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Nurse' prediction prevention and management on post-operative delirium in geriatric patients with hip fracture: The development of a protocol to guide care

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Abstract ***Background:*** A high prevalence for the development of delirium after hip fracture was found in the group of geriatric patients. The National Institute for Health and Clinical Excellence has introduced a guideline for the management delirium (NICE, 2010). Protocols composed of detection, prevention and management of post-operative delirium required some adaptation to meet the needs of local nurses.

Aim: A protocol with a nursing care plan referenced from an international guideline and other literature was developed to predict, prevent and manage post-operative delirium for geriatric patients with hip fracture.

Methods: The literature suggests numerous risk factors are associated with post-operative delirium and its preventive interventions were adopted to develop the protocol and nursing care plan.

Findings: Six major risk categories included mental and behavioural influence, sensory impairment, physiological influence, immobility influence, electrolyte disturbance and infection influence. These were used for screening patients, accompanied by various preventive interventions. A protocol was developed to strive for the best management of geriatric patients receiving hip fracture surgery from admission to discharge.

Conclusions: The protocol incorporated with the Risk Assessment for Management of Postoperative delirium (RAMP) care plan was adapted for staff to implement in their local clinical area. Further study is required to determine its effectiveness on the prevention of the development of post operative delirium (POD) in the future.

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Editor comments: Post-operative delirium can cause distress not only for patients but for the family or carers. Whilst often a transient state some clients can be left cognitively impaired for an extended period of time and indeed some may never regain full functional and cognitive ability. The recognition and management of post-operative dementia is therefore a key concern to practitioners dealing with patients following general anaesthesia. This paper describes how a protocol for dealing with post-operative delirium in and orthopaedic ward was developed. BS

Introduction

Delirium is one of the common complications causing cognitive disturbances in older adults with rates ranging between 9% and 65% after hip fracture (Bitsch et al., 2004; Sorensen and Wilblad, 2000; White et al., 2011). A prospective study in our orthopaedic department demonstrated a post-operative delirium prevalence rate of 37.6% after hip fracture (Tsang et al., 2012a,b). Owing to the high prevalence of post-operative delirium (POD) after surgeries, there were numerous studies conducted to identify associated risk factors, preventive strategies, and methods to manage POD. The purpose of this paper is to describe the incidence of postoperative delirium in orthopaedic patients and to describe the development of a practice protocol for nurses to use to identify and monitor those patients at risk of development of postoperative delirium.

Delirium after surgery, especially in frail elderly patients can lead to significant mortality and morbidity resulting in adverse outcomes with prolonged hospital stay (McCusker et al., 2003), increased mortality at 40% in one year following discharge (Maran and Dorevitch, 2001; Siddiqi et al., 2006), increased risk of developing hospital acquired infection, falls and pressure ulcers, poor cognitive recovery (Andrew et al., 2005) and increased risk of developing dementia even in patients without having cognitive impairment at baseline (Rockwood et al., 1999).

Delirium, indeed, is not easily detected in the clinical area. It can be categorized into three types: hyperactive, hypoactive and mixed subtype. Korevaar et al. (2005) reported that 30—67% of patients with delirium were underestimated. Hypoactive delirium is characterized by quiet and lethargy in a previously engaged person, which is often missed (McCusker et al., 2003). Hyperactive and mixed subtypes are more commonly found in the delirious patient in that they are agitated and fluctuate in behaviour. An accurate and timely assessment incorporating a strategic protocol is of paramount importance to detect patients with delirium and to provide appropriate interventions.

Use of protocols

The use of protocols to guide practice has been widely welcomed and commonly implemented in nursing care. The protocol based care was described as a generic term, making explicit ''who should do what, when, how and why'' in the form of algorithms, protocols, guidelines, policies, procedures and integrated care pathways (Ilott et al., 2010). Many nursing practices using protocols have been heralded as a means of ensuring evidence based care (Ilott et al., 2006). Protocols for each clinical condition have been developed using a multidisciplinary approach with various experts in that particular area contributing. Ilott et al. (2010) strongly advocated the use of protocols in worldwide healthcare areas. The extension of nursing roles to incorporate prescribing can provide a more streamlined service for patients because they do not need to refer to doctors (Rycroft-Malone et al., 2008). Nurses commonly use checklists to guide their clinical care for patients with box-ticking. Similarly the protocol that is well defined with specific care interactions prescribed under various circumstances can be developed to guide nurses. Some argue nevertheless it could lead to a restricted decision-making process and reduce independent thinking (Rycroft-Malone et al., 2008). Flynn and Sinclair (2005) suggested that the development of new protocols do not encroach on nursing autonomy but conversely nurses should have more confidence using them. According to the ordinance in Hong Kong, nurses are restricted when requesting investigations, tests or treatments. By using standardized care protocols nurses therefore can take on new tasks and develop skills beyond the traditional scope of practice including prescribing, diagnosing, ordering tests and sometimes making decisions on providing treatments (Rycroft-Malone et al., 2008). As a result, nurses can increase their autonomy and take a lead role in managing patient care (Hewitt-Taylor and Melling, 2004).

The protocol looks at the specific circumstances at admission and comprises of various strategies to screen risk factors, followed by