**Case study: Drugs Safety and Administration**

Mr. Walter Williams an 83-year-old man had a fall while working on his property, he was taken to the hospital and an x-ray confirmed a fracture in his left neck of femur (NOF). He has undergone a hip replacement surgery, recovered in Post-Anaesthetic Care Unit (PACU) and returned to the Orthopaedic Surgical Inpatient Unit for drug administration and monitoring. Therefore, this analysis documents a comprehensive health and physical assessment, provide ways in which safety administration and effects monitoring can be conducted to medications and intravenous fluids. In addition, present the legal, ethical and professional requirement for safe and accountable practice.

Health and Physical Assessment.

Primary Survey

The primary and secondary survey is an all-inclusive and sequential element of the assessment of Mr. Williams (Carter, Waterhouse, Kovler, Fritzeen, & Burd, 2013). Hence, the primary survey is mostly applied to trauma scenarios but provides a comprehensive clinical representation of Mr. William. The main purpose of conducting a primary survey is for immediate identification of possible conditions which might be life-threatening and appropriately treating them (Parker & Magnusson, 2016). The contemporary clinical practice utilizes a DRABC sequence for conducting a primary survey on a patient. Therefore, the primary survey of Mr. William will begin with assessing the danger, response, airway, breathing, and circulation in order to identify any immediate life-threatening condition and correct them as found.

1. Assessment of danger is forming a general impression of the Williams which will be helpful in deciding the seriousness of his condition. This is generally based on the general impression concerning his level of distress as well as his mental status (Carter, Waterhouse, Kovler, Fritzeen, & Burd, 2013). Therefore, his level of distress and mental status cannot be certain as he has just been recovered from a hip replacement operation in the Post-Anaesthetic Care Unit (PACU). Hence, based on his age the daughter in law Lynn who is also his next of kin can be asked to provide baseline information concerning the mental status of Mr. William.
2. The assessment of his response to the stimulus which will help in the determination of the degree of consciousness. In this case, the AVPU scale is used to measure the responsiveness or unresponsiveness of the patient (Carter, Waterhouse, Kovler, Fritzeen, & Burd, 2013). Thus, this scale will help classify the patient in relation to his alertness, verbal response, feels pain or unresponsive. Hence, an alert patient is one who is awake, oriented, responsive and able to talk to a caregiver. A pain responsive patient is not responding to the verbal stimuli but responds to pain. This pain can be from rubbing the sternal or a gentle shoulder pinch. The last classification of patients in relation to the AVPU scale is the unresponsive patient who does not completely respond to the verbal or painful stimuli. A verbal patient would be unresponsive at the onset but will eventually respond to any verbal stimulus that is loud from the caregiver (Parker & Magnusson, 2016). This does not mean that the patient is replying to questions or is initiating any conversation. He might simply speak not necessarily to the caregiver, might grunt, look at the caregiver or simply groan. Therefore, Williams can be categorized as a verbal patient because when spoken to he wakes because of the loudness of the voice and he simply answers some questions directed at him and goes back to sleep when not spoken to. Also, he can respond to pain as it was reported that he had complained of being in pain less than 10 minutes ago before being taken to the Orthopaedic Surgical Inpatient Unit.
3. Assessment of airway to ascertain if the airway of the patient is open. Also, this can involve checking for patent airway and making sure that future airway obstruction is eliminated. The C-spine immobilization, suctioning, simple airway maneuvers such as the jaw-thrust maneuver and basic as well as advanced airway adjusts such as the OPA, LMA, NPA, and ETT can be conducted (Parker & Magnusson, 2016). Most of these maneuvers were not possible because according to an earlier conducted x-ray, the patient had a fracture in his left neck of the femur.
4. Assessment of patient breathing is done to ascertain if the patient has adequate ventilation. This can be done by placing an ear over the mouth and nose of the patient and looking out for the chest movement, as well as symmetry or absence of symmetry in the movement of the chest of the patient (Carter, Waterhouse, Kovler, Fritzeen, & Burd, 2013). Also, the caregiver should feel and listen to any presence of air exhaled by the patient. The breathing sound should also be paid attention to. All these procedures were conducted to ascertain if Mr. Williams has sporadic respirations and their speeds. Often, the elderly have an irregular pulse which is rarely found to be life-threatening but the speed either too slow or too fast can be life-threatening. Mr. Williams, the respiratory rate is normal but heart rate is irregular causing a threat to his life.
5. Assessment of circulation and determining if the patient has any pulse. If the patient has a pulse, the caregiver should make a determination if the pulse is adequate. A serious bleeding should be assessed to find out if the patient lost a large quantity of blood before being taken to the care facility (Parker & Magnusson, 2016). Thus, pulse at the neck should be checked if the patient is not breathing. If he/she is breathing the wrist (radial) or carotid pulse should be checked. Presence of the carotid pulse and absence of the radial pulse is an indication of a shock situation in a patient. Also, a weak or rapid pulse is an indication of a shock situation. Although, this is important the quantity of blood loss is the major concern at this initial assessment stage. Also, the skin signs such as color, moisture, temperature are significant at this stage. If the finding from this assessment present pale cool, and moist skin, this could be an indication that the patient is experiencing shock. This assessment indicated that Mr. William has lost some blood and his pulse rate is abnormal. Thus, defibrillation, leg elevation, hemorrhage control, fluid therapy and IV/IO access should be provided in this situation.

Secondary Survey

The secondary survey is done after the primary survey has found and corrected the life-threatening problems. Hence, the objective of secondary survey is to obtain a comprehensive history, the patient’s vital signs and execution of physical examination (Douglas, et al., 2016). The physical examination is focused and only looks at the specific medical problem or injury of the patient. The pelvis will be felt for assessment of injury and possible fractures by pressing while looking out for pain and any kind of deformity. Therefore, this examination confirmed a fracture in his left neck of femur (NOF). Moreover, the vital signs assessment would focus on assessing the pulse, respiratory rate, blood pressure, temperature, and spO2. Therefore, the results presented BP as 103/55 mmHg, HR as 81 bpm (irregular), RR as 14/minute, Temp as 35.1°C, and SpO2 as 94% with Nasal Prongs 3L/min.

To obtain the medical history of Mr. William the signs/symptoms were assessed and he was responsive but under too much pain in his pelvic area. Following was the assessment of his allergies which revealed that he had an allergy to morphine and had previously reported having had a severe rush on two different occasions after being administered this medication. An assessment of the medications and their quality was then conducted (Parker & Magnusson, 2016). The current medications he is using are Apixaban 5mg PO BD, Metoprolol 25mg PO BD, Digoxin 62.5mcg PO daily, Frusemide 40mg PO BD (mane/midi), and Nexium 40mg PO nocte.

On further examination, it is evident that he had a past medical history of hypertension, gastro-oesophageal reflux disease, osteoarthritis, congestive cardiac failure, and atrial fibrillation. His last oral intake was following the postoperative orders that he receives Diet and fluids PO as tolerated.  Hence, by the time he was brought to the Orthopaedic Surgical Inpatient Unit, it was 1500hrs meaning he had taken his lunch at 1200hrs the hospital's meal-time. The onset of his illness is a fall while working on his property two days prior to being brought to the Orthopaedic Surgical Inpatient Unit. The history of the patient is based on the current condition of the patient and some other medical problems that could be related to the current situation (Douglas, et al., 2016). Hence, the daughter in law to William will provide clarity or provide more information concerning the history of Mr. Williams.

Treatment

The chosen medications for his treatment are Apixaban 5mg PO BD; Cephazolin 2g IV BD for 48 hours post-op; Frusemide 40mg PO BD (mane/midi). In addition, the chosen fluid is Hartmann's Solution. Therefore, safe administration and monitoring of the effects of these medications and intravenous fluid must adhere to by the nurse. This can be done by ensuring that the potential risk is minimized by referring to the drugs and poisons classifications and schedules as determined by the laws of Australia (Durham, 2015). Also, the nurse should identify the function and the purpose of the chosen medicine and the IV therapy (Therapy, 2013). Finally by identification of the substance and pharmacology incompatibilities based on particular situations involving administration of medicine.

  The Apixaban also is known by the brand name as Eliquis is classified as an anticoagulant, factor Xa inhibitors and cardiovascular medication (Liu, Zi, Xiang, & Wang, 2015). It is mainly prescribed following a knee or hip replacement surgery to replace the knee or hip. Hence, 12-24 hours after surgery one is prescribed with 2.5 mg PO or 5mg PO for 35 days. The adverse effect of this medication is bleeding and hypersensitivity. Cephazolin is classified as cephalosporins, 1st generation (Liu, Zi, Xiang, & Wang, 2015). Cephazolin 1-2 g IV is mainly used for cardiac procedures, oral or pharyngeal procedures, hysterectomy, thoracic procedures, craniotomy, arterial procedures, traumatic wounds, and amputation.

Furosemide is also known by the brand name Lasix. It is used for treating fluid build-up due to liver scarring, heart failure or kidney disease. In addition, this medicine can be used for treating high blood pressure. The major effect of furosemide to be looked out for while administering this medication is hypersensitivity caused by thrombotic events. The Hartmann's solutions are also known as ringer lactate solution (RL), or sodium lactate solution. It is a mixture of sodium lactate, sodium chloride, calcium chloride, and potassium chloride in water. Hence, this solution is used to replace electrolytes and fluids with the patients have lost a lot of blood or having a low volume of blood and low blood pressure.

Adverse effects and warning signs include hypersensitivity. A multi-professional and an evidence-based approach to the management of medicine can be used together for better results (Edwards & Axe, 2015). This approach recommends the consideration of using the right patient, right drug, right routine, right time and right dose for administration of medicine in order to prevent administration errors. Generally, there is no contradiction found with the interactions of these drugs and Mr. Williams can immediately start his medication for quick results in the replacement of his hips.

Safe and Accountable Practice

The nursing profession is coupled with legal, ethical and professional requirements which are significant for safe practice and making sure that the patient’s best interests are considered (Durham, 2015). The major issues involved in the case of Mr, William is informed consent, dignity, and accountability. In Australia, nurses are governed by legal, and professional requirements which protect the well-being and the safety of patients and at the same time caters for ethical considerations which take care of ethical issues arising while undertaking their nursing practice.

Legal and Informed Consent

Patients are entitled to a legal right to refuse medical procedures, examinations, and treatment. Although declining some procedures which ought to be beneficial to their health, their wishes ought to be respected. A patient's consent is a justification for providing treatment and lack of consent might implicate the nurse providing forceful care for battery (Hall, Prochazka, & Fink, 2012). Hence, Mr. William's wishes will be respected and consent must be obtained either directly from him of from his daughter-in-law who is also his next of kin. According to (Hall, Prochazka, & Fink, 2012) expressed consent can be obtained as a written or a verbal consent. Also, in some circumstances when there is an implied consent which is presumed by the actions of a patient. This type of consent is also used in emergency situations. Thus, unless the case is an emergency a patient has the right to voluntarily give out, or withdraw consent which makes it illegal for a nurse to proceed with caregiving without consent.

Consent from the patient should be “informed consent” which requires factual details, potential complications, benefits or risks involved, and alternatives to be provided to the patient (Hall, Prochazka, & Fink, 2012). Consent should be given to a qualified nurse who can provide all the necessary information and be able to answer any question in regards to the treatment procedure. In case key information is not disclosed to the patient at the time the nurse is obtaining consent to carry out a medical procedure, exam or treatment the nurse will be held negligent.

In addition, the consent should be given by a competent person with the legal capacity for giving out medical consent. According to the (NMC, 2015) incapacity is defined as incapable of decision-making, communicating those decisions, comprehending those decisions as well as remembering the decisions made. Medically, cognitive abilities are affected by factors such as dementia as well as neurological conditions. The law allows decision-making on behalf of the incapacitated persons on medical grounds so long as these decisions are for the best interest of the incapacitated individuals. Therefore, if a patient is incapable of giving consent, a person with authority such as a guardian or next of kin can give consent on their behalf. In this case, Lynn, the daughters-in-law to Mr. William would be asked to give consent to administer medication and any other procedure required.

Professional Accountability

According to the (NMC, 2015), a nurse has the responsibility to personally account for their actions by justifying their behavior. Thus, a nurse must act within their legal or professional scope in regards to their ability and competence. The NMC expects nurses to keep their skills and knowledge up to date through the utilization of evidence-based practice. This means that effective decision-making concerning the care delivery in Mr. William circumstances can be made through the use of sound clinical skill, knowledge, and judgments. The major areas of accountability in nursing include public accountability, professional accountability, patient accountability and employer accountability. Local policies, moving and handling guidelines, codes of professional conduct and NMC standards assist the nurse to deliver effective and safe care and protects the patients.

Ethics and Dignity

Ethically, a person’s dignity must be upheld. Dignity refers to how an individual thinks, feels and behaves regarding others and themselves. Therefore, nurses must uphold the dignity of their patients by finding out what makes them feel valued. Actions such as getting them involved in their care, and allowing them to control and make decisions concerning their care. Fahlberg (2014) gives major factors likely to promote dignity including staff attitudes and behavior, environmental care, care culture, and particular care activities. All these offer dignified care and respect to the patients making them feel valued.

After the fall Mr. Walter William incurred a fracture in his left neck of femur (NOF) and underwent a hip replacement surgery. He was brought to the Orthopaedic Surgical Inpatient Unit for drug administration and monitoring. Therefore, for proper drug administration and monitoring primary and secondary survey is an all-inclusive and sequential element of Mr. William’s assessment. The primary survey is mostly applied to trauma scenarios but provides a complete clinical representation of Mr. William. The objective of secondary survey is to obtain a comprehensive history, the patient’s vital signs and execution of physical examination. The chosen medications for his treatment are Apixaban 5mg PO BD; Cephazolin 2g IV BD for 48 hours post-op; Frusemide 40mg PO BD (mane/midi) and the chosen fluid is Hartmann's Solution. While providing care the legal, ethical and professional requirements will be considered for safe practice and ensure that the patient's best interests are considered.

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