

科目：內外科護理學

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下面有四篇英文文獻，請從中選出一篇，閱讀後請寫出英文篇名及不超過500字的中文摘要(100%)。

第一篇文章：第2頁至第4頁。

第二篇文章：第5頁至第8頁。

第三篇文章：第9頁至第12頁。

第四篇文章：第13頁至第14頁。

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Alert 1

Alert: a change in bladder management for the individual with a spinal cord injury can lead to constipation

By Wendy Jannings

Introduction

Advances in urology and continence management are evident in practice and the literature, particularly for persons with an acquired neurogenic bladder following traumatic spinal cord injury. This paper will provide an overview of past practices and present recommended practices. It also identifies constipation as a complication that may accompany a change from past to more contemporary practices. This paper concludes with a discussion of a role for nurses in supporting persons with spinal cord injury wishing to update their bladder management practices.

History of bladder management following spinal cord injury

When the two spinal units opened in Sydney NSW in the late 1950s, individuals who had sustained an injury that resulted in a neurogenic bladder may have been taught to empty their bladders, depending on type, by reflex/trigger voiding, manual bladder compression or abdominal straining methods called Crede and Valsalva manoeuvres. Some individuals used a combination of methods. To overcome outlet obstruction, men who had either limited hand function or insufficient caregiver assistance, underwent external sphincterotomy to facilitate continuous drainage via an external catheter appliance; women used indwelling urethral catheters due to the lack of female external collection devices.

However, early neurogenic bladder function work undertaken by Sir Ludwig Guttman in the 1940s demonstrated potential problems of hydronephrosis and renal damage arising from reflex voiding, manual compression and abdominal straining methods. With the introduction and acceptance of intermittent catheterisation in the 1970s, there has been a move away from reflex voiding and methods such as Crede and Valsalva manoeuvres.

Current neurogenic bladder management following spinal cord injury

Within both Sydney spinal injury units, neurogenic bladder management has changed markedly due to new research in the area. Current practice guidelines used within the spinal injury units have incorporated the evidence based clinical guidelines from the USA Consortium for Spinal Medicine. Hence, reflex voiding is no longer the first line management option, and manual bladder compression and abdominal straining manoeuvres are no longer recommended as they are thought to exacerbate haemorrhoids and vesico-ureteric reflux. Other possible complications associated with Crede and Valsalva manoeuvres are abdominal bruising, hernia, pelvic organ prolapse and incomplete bladder emptying.

Nowadays, bladder management decisions are guided in the main by urodynamic characteristics, with the aim being to preserve renal function by limiting intra-vesicular pressures while allowing for complete emptying. Neurogenic bladders are commonly managed by intermittent or indwelling catheterization and only sometimes by reflex voiding. Pharmacotherapy is available to increase outlet resistance, decrease outlet resistance, to promote

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bladder emptying, and to promote bladder storage.

Alternatives to methods already mentioned generally involve major surgical interventions, for instance urinary diversion procedures and bladder augmentation; technological advances have also provided options. Bladder stimulators of sorts have been available since 1954 and over 2000 devices have been implanted, internationally, with varying degrees of success. With improved mechanisms which electro-stimulate the paralysed bladder to completely empty, the goal of near-normal voiding for persons with neurogenic bladder is getting closer.

On the premise that reflex voiding is not being routinely taught and manual bladder compression and abdominal straining are no longer recommended, individuals who were taught and continue to practice these methods, invariably sustained their injuries many years ago. These people were discharged home independent and confident in their bladder management. They would have been advised to have annual testing in the first 3-5 years after injury and then biannually, if no problems were noted. Testing involved either intravenous pyelogram or, more recently, cystometrogram or renal tract ultrasound, to re-evaluate the bladder emptying method, for appropriateness, safety and efficacy. This surveillance would ensure that any occult damage to the urinary system was detected early and managed appropriately.

As these individuals age with their disability and come to spinal clinics for review, they may very well be advised to update their bladder emptying habits. Some individuals may not have been diligent with the advised monitoring, and damage to the upper renal tract may already have occurred. Hydronephrosis is often asymptomatic until well advanced. For the motivated individual with adequate hand dexterity, the recommended management is clean intermittent self catheterization with anti-cholinergic medication. If the individual does not have adequate hand function, then a dedicated care-giver would be required to undertake the procedure. This reliance is not advised due to economic and/or social limitations. Although long-term catheterization brings its own problems, if hand function is not adequate then a permanent suprapubic catheter is usually advised with the individual taking anticholinergic medication. Urethral catheters are discouraged long-term. However, having changed their method of bladder emptying, more often than not, problems with defecation are experienced by the individuals, in the main – constipation.

Constipation as a side effect of changed practice

Previously, with a balanced diet, good fluid intake and physically transferring a couple of times per day from a wheelchair to prepare for bladder emptying, plus the pressure and/or tapping to elicit a voiding contraction, the individual's bowels had invariably been regular, without the use of aperients.

However, for the newly adopted bladder emptying method, physical actions/exertion may become unnecessary, as an indwelling catheter or intermittent catheterization (for males) can be attended while seated in the wheel chair. Also, for intermittent catheterization, fluid intake may need to be restricted and by taking anti-cholinergic medication, which has been related to the presence of constipation, individuals are suddenly in need of bowel management education, after years of having 'problem-free bowels'.

Anti-cholinergic medications play an important role in maintaining low detrusor pressures, bladder capacity

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and compliance but, due to their direct anti-spasmodic effect on smooth muscle and the prolonging of gastric emptying and oro-caecal transit times, constipation is a well recognized side effect. Against medical advice, some individuals have taken themselves off the medication 1 due to defecation difficulties. Others purposely become constipated to avoid bowel accidents, but this can lead to faecal impaction, rectal distension and ongoing problems that are difficult to manage. With the risk of incontinence and the desire of a satisfactory social life, some individuals have been tempted to revert back to their less optimal bladder emptying methods.

Implications for nursing practice

Change can be unsettling. Individuals may feel anxious and insecure, having firstly to deal with a new method of bladder emptying, then secondly having to deal with the consequences of that change. If a decision is made by the medical specialist to change bladder emptying practices, the person needs support and education in their home setting. These individuals are not grappling with a new spinal cord injury; they are well established and usually motivated, ready to listen and learn 10 about continence. By being referred to a spinal nurse or a continence nurse specialist in the community, discussions regarding the pros and cons of new bladder management regimens that include taking anticholinergics, the importance of renal tract preservation, and the link between bladder management and the workings of the bowel can occur. Such discussion will assist the individual towards making sound decisions.

If after changing their bladder emptying practice, constipation is experienced by the individual, the nurse can review the bowel programme and advise adjustments as required. When discussing a bowel care plan, the individual should be encouraged to have a balanced diet with adequate fiber and fluid intake. If fluid intake is to be restricted, fiber intake should be adjusted accordingly. If there is a need to either increase or introduce oral aperients and/or rectal stimulants to counteract the effects of constipation, always commence with the lowest effective dose; better to take less irritant bowel medication consistently than over medicating when constipation occurs. Abdominal massage should also be included in the routine; massaging the abdomen from right to left and continuing down left side will assist the stool along the descending colon.

If changes are implemented, they will need careful monitoring; it is advisable to change only one element of the programme at a time. Evaluate each change after a planned trial period before altering another element. Working alongside the individual, a suitable bowel programme can be developed to reduce, if not eliminate, constipation. Through the acquisition of self care knowledge and skills comes independence. The individual will once again take charge and over time make sound decisions in relation to their bladder and bowel management.

Conclusion

When individuals update their bladder emptying practices, their bowel elimination patterns may be adversely affected. Nurses have a vital role in supporting and advising these individuals, until such time as technology produces devices which stimulate the bladder and bowel 'on request', or anti-cholinergic medications are so improved that constipation is no longer a side effect.

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To Live Until You Die: Quality of Life at the End of Life**By Cynthia F. Cramer**

We don't know how to do this. . . . We've never done this before," said the sister of an actively dying patient whom I had been called to see in one of our intensive care units. The staff wanted me to talk with the family of this woman who was "too young to die."

We are so used to our world of alarms, sterile environments, windows that don't open, fluorescent lights, indecipherable words, high-tech equipment, and multiple professionals going about their daily business of health care. We forget that most of our patients and families have *never done this before*. Many have never even stepped inside the door of a hospital before, have never been really sick, have never experienced real pain and suffering. This is a foreign world, and they wish that they had never gotten a ticket to ride on this cancer train. And who better to be the guide/confidante/advocate/train conductor than the oncology nurse?

Dame Cicely Saunders, the founder of the modern hospice movement, wrote, "You matter because you are you. You matter to the last moment of your life, and we will do all we can not only to help you die peacefully, but to live until you die". This has become the unofficial motto of hospices around the world: "To live until you die." That's the thing that so many people don't get. It's all about life—not death! How many times have people asked you, "How can you be an oncology nurse?" Hospice nurses get the same question. But some of the most awesome nurses—who really and truly like what they do—are hospice and oncology nurses. So, what's the secret? Why do you do what you do? Isn't it depressing? Isn't it sad?

The Secret Is Hope

"Hope?" you may ask. "How can you have hope?" Well, hope is a very fluid thing. It changes depending on where you are on the trajectory of life. For newly diagnosed patients with cancer, the hope is for a cure. If that is a realistic hope, then we are their "cheerleaders." We are there to help them make it through all the tough treatments that we have to throw at them. We are there to manage their symptoms to the best of our abilities so they can "stay the course." With more advanced cancers, the hope may be for control. That is a very real hope, as we've already seen how Gleevec® (imatinib mesylate, Novartis Oncology) paved the way for patients with chronic myeloid leukemia. Researchers are working furiously, trying to find more ways to turn cancer into the next diabetes. What a concept: living with cancer. But most people won't put up with as much if cure is not likely. If insulin made diabetics miserable, a lot fewer patients with diabetes would be taking it daily. And if control is not a possibility, there is always hope for time. Time to finish business, to tell someone "I'm sorry," to leave a legacy, to experience something special like a graduation or a marriage, or maybe even time for that "magic drug" to be invented. The goal is to have interventions that make you feel better—not worse. And finally, there is hope for a "good death." Most nurses have been present for a "bad death." You know the difference; instead of machines, bright lights, surrounded by strangers, pain, and suffering, patients are where they want to be, as comfortable as possible, doing what they want to do, surrounded by the people they love, with their symptoms well managed and their goals accomplished.

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Health Care Is Changing

People used to die at home, surrounded by their families, with their hands held. Now they are dying in institutions, hooked up to machines and surrounded by strangers. The United States has been called a “death-denying society”. Even though this is starting to improve, many of our physicians and nurses never received education about dealing with the end of life. Many feel they have failed when their patients die. Nursing training is not much better but is improving. Aren’t we here to cure people? Aren’t oncology nurses and physicians trying to cure cancer? If we didn’t “push the envelope,” we wouldn’t have gotten as far as we are today. And we’ve come a long way. There are more cancer “survivors” than ever before. Every day, we hear about a new discovery, a new theory, a new intervention. We are aggressively fighting the “war on cancer.”

I work in a large teaching hospital that does some very awesome things. We are known for aggressively fighting for our patients’ lives. But isn’t part of caring for people to actually “care” for them? Doesn’t our role include helping them when we can’t “kiss it and make it all better” like mom used to do?

Unfortunately, the public gets the majority of their health information from television. I’m not talking about documentaries. I’m talking about shows such as “House” and “HawthoRNe.” How many top nursing administrators do you know who regularly work at the bedside—on all shifts? How many teams of premier physicians do you know who can spend days and hours on one patient? When I’m teaching the public, I often tell them that there is a reason that we still call it “practicing medicine”—because we are still learning. Much of what we do is guesswork. We may have some highly educated and talented “guessers,” but it’s far from perfect.

Predicting prognosis is one of those difficult things that we can only “guestimate”. If there was a neat little algorithm to make this prediction, it would be easy. Although we have a growing number of tools that can help us guess better, it is still a guess. We must remember that for every 95% survival rate, 5% did not survive. Likewise, for every 5% chance of survival, someone was in that 5%.

Unfortunately, there are just some things man cannot cure—yet. We know that stage IV cancers are considered to be terminal cancers. Do some people survive? Yes, but very few. We also know that all cancers are not alike. For example, a patient with stage I breast cancer has a better prognosis than a patient with the rarely found stage I pancreatic cancer. As oncology nurses, you know these things. Don’t you regularly have family, friends, and coworkers asking your opinions about the cancers they or their loved ones have been diagnosed with? They are aware that you know much more than they do. You have an opportunity here to educate, to advocate, to help people with those difficult conversations, exploring what their goals are if things don’t go well.

The Big Questions

- What if things don’t go well, how aggressive do you want your doctors and nurses to be?
- What if you can no longer speak for yourself, who do you want to speak for you?
- How did you decide to pick your surrogate? Maybe it should not be the person who loves you the most—he or she may not be able to let you go if that is your choice.
- Have you talked about your thoughts about this with your clinicians, your surrogate, and your family?
- Do you have an advance directive? Have you made copies of your advance directive, and do you and your

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loved ones know where they are?

As a nurse, you have to be flexible enough to support decisions that may be different from what yours would be—and allow the decisions to change with time. When people are faced with the end of life, decisions may become different from what we thought they would be. If goals of care are discussed early in a patient's healthcare experience, such difficult conversations become less difficult. Prepare for the worst, but hope for the best. This conversation can be revisited periodically.

What Is Quality of Life?

According to the World Health Organization (2009), palliative care is for anyone with a life-threatening illness. But focusing on quality of life is the key to it all. This is what palliative care is all about: providing good symptom management (i.e., supportive care), being able to have difficult conversations, being “present,” and championing quality of life.

Symptom Management

We have made great strides in controlling pain, nausea, dyspnea, and other symptoms encountered by patients with cancer. Oncology nurses should be experts on a variety of supportive care tools (both drug and nondrug) that can make the quality of our patients' lives the best it can be. Why do you think patients have championed physician-assisted suicide? It's not the fear of death; it's the fear of dying—what you must go through before you die. “I'm not afraid at all of dying, but I'm terrified of what waits for me between here and there”

Difficult Conversations

How can our patients make informed decisions about what they do and do not want if nobody talks about prognosis, all of the options, and patient goals? Without advance directives and healthcare surrogates, who will speak for our patients when they can no longer speak for themselves?

In a prospective, longitudinal, multisite cohort study of 332 patient and caregiver dyads that was funded by the National Cancer Institute, patients who were able to have end-of-life discussions clarifying their goals and care expectations had significantly less aggressive interventions in their final days. The study also linked aggressive care with poorer quality of life and increased caregiver depression, whereas longer hospice stays were linked with better patient and caregiver quality of life.

Most physicians do not have the time to have one- or two-hour family conferences plus other extended conversations with each patient. But palliative care physicians excel at this. Oncology nurses can be the intermediary to facilitate such conversations and open the door to referrals. They can educate other clinicians as well as their patients and their patients' families about what palliative care has to offer.

Presence

Isn't that also part of being a nurse? Isn't that what nursing “care” is all about? Sometimes just “being there” is the most important thing we can do. We call it “the power of presence.” You don't have to have any “right words” or “things” you can do for your patients—just being there to witness, to hold a hand, to show that you care—can be as powerful as any high-tech intervention we can offer.

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Quality of Life

In 1991, Betty Ferrell developed her Quality of Life Model, which was based on Dame Cicely's philosophy. It looks at the whole person: physical, psychological, spiritual, and emotional well-being. All are considered to be equally important. In this world of specialists and disjointed care, the nurse is the person looking at the whole patient. Who better to be an advocate for quality of life through good palliative care than the oncology nurse?

Communication Is Key

In health care, we belong to a special club with our own special language. Did you have any idea what "I&O" was before you became a nurse? Did you ever use the word void for urinating? We have become so comfortable in our environment that we can forget how truly frightening it all is for lay persons. Communication is everything. Remember when "cancer victims" changed to "cancer survivors?" Think about what a dramatic difference that made. We need to look at the words we are using at the end of life, too.

And listen to patients' words: "Doc, I want you to do everything!" Do they know what "everything" is? Just because we can do something—does that mean we have to do it? These aren't easy questions with easy answers. That's what makes ethics so hard. There are no absolutes and no obvious right or wrong answers. That's why we call them difficult conversations.

Conclusion

Nobody ever says, "I wish I could end my days in an intensive care unit with inadequate symptom management and surrounded by strangers instead of with my loved ones and on my own terms." In the documentary "Notes From the Edge," a physician who was dying from cancer told his oncology nurse, "I don't want to manage my death. I want to manage my life!". Instead of a negative and horrible memory, this can be the most profound experience that any person will face. This includes the patient, his or her loved ones, and clinicians. Your patient's loved ones will remember you for the rest of their lives because you helped make it better than it could have been.

Oncology nurses can make the difference by sharing their specialized knowledge with their patients, their families, their coworkers, nononcology nurses, and the public. They make a difference every day as educators, as advocates, and simply by their presence. What better reason is there for becoming a nurse?

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Memory Loss Following Coronary Artery Bypass Graft Surgery: A Discussion of the Implications for Nursing

By Suzanne Fredericks

Cardiovascular diseases (CVD) are abnormalities of the cardiovascular system, which include the heart and blood vessels. They are the most common cause of death in individuals older than 65 years of age. Coronary artery bypass graft (CABG) is the most frequent surgical treatment for cardiovascular disease. Reports indicate CABG procedures significantly increase the risk of cerebral impairment and/or injury, which may not always be transient. Older individuals, defined as being over the age of 65 years of age, who tend to be at higher risk than other age groups for neurologic and neurocognitive problems, undergo CABG later in life. This significantly increases their risk for central nervous system dysfunction, specifically cognitive decline following surgery. Cognitive decline is deterioration in cognitive function and is characterized by increasing difficulty with memory.

The impairment to cognitive function influences the individual's ability to engage in behavior and can, in many instances, result in memory loss. Newman et al. (1995) postulated that an increase in age predicts a decline in memory immediately following CABG. The change in memory is thought to result from a combination of hypoperfusion during cardiac surgery, impact of re-warming on the brain, embolism of air, intracerebral hemorrhage, manipulation of the ascending aorta, and cardiopulmonary bypass (CPB) producing a systemic inflammatory response. Memory loss following CABG has resulted in increased length of hospital stays, delayed healing, and extended home recovery. Although advances in techniques for peri-operative anesthesia, and surgery have occurred, the incidence of memory loss has changed little over the past 10 years. The aim of this discursive paper is to present nursing interventions that address memory loss following CABG and that can be incorporated into patients' overall plan of care.

Background

Older patients, defined as chronological age of 65 years, are more susceptible to experiencing memory loss due to the normal aging process. Internationally, an exponential growth in the number of individuals aged 65 years and older has occurred over the past 10 years. One of the most common diagnoses among older individuals is that of CVD, which tends to be more prevalent, extensive and severe among this age group than in younger individuals. Over the past 10 years, a shift towards performing heart surgery on older patients has occurred. Since this age group is more susceptible to pre-operative neurocognitive decline in the form of memory loss, it is possible that the effect of heart surgery may hasten the onset of memory loss resulting in decreased functional status, the onset of co-morbid conditions, and increased post-operative mortality and hospital readmission rates.

Fasken, Wipke-Tevis and Sagehorn (2001) reported that approximately half of all cardiovascular surgical patients experience some form of short-term dementia, delirium, or memory loss following CABG. Similarly, Newman et al. (2001) reported cognitive decline in 53% of their study sample (n = 261 patients) at time of hospital discharge, 36% at six weeks, 24% at six months, and 42% at five years. Cognitive decline was most commonly manifested in the form of memory loss.

In this paper the author addresses the need for changes to current nursing practice. At present, anecdotal

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evidence suggests standard nursing practice does not routinely address memory loss in the overall plan of care for the cardiovascular surgical patient. As the demographic characteristics of patients undergoing CABG change to reflect individuals over the age of 65, there is likelihood for an increase in cognitive impairment, specifically memory loss. The author presents and suggests common medical and surgical techniques that have been used in an attempt to decrease the incidence of cognitive impairment in an attempt to manage memory loss.

Strategies to Decrease Cognitive Impairment

Various medical and surgical techniques have been used to reduce the incidence of memory loss in the older patient undergoing heart surgery. Homologous blood transfusion, which involves transfusing blood from a compatible donor, is typically used for cardiopulmonary bypass priming. The mechanism underlying homologous blood transfusion involves harvesting, concentrating and transfusing red blood cells during the bypass priming process. This procedure exposes the patient to potential cellular and humoral antigens, as well as hemodilution resulting in neurocognitive decline, which can present itself in the form of memory loss. The use of hemoglobin vesicles (HbV), which is an artificial oxygen carrier in which the surface is covered with polyethylene glycol (PEG), is employed during cardiopulmonary bypass priming. The hemoglobin vesicles prevent hemodilution, while maintaining intact neurocognitive function in the animal model. However, HbV has only been used in infants.

During heart surgery, circulatory arrest with temporary exclusion of the cerebral circulation increases the likelihood for neurologic problems, in particular memory loss. Placing a low-pressure tourniquet (30–50 mmHg) on the upper arms of patients during circulatory arrest, forces blood to the brain, yielding increased cerebral flows, allowing for more easily maintained cerebral perfusion pressures. Preliminary evidence suggests that this intervention significantly reduces the incidence of memory loss. However, it has not been extensively examined and requires further testing.

Finally, cerebral emboli have been thought to be a significant cause of neurocognitive impairment following CABG. The presence of cerebral emboli has been shown to be high in individuals who undergo CABG while the heart is stopped. During the surgical procedure, the individual's heart is put onto a cardiopulmonary bypass machine, which is an artificial circulation system that does the work of the heart and the lungs. Cannulas are placed into the heart to drain deoxygenated blood to the pump, where it is oxygenated and pumped back into the patient. During this process, there is an increase in embolic load (increase in the number of abnormal particles found in the blood) causing the creation of cerebral emboli resulting in impaired neurocognitive function. The embolic load gradually decreases over a period of weeks and, in some instances, months following the surgical procedure, resulting in the gradual improvement in neurocognitive function. This increased embolic load is not as prominent in patients who have undergone CABG while their heart is still beating.

Inconsistencies in research findings pertaining to embolic load during CABG procedures and their effect on neurocognitive function exist. As a result, neurocognitive impairment, specifically memory loss, continues to present itself in many patients following heart surgery. Thus, routine nursing care should incorporate specific strategies tailored to reduce loss of memory following heart surgery.

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Nursing Implications

The review of the literature suggests that more than a quarter of all patients experience some form of memory loss following CABG. The literature, however, does not accurately reflect memory loss in individuals older than 65 years of age. It is suggested that the severity and duration of memory loss increases with age and is significantly influenced by major invasive procedures such as heart surgery. As such, the incidence of memory loss may be higher than 25% in individuals older than 65 years of age following CABG. Future research is needed to fully understand the extent and severity of memory loss following heart surgery and its influence on older patients. However, in the interim, nurses need to engage in practices that allow them to assess and manage memory loss immediately following heart surgery. At present, the assessment and management of memory loss is inconsistent during the first few weeks of recovery. Screening for memory loss is not considered to be common nursing practice when caring for patients following heart surgery. This assessment is performed on irregular intervals, using techniques that range from observation to didactic interactions between the nurse and patient and, on many occasions, using instruments that are invalid or unreliable. Nursing practice should require that nurses screen and assess all patients for memory loss during their initial pre-operative assessment to obtain baseline data. This assessment should be followed by two additional memory loss screenings: one on admission to the post-operative recovery unit, and the second following discharge from the inpatient recovery units using valid and reliable measures.

A possible screening tool that can be used is the NEECHAM Confusion Scale, which provides rapid and unobtrusive assessment of acute confusion. This scale was developed by nurses and is considered to be easy to use. The scale consists of nine items divided over three subscales. Each item consists of three to six descriptions. Subscale one relates to information processing and memory, subscale two pertains to behavior, while subscale three addresses physiological condition. The scale was designed to be used for both intubated and nonintubated patients. The overall score of the scale ranges from 0 through 30. Scores ranging between 0 and 19 indicate acute confusion with complete short-term memory loss. Scores ranging between 20 to 24 indicate early signs of confusion with some short-term memory loss, while scores between 25 to 30 indicate no confusion or memory loss. The scale correlates well with the Mini-Mental State Examination and the sum of DSM-III-R positive items. Even though subscale one only states memory loss, all subscales assess memory loss through either changes in behaviour and/or physiological condition. Thus, the entire scale should be used to screen for memory loss.

Based on the screening, if memory loss is noted, nurses should alter their overall plan of care to address the cognitive impairment. The extent of memory loss (either complete or partial short-term memory loss) would vary depending on the age of the individual and his or her pre-existing condition. Thus, the care being designed would need to be tailored to reflect the severity of memory loss associated with each individual. Specific skills and/or training would be required of all nurses working with patients following heart surgery to be able to assess and design appropriate care that is reflective of post-operative memory loss.

In particular, memory loss will have an impact on the ability of patients to retain post-operative education. Individuals assessed with memory loss may require this self-care postoperative education to be repeated on

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several occasions following hospital discharge. Nurses may be required to call or communicate with patients following their hospital discharge to ensure that they understand the self-care information and are properly engaged in the behaviors in order to prevent and/or reduce complications, mortality and hospital readmissions. The integration of this strategy may increase nurses' workload and may require the use of additional nurses to communicate with patients following hospital discharge.

Nurses should also consider engaging in supportive reality-oriented relationships that stress orientation to time, place, person and event, and avoid interruption of patients' sleep. This intervention, if implemented immediately following surgery, has been shown to be effective in reducing the severity of memory loss over time.

Finally, nurses should consider engaging in memory training for individuals who score less than 19 on the NEECHAM scale. This type of training focuses on verbal episodic memory in which individuals are taught mnemonic strategies for remembering word lists and main ideas. During the training, nurses would provide instructions pertaining to the performance of required self-care behaviors, encourage engagement in behaviors and then provide feedback on performance. The instruction phase would involve individuals being asked to organize word lists into meaningful categories and to form visual images and mental associations to recall words and texts. The use of verbal episodic memory training has shown to be effective in enhancing information retention, recall, and use. Since memory loss screening would occur both on admission and following hospital discharge from the clinical setting, then it should be performed on both an inpatient and outpatient basis despite length of stay.

Conclusion

Memory loss following heart surgery in the older patient is of significant concern. At present, a variety of medical strategies are being employed to decrease the likelihood of memory loss. However, continued examination is needed, as patients continue to present with memory loss that may not always be transient and can persist up to five years following surgery. As the incidence of memory loss continues to prevail, changes to nursing practice are required to address this symptom. Currently, nursing practice does not routinely incorporate assessment and management of memory loss into the overall plan of care for patients following heart surgery. Specific nursing strategies that centre on the assessment and management of memory loss have been provided. ♥

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Pneumothorax 1

On alert for iatrogenic pneumothorax

By Michael W. Day

An *iatrogenic* condition is induced by a medical treatment or procedure. An iatrogenic pneumothorax occurs when air enters the pleural space during a medical treatment or procedure. Factors causing an iatrogenic pneumothorax include transthoracic needle aspiration or biopsy, thoracentesis, tracheostomy, pleural biopsy, transbronchial lung biopsy, subclavian or jugular vein cannulation, mechanical ventilation, CPR, blind nasogastric or nasoduodenal feeding tube insertion, liver or kidney biopsy, computed tomography-guided, radiofrequency tumor ablation, and acupuncture. If a small amount of air enters the pleural space, the patient may be asymptomatic, but larger amounts of air can cause a partial or complete lung collapse. The result is decreased vital capacity and SaO_2 . Potential complications include *tension pneumothorax*, the accumulation of air in the pleural space causing mediastinal shift and circulatory collapse. This is a medical emergency requiring immediate intervention.

A patient who's on positive pressure ventilation or who's hemodynamically unstable must be treated immediately with a needle chest decompression followed by chest tube insertion. In severe cases, even a short delay to obtain an X-ray or to place chest tube can be fatal. The good news is that the incidence of iatrogenic pneumothorax has decreased from more than 20% in the 1990s to approximately 3%.

Be vigilant in monitoring your patient for iatrogenic pneumothorax following any procedure known to increase the risk. Any time a patient demonstrates classic signs and symptoms associated with pneumothorax within several hours of a risky procedure, presume the patient has a pneumothorax until proven otherwise.

Signs and symptoms of iatrogenic pneumothorax include ipsilateral chest pain that may radiate to neck, back, and shoulder, hemodynamic instability, tachycardia, tachypnea, dyspnea, hypoxemia, ipsilateral decreased or absent breath sounds, ipsilateral hyperresonance, cough, increased airway pressures in a mechanically ventilated patient.

In patients receiving mechanical ventilation, assess for a sudden increase in peak airway pressures in addition to classic signs and symptoms. If the patient is being ventilated with a manual self-inflating resuscitation bag-valve device and increasing pressure is required to deliver the breaths, be alert to the possibility of a pneumothorax.

Should the pneumothorax progress to a tension pneumothorax, additional assessment findings may include jugular vein distension, profound tachycardia, profound tachypnea, absent breath sounds on the affected side, hypotension, cyanosis, significantly increased airway pressures in a mechanically ventilated patient, a deviated trachea (late sign), or pulseless electrical activity. Because a suspected tension pneumothorax must be treated without delay, diagnosis is made on the basis of clinical findings, not an X-ray.

If time allows, a diagnosis is usually quickly established with an erect chest X-ray, which shows the absence of pulmonary vessel markings on the periphery of the lung. A chest X-ray taken immediately after a procedure may be negative for pneumothorax simply because it hasn't developed yet (delayed pneumothorax).

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Pneumothorax 2

If the distance from the apex of the lung to the top margin of the visceral pleura is less than 3 cm, the pneumothorax is considered small; if it's more than 3 cm, it's considered large. A supine chest X-ray may not clearly show the absence of pulmonary markings, but a pneumothorax may be indicated by a very dark, deep costophrenic angle, known as the deep sulcus sign. The costophrenic angle is abnormally deepened when air collects in the lateral aspects of the chest.

Additional diagnostic studies (depending on the patient's hemodynamic stability) may include computed tomography, which can identify small or occult pneumothoraces; ultrasonography, which may be done at the bedside; and contrast-enhanced esophagoscopy for a patient with suspected esophageal perforations.

When an iatrogenic pneumothorax is suspected, initial nursing care includes assessing and supporting the ABCs, and monitoring vital signs and SpO₂. Administer high-flow oxygen to treat hypoxemia and help reabsorb pleural air, and make sure that the patient has a patent venous access. In addition, follow these guidelines.

- If the patient is hemodynamically stable and asymptomatic and the pneumothorax is small, simple observation may be appropriate.
- If the patient is hemodynamically stable and symptomatic and has a small pneumothorax, the healthcare provider may prescribe observation for several hours or perform a needle aspiration of the pleural air.
- If the pneumothorax is estimated to be too large to aspirate with a single syringe, the healthcare provider may insert a soft pigtail catheter and use a three-way stopcock or Heimlich valve.
- If the pneumothorax persists, the catheter may be connected to a chest drainage unit (CDU).
- If the patient is hemodynamically unstable, a needle chest decompression may be required while preparations are made for immediate chest tube insertion with a CDU set to the prescribed suction level. A follow-up chest X-ray should be obtained to determine resolution, progression, or recurrence of pneumothorax.

Many procedures, such as cardiothoracic surgery, inherently result in unavoidable pneumothorax, requiring chest tube placement. Other procedures that shouldn't cause pneumothorax (such as central venous access device insertion, mechanical ventilation, and thoracentesis) sometimes can cause pneumothorax.

Because you may be on the front line helping to evaluate and resolve this complication, being familiar with each procedure and ensuring that all team members adhere to the correct process can have a positive impact on patient outcomes. For example, practitioners should abandon efforts to insert a central venous catheter after two unsuccessful attempts.

Evidence-based practice has demonstrated the effectiveness of team communication, "time-outs," and full barrier precautions for invasive procedures. In addition, advances in ventilator management have resulted in lower tidal volumes and pressure limits, decreasing the incidence of iatrogenic pneumothorax in mechanically ventilated patients.

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