MISMANAGEMENT OF DELERIUM PLACES PATIENTS AT RISK

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ABSTRACT

Objective:

This paper discusses the problem of delirium and the challenges of accurately assessing, preventing and managing patients with delirium in an acute care setting.

Primary Argument:

Acute confusion, also known as delirium, is misdiagnosed and under-treated in up to 94% of older patients in hospitals. With the ageing population, this problem will increase dramatically in the Australian setting. Managing patients with delirium is challenging not only for the management of their basic nursing care needs but also because they are prone to adverse events such as falls and medication problems. In order to address this issue it is vital that health care professionals routinely assess patients for signs of delirium. The current 'gold standard' for assessing delirium is the use of the Confusion Assessment Method (CAM) which has been developed based on the diagnostic criteria set by the Diagnostic and Statistical Manual of Mental Disorders DSM-IV and can be used by non-psychiatrists. Further, increased attention should be given to the prevention and management of delirium and the use of orientation and validation therapy.

Conclusion:

Research indicates that early identification and intervention can help to limit any negative effects or adverse events. Increasing knowledge and awareness of early detection and efficient management of delirium is the first step toward prevention.

INTRODUCTION

Acute confusion, also known as delirium, is misdiagnosed and under-treated in up to 94% of older patients in hospitals, according to international reports (Cole et al 2002a). Australia's fastest growing population is older adults aged 85 and over, whose cognitive decline predisposes them to developing delirious episodes. This issue requires urgent attention as it places enormous strain on families, carers and the health care system. Yet so far, there is no Australian data available on prevalence of delirium in our hospital settings to indicate the severity of the problem. Further, a widely accepted nursing management protocol of delirium is yet to be established.

SEARCH STRATEGY

This discussion was developed based on the literature from EBSCO which provides access to a range of databases as well as Academic Search Premier; MEDLINE; CINAHL; Health Source: Nursing/Academic Edition; Psychology and Behavioural Sciences Collection; PsychINFO; and PsychARTICLES. Key words that were used in these searches were 'delirium' or 'acute confusion', which were combined with the words 'depression', 'dementia', 'management', 'acute care' and 'hospitalised patients'. To ensure evidence was contemporaneous, studies were limited to those that were undertaken from 1990 to 2005.

DISCUSSION

There are a number of risk factors associated with delirium, the most common documented being advanced age (Mentes, Culp, Maas, and Rantz 1999). Other risk factors for delirium include polypharmacy, malnutrition, dehydration, respiratory or urinary infection, dementia, functional or sensory impairment, use of restraints, stroke and sleep deprivation (Inouye et al 2001; O'Keefe 1999;

Samuels and Evers 2002). Each of these factors is an issue commonly experienced by hospitalised patients. As delirium can be instigated by a number of physiological, psychological, sociological and environmental factors, this condition can develop across a number of clinical settings and patient conditions. For example, patients following hip replacement surgery (Segatore and Adams 2001), patients who are terminally ill (Morrison 2003), and those in residential aged care (McCarthy 2003a). The large number of multi-dimensional variables, risk factors and environments that predispose individuals to develop delirium makes the prevention of this condition a difficult task.

Reasons why delirium is misdiagnosed

In many cases delirium is misdiagnosed as being either dementia or depression (Samuels and Evers 2002). Such an assessment error distracts and diverts health care professionals from treating the actual condition of delirium with some serious consequences. This type of misdiagnosis and subsequent treatment of delirium eventually results in increased: length of stay; hospital costs; nursing home placement; and morbidity and mortality rates (Douglas et al 2005).

Furthermore, patients experiencing a delirious episode will often experience hospital-acquired complications such as adverse reactions to medications, falls, infections, urinary incontinence and poor nutrition, which in turn may exacerbate or prolong the delirious episode – these factors may also contribute to the onset of delirium (McCarthy 2003b).

According to the international literature, the complexity of misdiagnosis lies in the fact that the symptoms of delirium, dementia and depression overlap, and all three syndromes have the ability to co-exist as well as in the fact that dementia is one of the most important risk factors for delirium (McCarthy 2003a; Samuels and Evers 2002).

According to the DSM-IV-TR, delirium is a neuropsychiatric syndrome characterised by disturbances in attention and consciousness that are acute in onset and have a fluctuating course (American Psychiatric Association 2001). In addition, delirium is classified into three types according to a patient's level of psychomotor activity: hyperactive, where psychomotor activity is increased and agitation is prominent; hypoactive, where psychomotor activity is decreased; and mixed, where features of both hyperactivity and hypoactivity are present. These differing symptoms of delirium add to the complexity in diagnosis.

For example, hyperactive delirium can be misdiagnosed as an anxiety state whereas hypoactive delirium may be misdiagnosed as depression or may even be left undetected. This problem is exacerbated by the prevailing conditions in acute care settings where the pre-admission status of the patient is not clearly known or understood by health professionals at the time of admission. For example, when the situation does not allow for an 'acute onset' to be determined, some patients who present as confused may be assessed to be displaying their normal behaviour.

Due to their dysfunctional cognitive status patients experiencing a delirious episode are unable to think clearly and often perceive their environment as being hostile or threatening. Increased psychomotor activity in hyperactive delirious patients may provoke them to abscond from this type of setting. It also means they are at increased risk of self-harm because they may dislodge critical life support and monitoring equipment.

Patients experiencing delirium have also been known to assault staff and visitors (Foreman, Wakefield, Culp, and Milisen 2001). This situation puts nurses, patients and visitors at risk and places an unnecessary burden on the health care system. This type of behaviour necessitates increased patient surveillance by nurses, and has been found to result in more frequent use of physical and chemical restraint, extended hospital stay and both increased and unexpected health care costs (Foreman, Mion, Tryostad and Fletcher 1999).

The majority of research papers on delirium have been based on studies conducted in Canada, the United States of America and the United Kingdom. Comparable to Australian hospitals, patient populations in these countries are also largely weighted towards older patients (>65 years). Overseas data have indicated that delirium occurs in about 15-22% of all general admissions to hospital and that another 10-30% of patients become delirious post-admission (O'Keefe 1999; Schofield 2002). Furthermore, over the past 5-10 years USA based statistics have identified a notable increase in the incidence of delirium for hospitalised patients from age 80 and above (Inouye, Foreman, Mion, Katz and Cooney 2001).

Statistics gathered in the USA indicate each confused patient costs an average of US$30,000 (Foreman, et al 1999). Unfortunately, no current costings are available on patients within an Australian setting. A study by Inouye, Schlesinger and Lydon (1999b) predicted that in the USA each year, delirium complicates hospital stays for more than 1.5 million inpatient days and accounts for more than US$4 billion of Medicare expenditures. The increased costs associated with delirium occur due to increased morbidity, increased nursing care needs, admission to residential care and re-admissions to acute care hospitals (Coulson and Almeida 2002; Franco, Litaker, Locala and Bronson 2001).

While there are no systematic methods for treating delirium, investigators have suggested that early detection is the first step toward developing treatment strategies and managing this condition (Coulson and Almeida 2002; Laplante and Cole 2001; Wakefield 2002). Early recognition and management can effectively restore an older person to premorbid health and functioning (Segatore and Adams, 2001). Regular systematic

screening of mental status in the acute hospital setting can ensure that cases of delirium are recognised and treated before they have a deleterious effect on the patient. Nurses at the bedside have the most extended contact with patients. As such, nurses are often the first to recognise subtle behavioural and cognitive changes in patients which, through systematic screening, best positions them for prompt detection of the condition.

Physicians who typically see patients for only brief periods tend to rely heavily on nursing observations for mental status changes. Even so, overseas studies investigating delirium have concluded that neither physicians nor nurses have been proactive or accurate in screening for delirium in at-risk patients (Inouye 2001; Lacko, Bryan, Dellasega and Salerno 1999). Similar outcomes were also found by an Australia-based study conducted by Nair, O'Dea, Lim and Thakkinstian (2000) which identified that health professionals do not routinely assess for cognitive decline in hospitalised patients as their main concern is the management of the patient's primary medical problem.

The assessment and management of delirium

In order to address this issue it is vital that health care professionals routinely assess patients for signs of delirium. The current 'gold standard' for assessing delirium is the diagnostic criteria set by DSM-IV (Cacchione 2002; Laurilla, Pitkala, Strandberg and Tilvis 2002), which was devised for use by psychiatrists and remains 'the most inclusive criteria (for delirium) to date' (Cole, Dendukuri, McCusker and Han 2003, p.200). At present, there are just a handful of instruments that assess delirium such as: the Delirium Rating Scale (Trzepacz, Baker and Greenhouse 1988); the Delirium Index (McCuster, Cole, Bellavance and Primeau 1998); the Informant Questionnaire on Cognitive Decline in the Elderly (Jorm 1994); and the NEECHAM Confusion Scale (Neelson, Champagne, Carlson, and Funk 1996).

Most of these instruments are problematic in that they do not assess all the key features of delirium, have relatively low sensitivity and/or specificity; and require information from many different sources that can only be interpreted by a skilled clinician (Lapante and Cole 2001; Rapp et al 2000). There is, however, one assessment tool that, in terms of its psychometric properties, consistently out-performs all others: the Confusion Assessment Method (CAM) (Inouye, van Dyck, Alessi, Balkin, Siegal and Horwitz 1990).

A study by Smith, Breitbart and Meredith (1995) identified that combinations of other validated instruments measuring delirium do not yield substantial improvements in performance over the CAM. Further to this, the CAM has been compared with other instruments by external reviewers and found to have the best combination of ease, speed of use, data acquisition, reliability and validity (Smith et al 1995). Because of its ease of use the CAM is currently the most widely used instrument for detection of delirium worldwide (Inouye 2001).

Originating from operationalised criteria set by DSM-IV, the CAM was devised by an expert panel using a consensus-building process (Inouye et al 1990). Inouye and colleagues developed the CAM to improve the assessment of delirium by non-psychiatrists. Greater awareness of such a reliable, expeditious and easy-to-use systematic screening tool in Australian populations at risk could increase the rate of early detection and lead to the appropriate management of delirious patients that could potentially reduce patient-stay costs.

To manage delirium, the literature highlights the use of environmental or psychosocial methods. Over the past few years two such interventions; re-orientation therapy and validation therapy, have been used by nurses for the treatment of delirium (Milisen, Steeman and Foreman, 2004). Currently there is no standard formula/protocol used in the implementation of either of these therapies and it appears these interventions have been applied in a number of ways across settings (Cole, et al 2002b; Fagerberg and Jonhagen 2002; Schofield and Dewing 2001; Wakefield 2002). These variations in practice may be explained by the relative flexibility of both interventions, dependent upon the severity of delirium in patient populations and the context of practice.

Re-orientation therapy

Re-orientation therapy uses environmental support measures that are designed to re-orient the patient to the *here and now*, thus minimising factors that contribute to patient confusion. These measures include: displaying time-orienting devices such as a clock or calendar; frequently addressing the patient by name; conveying identifying information by stating their purpose, eg. 'Mr Smith, I am your nurse and I am now going to...'; using frequent verbal reminders of time, day and place; providing the patient with glasses and hearing aids as needed; dimming the lighting; minimising noise both during the day and at night to promote uninterrupted sleep ie. using volume control on equipment and minimising conversation among staff at the bedside; using effective communication ie. slow-paced, concise and repetitive language; avoiding terminology unfamiliar to the patient; displaying family photos or familiar possessions from home; encouragement of family visits; and ensuring adequate pain relief. In creating the best environment for the older person, re-orientation therapy enables the patient to restore a sense of control through supportive measures that help in relieving physical discomfort and promote mental activity. There is now good evidence that re-orientation therapy can prevent delirium in high-risk patients (Inouye 2000; Inouye et al 1999a).

Validation therapy

Validation therapy involves nurses' acknowledgement that patients' feelings are real to them. The key to administering this type of therapy is for nurses to listen to

what their patients are trying to tell them, to trust their stories, even though they might seem fanciful, and to interact with them in a way that maintains their dignity and integrity. In doing so nurses are meeting patients' interpersonal and psychological needs with sensitivity through confirmation, reassurance and support of patient narratives during their delirious episode. In this regard validation therapy has been found to be an effective approach in meeting confused, aggressive older persons (Fagerberg and Jonhagen 2002).

Validation therapy is literally about 'validating' an experience as real, without confirming that it exists in the real world. Therefore, rather than re-orienting the patient to the here and now, as with re-orientation therapy, validation therapy emphasises supporting and endorsing the patient's current confusional experience. Findings presented in a study conducted by Andersson, Hallberg, Norberg and Edberg (2002) indicated a person's confusion may actually involve their experience as a mixture of events going on in their vicinity, their previous experiences and/or current life situation transferred into a 'new story'. Nursing staff should not scold the patient or make humorous remarks which may cause the patient to feel embarrassed or perceive that something disgraceful has taken place. Otherwise there is a risk that such threatening experiences will increase their suffering. When it appears that patients might harm themselves or others, and when non-pharmacological methods have failed, then chemical and/or physical restraint may be necessary.

Both of these therapies, even though they are to some extent conflicting, make a valuable contribution to prevention and treatment of delirious episodes within the acute care setting (Millisen et al 2004). These interventions also promote restraint-free care, thus reducing the likelihood of increased patient agitation.

Research, which implemented a large controlled clinical trial of standardised protocols for the management of risk factors for delirium, found that primary prevention strategies, principally re-orientation therapy, were the most effective and that these strategies should be implemented by nurses with patients at risk of delirium (Inouye et al 1999). This finding supports the conclusions of Stromberg (1995) and Schofield (1997) that re-orientation is the best way to aid patients experiencing delirium. However, Fagerber and Jonhagen (2002) found when nursing staff tried to reorient patients experiencing a delirious episode, attempting to guide them back to reality, the patients experienced this as mistrust of their experiences which then led to undue stress and further delirium. By the same token, Meredith (1998) suggested that validation therapy is the most effective approach when dealing with confused, aggressive, older patients. What this denotes is that, although findings from previous studies are informative, a widely accepted management protocol of delirium is yet to be established.

CONCLUSION

The challenge ahead is to find the right combination of both therapies to form an easy-to-administer social intervention. The development of such an intervention could then be applied across the continuum of care to be used by nurses in the acute care setting through to staff in residential care and carers in the community. Australia's ageing population calls for, if not demands, cost-effective and competent care which meets the unique needs of older people. The increasing lifespan of older Australian adults predisposes them to cognitive decline which predisposes them to developing delirious episodes. This places an enormous strain on families, carers and the health care system. Research indicates early identification and intervention can help to limit these negative effects. Increasing knowledge and awareness of early detection and efficient management of delirium is the first step toward prevention.

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