoms). Can J Ger 2006;9(2): 59. <http://www.ccsmh.ca/downloads/finalSupplement.pdf>. Accessed 2010 Jan 1.
7. Hogan D, Bailey P, Black S, et al. Diagnosis and Treatment of Dementia: 5. Nonpharmacologic and Pharmacologic Therapy for Mild to Moderate Dementia. CMAJ 2008;179(10): 1019-26.
8. Flaherty J, Rudoph J, Shay K, et al. Delirium is a Serious and Under-recognized Problem: Why Assessment of Mental Status Should Be the Sixth Vital Sign. J Am Med Dir Assoc 2007;8(5):273-5.
9. Herrmann N, Lanctôt, K. Pharmacologic Management of Neuropsychiatric Symptoms of Alzheimer Disease. Can J Psychiatry 2007;52(10):630-46.