Alleviating the Anxiety: Behavioural Problems in Dementia

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Behavioural and psychological problems are nearly inevitable in Alzheimer's disease (AD). The prevalence of some type of difficulty has been estimated at close to 90%.[1] The nature of the problem is different, as well as the cause and response to treatment, depending on the stage of the disease.

Mild disease

At the earliest stages of AD, the most prevalent difficulty is apathy. Patients have a lack of initiation of behaviour, especially social behaviours.

At the time of diagnosis of AD, patients are usually placed on a cholinesterase inhibitor (ChEI). Apathy tends to respond well to this class of medication[2] and caregivers often state that patients are "more like their usual self." Non-pharmacologic treatment involves improving mental, physical and social activity. Structured activities, such as day-away programs are also useful.

The other behavioural/psychological problem that arises in early dementia is depression. It can be a reaction to the diagnosis of dementia, but is also a result of the neurochemical changes that occur in early AD. Selective serotonin reuptake inhibitors (SSRIs) have been studied in this population and have been found to be effective.[3] Support groups for recently-diagnosed patients can also be helpful.

Sonya's case

Sonya, 75, has a 5 year history of Alzheimer's disease (AD) and is agitated. She is currently in the moderate stages and is on a cholinesterase inhibitor (ChEI) and memantine.

A decision has just been made to place Sonya in a special care residence. Within a few days of her arrival at the residence, her agitation suddenly becomes much worse. She starts having delusions, where she believes that the staff and other residents are stealing from her. This leads to her being verbally and physically violent with staff and other residents.

Management

A delirium work-up is done and a urinary tract infection is found. This is treated. As well, she is started on a short course of low-dose risperidone. Her behaviour significantly improves and the risperidone is discontinued. She also slowly gets used to her new environment and the agitation improves to baseline.

Moderate-to-severe disease

It is in the moderate stage of AD that behavioural problems start to become more evident.

• FAQ •

I have a patient who has been on donepezil and did well initially for a number of years. Now he is declining more rapidly and developing behaviour problems. Should I switch to another ChEI or memantine, since it seems that the donepezil is no longer effective?

It is not that the donepezil is ineffective, it is that his underlying disease is progressing. I would add memantine on to the donepezil, as there is good evidence that the two together are better than donepezil alone.

Table 1

Work-up for delirium

- History and general physical and neurological exam
- Complete blood count
- Electrolytes, blood urea nitrogen, creatinine, glucose
- Liver function tests
- Urinalysis, urine culture
- If indicated:
  - Chest x-ray
  - CT/MRI scan of head
  - Electroencephalogram
  - Other tests, based on history/physical or neurological exam

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When treating the more severe behavioural problems at this stage, it is important to understand a number of aspects of the behaviour in order to guide your treatment:

- How severe is the abnormal behaviour?
- What is the timeline of the onset of the behaviour?
- Who is the behaviour bothering?
- Are there any environmental cues that trigger the behaviour?

How severe is the abnormal behaviour?

Is the behaviour causing mild psychologic distress to the caregiver vs. a risk of serious physical harm to the patient or caregiver? The severity will determine how quickly you act, both with medication and assessing the home situation. If a potentially violent patient is still living at home, their caregiver needs to know that it is appropriate to call for help, or go to the ED if they feel threatened. You may also need to look into urgent placement options. Patient and caregiver safety are paramount.

What is the timeline of the change in behaviour?

Has it been a gradual change over weeks or months, or has it been a more sudden change over days? If there has been a significant change in behaviour over days, then it is imperative that delirium be ruled out (Table 1). In patients with moderate-to-severe dementia, sometimes the only sign of an underlying medical illness is a change in behaviour.

Who is the behaviour bothering?

Is the behaviour bothering the patient? The caregiver? The nurses at the residence? If the

behaviour is not bothering the patient and is not causing harm, perhaps medication can be avoided by educating the patient's caregivers. Examples include a patient having non-distressing hallucinations or mild delusions. It is useful to educate caregivers that it is not necessary to treat hallucinations or delusions with medication if they are not disturbing the patient or interfering with care. In the case of mild delusions (*e.g.*, of stealing), teaching the caregivers redirection techniques is frequently helpful.

Are there any environmental cues that trigger the behaviour and if so, could they be modified?

An example is a female patient that always gets agitated when she is bathed, but only when bathed by a male caregiver. Transient increases in agitation and exit seeking are common after a change in residence. If there is an environmental trigger that can be modified, this can decrease the need for medication.

Behavioural disturbance

In the moderate-to-severe stages, there are three major areas of behavioural disturbance:

- psychotic symptoms (delusions and hallucinations),
- agitation and aberrant motor behaviour and
- sleep-wake cycle changes, including sundowning (late-afternoon confusion).

If the behaviour is serious and needs to be dealt with quickly (*e.g.*, for safety reasons), often the only choice available is antipsychotic medication. The medications that are used most often in the demented elderly population are the

Table 2

Common underlying causes of screaming in terminal AD

- Delirium
- Pain (*e.g.*, arthritis, bedsores)
- Constipation
- Akethesia

• FAQ •

I have a patient that developed rapid-onset agitation. A delirium work-up showed a urinary tract infection. She has now had her 5 day course of antibiotics and her urine is sterile. However, she is not yet back to her baseline. Should I be worried that I might be missing something?

No. Return to baseline often lags behind the treatment of the cause of the delirium and can take a few weeks.

• FAQ •

It seems that it could be difficult to tell the difference between the anhedonia of depression and apathy, both of which occur in early dementia. If you are not sure which you are dealing with, how would you approach treatment?

First, if the patient is depressed by other criteria, treat that aggressively, preferably with a selective serotonin reuptake inhibitor (SSRI). If the diagnosis is not clear, I would make sure that they are on a maximal tolerated dose of a ChEI, then start a trial of a SSRI to see if there is any improvement.

Take-home message

- Behavioural and psychological symptoms are nearly inevitable in AD
- Different types of behaviours happen at different stages of the disease
- If there has been a sudden change in behaviour, you must first rule out delirium
- You must assess if the behaviour is compromising the patient's or caregiver's safety
- There are a number of pharmacological and non-pharmacological treatments that can be used in concert, throughout the spectrum of AD, to improve behavioural and psychological symptoms

atypical antipsychotics:

- risperidone,
- quetiapine and
- olanzapine.

These medications take effect quickly, over days and are often quite effective. However, they are not without risks. They are well known for causing:

- sedation,
- parkinsonism and
- an increased risk of falls.

More recently, they have been found to be associated with an increased risk of cerebrovascular disease.[4] Therefore, they should not be used without taking into account the risks vs. benefits and their use should be revisited regularly in each patient.

In cases where the behaviour is less severe but still bothersome, a ChEI should be started if the patient is not already on one. All ChEIs have shown effect in improving behaviour; however, their effect takes weeks to maximize.[5] They do not have the safety concerns of the atypical antipsychotics and are generally well tolerated. The main side-effects are transient GI upset or diarrhea.

If the patient is already on a ChEI and is in the moderate-to-severe stage of AD, then memantine should be added.[6] It improves behaviour, but takes weeks to take effect. Its side-effects are usually minimal, but some patients experience an increase in agitation, sedation, or dizziness.

SSRIs (*e.g.*, citalopram, venlafaxine) can be helpful with mild agitation or obsessiveness, in addition to their effects on mood. Finally, trazodone can be helpful for sleep.

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Terminal/palliative AD

At this stage, there are usually fewer behaviour problems due to the lack of mobility and speech. The most common problem in this stage is screaming. This can often be difficult to treat, so it is important to look for an underlying cause (Table 2). Dx

For resources, please contact **diagnosis@sta.ca.**