

Differentiation of delirium, dementia and delirium superimposed on dementia by registered nurses caring for the older person

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Abstract

Delirium is an acute clinical emergency that requires prompt clinical intervention. A predisposing risk factor for delirium is dementia, and delirium may highlight the vulnerability of a patient to develop dementia. However, delirium also occurs during an acute illness in patients diagnosed with dementia, this is classified as delirium superimposed on dementia. This complex interplay of both dementia syndromes and the condition of delirium has been extensively studied, however delirium continues to be under recognised in the acute setting, which impacts negatively on patient outcomes. Registered nurses are the best placed healthcare professionals to recognise a change in a patient's cognitive symptoms, but nurses caring for the older person have suggested the identification and differentiation between delirium, dementia and delirium superimposed on dementia remains very confusing. A need for further education with supportive guidelines and protocols is required to empower nurses caring for an older person to verbalise changes in patient's cognitive status in a reliable, robust and systematic manner.

Key phrases

- Delirium and delirium superimposed on dementia are acute clinical emergencies that need prompt clinical treatment.
- The interplay between delirium, dementia, and delirium superimposed on dementia is complex, although screening and assessment tools are available.

- Registered nurses are the best placed healthcare professionals to recognise a change in a patient's cognitive status, but still struggle to do so.
- Nurses caring for an older person require education to empower them to implement cognitive screening and understand the complex interplay between delirium, dementia and delirium superimposed on dementia.

Key search terms

Delirium, dementia, hospitals, nurses, guidelines

Introduction

Delirium is an acute medical emergency and if not treated immediately impacts negatively on patients rates of recovery, increasing their length of hospital stay, admission to a care home and risk of mortality (Kiely et al 2006; McAvay et al 2006; Bellelli et al 2007). A significant predisposing factor for delirium is a dementia (Inouye et al 2014). When delirium occurs in patients with dementia this can be classified as delirium superimposed on dementia (DSD). Prevalence of DSD in an acute hospital setting for those over the age of 60 has been estimated to be 39%, over the age 65 32%, and over the age of 70 39% (Avelino-Silva et al. 2017; Travers et al. 2013; Fick et al 2013). Other studies have suggested in hip fracture patients DSD ranges from 25% to 65% (Holroyd-Leduc et al. 2010).

More recently, the complex interaction of delirium and dementia has been acknowledged, and an episode of delirium might highlight the vulnerability of a patient to develop dementia or identify an undiagnosed dementia (Jones et al 2011). Rapid assessment, identification, treatment and management of delirium is essential as underlying causes are commonly treatable through pharmacological and non-pharmacological interventions (Fleet and Ernst, 2011; National Institute for Health and Care Excellence [NICE] 2010).

The importance of early diagnosis of delirium is reflected in the understanding of patients' experience of DSD. Morandi et al (2015) interviewed 30 patients following an episode of DSD. This work highlighted patients could recall episodes of emotional upset including anxiety, anger and shame, a deterioration in their cognitive abilities and episodes of psychosis including: disturbing thoughts and feeling. Patients also reported an awareness of these changes and symptoms, but simultaneously the inability to understand these changes (Morandi et al 2015).

In the acute hospital setting registered nurses are the best placed healthcare professionals to identify the development of delirium in their patients. However, previous studies reported nurses only identified 41% of hyperactive delirium, and only 21% of hypoactive delirium (Fick et al 2007). More recently Cerejeira and Mukaetova-Ladinska (2011) and Pun and Boehm (2011) suggest nurses remain poor at identifying delirium.

Identification and differentiation of delirium and dementia by registered nurses caring for an older person

This paper reports on an incidental finding from a broader study. Registered nurses working in older person care struggled to identify and differentiate between delirium and dementia. The aim of the original study was to explore the lived experience of delirium by patients, their families, junior nurses and doctors, across cardiology, renal, respiratory and older person care specialities. Ethical approval for this study was obtained from all relevant ethic boards including a National Research Ethics Committee and the Health Research Authority. Nurses were informed of the voluntary nature of participating and all information provided would remain confidential unless an issue was raised that highlighted possible harm to patients or staff. Qualitative data were collected through semi-structured interviews. This methodological approach was undertaken to guide participants to discuss elements relevant to the research aim, but also important to them, and not necessarily obvious to the research team. Data was transcribed verbatim and analysis using Braun and Clarke thematic analysis (Braun and Clarke, 2006). This paper discusses the data from interviews that occurred with

five registered nurses specialising and working on older person care wards in an acute hospital in England. The older person care wards focused on medical conditions of people over the age of 65, outside of renal, cardiology and respiratory specialities. For more information on the methods and results of the wider study refer to Brookes and Manneh (2018).

Registered nurses caring for an older person discussed delirium and dementia simultaneously and interchanged these concepts, none of these nurses expressed an understanding of hyperactive delirium, hypoactive delirium or mixed delirium, they also struggled to understand the differences between delirium and dementia, and how to identify acute confusion against a backdrop of dementia. Nurses were honest that they remained confused regarding the relationship between delirium and dementia. The below quotes from nurses caring for the older person demonstrate an understanding of the impact of infection on a person, which may cause confusion, but simultaneously a lack of understanding of the definition of delirium and the difficulties between identifying and separating dementia and delirium.

“Most of our patients have dementia, so I am not aware of any case that was just delirium without dementia. I remember one patient that was really confused because of an infection and when he was admitted he was so aggressive with us and then after the treatment he was like a gentleman, very nice, but he was confused because of the infection and was not diagnosed with delirium.” (Participant 1)

“I would say that 80% of the patients on this ward have dementia and we never know when it is a new dementia, so delirium is often related to their dementia.” (Participant 3)

“It is confusing for us, because the hallucinations, the visual and verbal occurs in both dementia and delirium, so for us it is sometimes difficult to understand what is the cause, is this improving or is this deteriorating, so sometimes in the beginning it is difficult for us to

know if it is delirium or dementia, or is it a new case of dementia that hasn't been diagnosed." (Participant 4)

"I think if they are not diagnosed with dementia or Alzheimer's that is when you cannot tell whether it is delirium or dementia, or is it an infection that they have got that has caused the onset of the delirium." (Participant 5)

Assessment of delirium

A number of reasons for the poor identification of delirium by registered nurses have been identified and include the fluctuating nature of delirium and poor delirium screening tools (Hussein et al 2014). Screening or assessment tools are necessary in the acute setting, so nurses can gain an understanding of a patient's baseline mental status. A cognitive assessment should be completed on admission, with any change in mental status and routinely every shift in older person care (Flanagan and Fick, 2010). Nurses caring for an older person have highlighted a lack of family members/friends on admission with patients prevented an understanding of the patient's baseline mental status. In the absence of family members/friends there is a need for collaboration between community and hospital healthcare professionals to support the understanding of the patient's baseline mental status. None of the nurses in the study completed a screening for delirium, but discussed screening for falls and safety. However, continuity of care supported nurses differentiation and identification of delirium from dementia:

"It depends how long the patient is here, because if I saw the patient every day and I can tell it is dementia, like he is forgetful, he doesn't know where his glasses are, and he is like that for five days and then the other day he is like 'oh my god, I am in the war' and then you observe the delirium and this is a red flag that I report to the doctors."

The most commonly used validated tool for screening for delirium is the Confusion Assessment Method (CAM), originally developed by Inouye et al (1990) for use with older adults in hospital.

Assessment tools such as the CAM have been specifically designed for nurses to complete by the bedside with patients to detect early signs of delirium. Another validated screening tool for cognitive impairment and delirium is the 4AT, this tool is sensitive for detecting delirium in patients with dementia and culturally diverse populations (Bellelli et al 2014; De et al 2016). These assessment tools are necessarily brief to allow multiple assessments through a 24 hour period. Multiple assessments of cognitive and behavioural changes in delirium are paramount due to the fluctuating nature of the condition (Caplan and Rabinowitz, 2010).

A patient may present with delirium superimposed on dementia, when the dementia has yet to be diagnosed. Assessments to detect delirium and/or dementia should aim to differentiate the two, refer to Table 1 for an overview of the different features. Dementia is a slow chronic decline in cognitive function, whereas delirium is a sudden acute decline. Delirium is also characterised by the reduced ability to sustain or shift attention, whereas dementia impacts more widely on behaviour and ability to maintain activities of daily living (Caplan and Rabinowitz, 2010).

Insert Table 1 here.

Discussion

In older person care there remains a need for clinical guidelines or protocols focused on delirium, dementia and DSD, which include cognitive screening tools and care interventions. This is needed to support nurses working in older person care to become competent to screen patient's cognitive status using a reliable and valid tool and to empower them to report their findings to the multi-disciplinary team. Registered nurses choosing older person care as a speciality need further education on delirium, dementia and DSD, which will develop their understanding and support them to embed cognitive screening and care interventions into their everyday practice.

Clinical guidelines are important in the provision of evidence-based healthcare, although current guidelines related to the assessment, treatment and care for patients with delirium in acute hospital

settings may not represent or be aligned or applicable to day to day practice in specialities outside of surgery and intensive care units (Day et al 2009; Bush et al 2017). However, NICE guidance (2010) proposed a 'think delirium' approach whenever an older person is admitted to hospital. Based on the best available evidence, NICE (2010) suggest the identification of risk factors on admission to hospital, alongside cognitive screening are paramount to inform a multi-component intervention to support and prevent delirium.

NICE (2010) also recommend a diagnosis of delirium is based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria or a patient is screened using the CAM or the CAM-ICU. The application of the DSM-IV was beyond the scope of nurses caring for the older person interviewed in the current study'. The CAM-ICU has been validated for the use in critical care or the recovery room and does not include recommendations relevant to general medical or older person care specialities. The CAM is appropriate for use within older person care, but the nurses working within older person care in this study had not been supported or trained to use this tool.

The lack of development and support to empower nurses to implement screening tools might support recent literature that suggests nurses did not recognise delirium because: nurses lacked a conceptual understanding of delirium, experienced delirium as a burden and could not identify the differences between delirium and dementia (Hussein et al 2014). These findings are similar to the current qualitative study of registered nurses caring for the older person, but with reference to DSD. However, delirium education for nurses, with the inclusion of screening and care interventions has been found to significantly improve nurses their knowledge (Wand et al 2014; van de Steeg et al 2015). There needs to be a focus for nurses caring for the older person on education that relates specifically to delirium, dementia and DSD.

Education may support the knowledge of nurses caring for the older person on DSD, but this needs to appropriate and applicable to their day to day care of patients with DSD. Therefore, Flanagan and Fick (2010) suggested four goals of interventions delivered by nurses for patients with DSD in an

acute hospital setting: identification of delirium and the cause to enable appropriate treatment, the promotion of safety of the patient to prevent injury, identify the complications of the delirium, and begin secondary prevention to reduce the severity of the delirium and the likelihood of a reoccurrence.

Recommendations

A clear recommendation is further education of registered nurses caring for an older person to empower them to complete cognitive screening and to implement evidence-based interventions as well as reporting back the findings confidently to doctors with the support of a clear protocol based on National guidelines. In addition education needs to support nurses' knowledge of delirium, dementia and delirium superimposed on dementia, including supportive care and interventions.

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Table 1: Features of Delirium and Dementia

Feature	Delirium	Dementia
Onset	Acute sudden onset	Slow chronic onset
Cause	An acute illness, such as infection, dehydration or withdrawal or use of drugs	An underlying brain disorder, such as Alzheimer's Disease, Lewy Body dementia, vascular dementia
Course	If treated early with no underlying brain disorder, reversible	Progressive, currently no cure, but pharmaceutical and non-pharmaceutical can slow progression
Duration	Weeks to months	Terminal disease
Attention	Greatly impaired during a delirious episode, otherwise intact	Declines as the dementia progresses
Sleep-wake	Usually worse at night	Can be worse at night
Level of consciousness	Impaired during a delirious episode	Usually unimpaired until the late stages of dementia
Orientation	Impaired during a delirious episode	Usually unimpaired in the early stages of dementia, but becomes impaired as the dementia progresses
Behaviour	Hyperactive delirium the patient will become agitated and restless. Hypoactive delirium the patient will become drowsy and withdrawn	Unimpaired in the early stages of behaviour, in the later stages of dementia behaviour may be misinterpreted as the person is unable to communicate their needs
Speech	Incoherent, either slowed or accelerated speech	Word finding difficulties, which progress as the dementia progresses
Memory	Varies, and on recovery a patient may not remember their actions or incidents that occurred when they were delirious	Loss of short term memory in the early stages, then increased memory loss as the dementia progresses
Perceptions	Hallucinations and delusions	Visual disturbances, hallucinations may occur in Lewy Body dementia

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