Dementia and delirium

Delirium prevention should be key to a person-centred approach and central to our work with people with dementia, says Claire Biernacki. She explains its causes and predisposing factors, the types of delirium and how it can be managed.

Claire Biernacki is acting general manager for community mental health services, at Derbyshire Healthcare NHS Foundation Trust. She has a strong clinical background in dementia care and over the past 18 months has been involved in developing integrated pathways for delirium prevention and management across the Derbyshire health and social care community.

As the scale of the challenge presented by delirium has grown, so has our understanding of its catastrophic impact on people who have dementia. Studies of people with dementia reveal that they are at significantly increased risk of developing delirium; indeed, there is evidence that the prevalence of delirium in people with dementia is more than five times higher than in people without it (Pong et al 2015).

Delirium is usually treatable by targeting the underlying causative factor, which is generally a physical health problem such as an infection. But even when the condition can be reversed, its legacy for people with dementia can be detrimental. So it will be argued that all of us caring for people with dementia need to be delirium-aware and should be working to prevent delirium from the point at which dementia is diagnosed. If we are providing care in 24 hour care environments, delirium prevention should be key to a person-centred approach and central to what we do.

What is delirium?

NICE (2010) describes delirium as “a common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course.” Although delirium is most commonly caused by a physical health problem this is by no means the only cause and is more usually the precipitating factor when other factors are already present, particularly in people with dementia. So apart from infection, for example, the physical causes include medication, malnutrition, dehydration, constipation, sleep disturbance and pain (see table).

And, less widely known, factors in the environment can trigger delirium including changes to surroundings (particularly admission to hospital), changes to routine and stressful events like the loss of familiar people or things. It can be helpful to use the mnemonic PINCH ME to memorise the causes of delirium:

P – pain
I – infection
N – nutrition
C – constipation
H – hydration
M – medication
E – environment.

It is often poorly understood that the symptoms of delirium can persist for more than six months, long after the original cause has been treated. As a result it is not uncommon for individuals to spiral into another episode of delirium.

Summary of delirium outcomes for people with dementia

Death
Accelerated cognitive decline
Loss of functional ability
Increased length of stay in hospital
Increased likelihood of institutionalisation

References


irium: cause for concern

Causes of delirium
Infection
Medication (anticholinergics, sedatives, antipsychotics in particular)
Malnutrition
Dehydration
Constipation
Sleep disturbance
Pain
Environmental factors (change to environment)
Individual stress triggers

Predisposing factors
Dementia
Over 65
Depression
Physical frailty
Sensory impairment
Previous delirium
Surgery
Male (more susceptible)

before the first is completely resolved. Where there is a dementia diagnosis, episodic delirium may be misinterpreted as deterioration brought on by the dementia and opportunities for treatment or to improve the individual’s wellbeing may be missed.

Vulnerability to delirium is associated with dementia, physical frailty, increased age, sensory impairment (particularly problems with sight and hearing), depression, and previous delirium. Risk of developing delirium rises in direct relation to the number of vulnerability factors a person has, if we consider people who are very old and have dementia, sight and hearing difficulties and more than one physical health condition, we can begin to understand why Mathillas et al (2013) concluded that this population has a risk of developing delirium that is 10 times higher than the average. These characteristics will fit a significant proportion of people living in 24 hour care.

Types of delirium
There are three types of delirium: hypoactive, hyperactive and mixed. An individual with hypoactive delirium, the most commonly missed of the three, will present as apathetic and quietly confused, a presentation that can be mistaken for depression. Someone who this will sleep much of the time, possibly missing meals and medication, and will be quiet and have difficulty concentrating and responding when awake. In a busy care environment it is easy to overlook a person with hypoactive delirium as they pose little or no challenge to the care team, the unfortunate result sometimes being that physical deterioration becomes a risk to life before being noticed.

Hyperactive delirium, on the other hand, will not be overlooked as it is characterised by gross confusion, agitation, hallucinations and confrontation with others, particularly in a care setting. Once again, these symptoms are frequently interpreted as an exacerbation of the dementia itself and the chance to deal with the underlying physical health issues is lost. Indeed, in the past, such behaviour may have been treated with antipsychotic medication which we now know can actually worsen physical health.

Mixed delirium has characteristics of both “hypo” and “hyper” delirium, and the individual will alternately present with elements of the one and the other. While delirium is a physical health condition with a presentation similar to dementia, it is also a medical emergency and can kill if not caught early and treated. Even when it is identified and treated, outcomes are often extremely poor, as we will see, and the argument for prevention is therefore overwhelming.

Impact of delirium on dementia
The experience of delirium is a frightening one. People without dementia describe altered awareness of surroundings, difficulty processing information, and hallucinations and cognitive problems that are extremely distressing and unsettling. It is no less distressing for someone with dementia and in this case is compounded by an underlying difficulty in processing the experience or making use of explanations given by others.

But the experience of delirium for the person with dementia, distressing as that is, should not be the only focus of our interest. Rather, we should consider the disastrous outcomes that delirium brings. Numerous studies (Gross et al. 2012, Davis et al 2012, Rockwood et al 1999) detail catastrophic outcomes including death, accelerated cognitive decline, prolonged hospital stay, repeat admissions to hospital, loss of functional ability, and increased likelihood of moving to 24 hour care. As noted above the effects of delirium can persist for as long as six months and for most people when this happens rearing previous cognitive and functional ability is impossible.

Differentiating dementia and delirium
When someone who is already confused, forgetful and struggling to communicate suddenly becomes worse in these respects, it is easy to interpret the change as a progression of the process of dementia. Research confirms that delirium is frequently misdiagnosed in this way and being able to differentiate between the two conditions is vital if we are to identify and respond to them appropriately.

One important clue to the presence of delirium is the speed with which the new symptoms appear. When the behaviour of someone with dementia suddenly changes the first thing we should think is, is this delirium? Dementia, as we know, has an insidious
onset and develops over months and years. Delirium on the other hand can develop in hours or days.

The fluctuating presence of symptoms is another indication for delirium. Whereas with dementia symptoms are stable and there is no gross variation in orientation, functional ability or memory, with delirium the fluctuation over a period of hours can be marked. Even in cases of advanced dementia it is possible to distinguish delirium because a person’s ability to communicate, eat, drink, or participate in daily activities will show a sudden and marked decline. Levels of alertness vary more with delirium than dementia, while changes in attention can also be apparent with inability to sustain, focus or shift attention being markers for delirium. In dementia ability to concentrate may be poor but it will be consistently poor. It is delirium’s inconsistency across the range of symptoms that often serves to separate the two conditions.

In the case of hyperactive delirium further distinguishing factors, as already noted, may be challenging and aggressive behaviour which can be particularly apparent during personal care. We saw that hypoactive delirium is less easy to recognise but there are still clues such as increased sleeping, decreased response even when awake and deterioration in ability and concentration. Even when the person is awake, it is unlikely to be for very long.

**Delirium management**

Delirium disrupts the fragile balance of factors that keep people with dementia well and restoring that balance is one of the biggest challenges for care professionals. In such cases it is crucial to restore this balance by interventions to ensure good nutrition, hydration, rest and sleep, and a needs-led response to challenging behaviour without using anti-psychotic medication. The accompanying table on delirium management sets out the basic tenets in full.

**Delirium prevention**

Expert and compassionate carers can achieve much in terms of supporting someone with dementia and delirium, but we have seen that treatment outcomes are still routinely poor. Evidence is much more positive in relation to delirium prevention interventions as is confirmed by the NICE guidelines (2010) and by Hsieh et al (2015), whose review of the research indicated that such interventions were effective in reducing delirium incidence, preventing falls, reducing length of hospital stay and avoiding institutionalisation.

Delirium prevention is about building and sustaining an individual’s resilience. Key contributors are good nutrition and hydration, avoiding constipation, treating pain, encouraging good sleep, keeping the environment stable and stimulating, and including familiar and important people in caring practices. In effect this building and sustaining of resilience targets the factors that create the risk of delirium in the first place (see above).

Care interventions described in the table can be hard to maintain and sometimes appear to conflict. For example, encouraging exercise to avoid constipation where someone is unsteady on their feet and has had previous falls is a risk; regular pain relief may enable mobility but can cause constipation; medication for physical health can upset mental wellbeing. There are difficult trade-offs in an individual’s care which can make the job of preventing delirium a complex one.

The truth is that there is no substitute for knowing the individual and striking the balance that works for each one. Where there have been previous episodes of delirium it will be possible to identify triggers and early signs of onset so that care can be specifically targeted to avoid a full blown new episode. For people who are particularly vulnerable to delirium because of the predisposing factors listed above, specific plans of care should be implemented and advance decision-making in relation to key interventions such as hospital admission should be considered with their best interest prioritised.
Delirium prevention: tips for implementation

**Good nutrition**
- Provide what the person is known to like
- Provide food the person can manage – texture and quantity
- Encourage self-feeding – finger food for example
- Ensure food and snacks are available at all times
- Provide the physical assistance the individual needs
- Maintain prompts and cues – smells, cutlery, communal meal times, familiar people and places associated with eating
- Record and monitor intake if concerned

**Adequate hydration**
- Provide regular liked drinks
- Ensure drinks are accessible
- Provide assistance needed to drink
- Encourage regular small amounts
- Take medical advice if necessary when managing fluid balance in patients with comorbidities (for example, heart failure or chronic kidney disease)
- Record and monitor intake if concerned

**Pain relief**
Be aware that pain may not be expressed in easily understood ways
Look for signs – swollen joints, facial expression, behaviour
Check for history of pain or conditions causing pain
Ensure pain relief can be taken – tablets can be problematic and alternatives may include heat treatment, massage and gentle exercise

**Good bowel habit**
Try to encourage fruit and vegetables in diet
Encourage plenty of fluids, as above
Encourage gentle exercise
Ensure any prescribed treatment is monitored
Liaise with person prescribing
Avoid catheterisation

**Adequate sleep and rest**
Know individual’s routine and encourage that routine
Promote balance between activity and rest
Facilitate personal preferences – daytime naps for example
Ensure physical environment is conducive to sleep – attend to noise, lighting and comfort for example

**Supportive environment**
Promote familiar routine
Involve familiar people in care
Provide regular reassurance and explanation
Encourage stimulation, but not over-stimulation
Reduce noise
Facilitate way finding – signage, good lighting

**Sensory support**
Attend to senses – hearing and sight checks if possible
Ensure glasses and aids are available, worn and working
Ensure dentures are in place where needed, and fit well

**Medication balance**
Ensure regular review
Ensure what is prescribed can physically be taken
Carefully monitor impact of any new medication

**Conclusion**
Delirium is a dangerous condition, which people with dementia are at high risk of developing. Catastrophic outcomes can result. Even when successfully treated it can have an adverse long-term effect and prevention strategies are to be preferred, accompanied by good nursing care that proactively targets the risk factors.

Achieving the right balance between interventions across competing needs is challenging and requires acute physical health care that firmly places the person and their needs at the centre. As a first step those working with people with dementia, particularly frail older people who have comorbidities, should cultivate an awareness of delirium, find out about its impact and most importantly make the link between good person centred care and delirium prevention.

Delirium prevention should become standard practice and any change in a person’s behaviour should lead to the question “is this delirium?” Where there is any doubt, care to combat the development of delirium should be the response.

**Useful resources**

**References**