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Science Sample 2

# Introduction

This essay is focused on the case of Mrs Cook who was taken to emergency department with the signs of stroke. She had suffered left sided CVA and she had right sided hemiplegia. In the following discussion, the type of stroke is identified, her medications are discussed in relation to her condition, risk factors and assessment methods are identified for IICP, and areas of concern and nursing management for Mrs Cook have been identified. It is followed by discussion of discharge planning and lifestyle choices for her to reduce the risk for further stroke.

## Criteria A “Type of Stroke”

Mrs Cook had suffered Ischaemic stroke which happens when an artery in or to the brain gets blocked completely by a blood clot. It could be confirmed by a head/brain CT scan which revealed an ischaemic area and no bleeding was seen, which means it was not a haemorrhagic stroke (Poletto, et al., 2015). Also, Mrs Cook was displaying symptoms of Ischaemic stroke like dense right sided hemiplegia, aphasia, incontinence and signs of agnosia. It is the most common type of stroke which occurs in 85-90% of all the stroke cases. It might be a type of thrombotic stroke which could have occurred due to atherosclerosis (her previous history showed mild hypercholesterolemia) (Schmidt, et al., 2015).

The medications charted for Mrs Cook include Clexane S/C, Aspirin 100mg, Atorvastatin, Ramipril, multivitamins, Omeprazole IV, Metoclopramide and N/Saline 8/24. Clexane contains enoxaparin, which is a low molecular weight heparin, used to disintegrate blood clots formed inside the blood vessels. It deactivates the thrombin during blood clot formation which in turn prevents the fibrin formation. This medicine must be used with caution for patients who recently had ischaemic stroke. Also, in combination with Aspirin (antiplatelet medicine), it may increase the risk of bleeding in the patient (Eskes, et al., 2015).

Aspirin is given to Mrs Cook to reduce pain, fever or inflammation. It will also help in preventing a second stroke. Atorvastatin helps in reducing the level of LDL (bad cholesterol) and triglycerides in the blood. It also helps to increase the level of HDL (good cholesterol) which in turn reduces the risk of stroke and heart attack in patients with type 2 diabetes and high cholesterol. Mrs Cook should be given Atorvastatin along with proper diet and education on exercise and weight control before discharge. Ramipril is given to Mrs Cook to decrease her high blood pressure (hypertension). Reducing the blood pressure would lower her risks of developing Increased Intracranial Pressure (IICP).

Omeprazole would help in reducing the quantity of acid produced in Mrs Cook’s stomach as she might develop gastroesophageal reflux disease (GERD) symptoms due to excess amount of acid in stomach. The redness to her perianal area might have developed due to this. As Mrs Cook’s bowels have been loose, she has been given Metoclopramide which would increase the muscle contractions in the stomach and intestines thus speeding up the stomach emptying into intestines. In my view, the medicines prescribed are appropriate as per her condition and the treatment that needs to be provided (Eskes, et al., 2015).

## Criteria B “Risk of IICP”

Mrs Cook is at a risk of developing Increased Intracranial Pressure (IICP). The risk factors which could increase the intracranial pressure could be seen in her. There are signs of increased blood pressure (hypertension -150/88), pressure areas could be seen developing at her right heel. Also, stroke increases the chance of IICP in the patients (Chesnut, et al., 2012).

The signs and symptoms of IICP include increased blood pressure, headache, vomiting, nausea, seizures, lethargy, decreased mental abilities, double vision, and unresponsiveness of pupils to changes in light and decreased consciousness (Fischer, et al., 2014). Nursing assessments would include Neurological assessment (altered LOC, vision changes, headache, seizures, unequal pupils and hemiparesis), Cardiovascular assessment (Increased BP, bradycardia), Respiratory (late tachypnea, irregular respirations), Musculoskeletal (weak function) and GI/GU (vomiting, nausea) (Fischer, et al., 2014). To confirm the diagnosis, a CT scan or MRI of the head can be used to determine the cause of IICP and stroke. Also, a spinal tap can be used to measure intracranial pressure (also known as lumbar puncture method). Another method to measure ICP is by using a catheter which could be inserted into ventricle of brain by drilling through the skull. If the ICP is more than mean arterial pressure, it is a sign of increased ICP (A Normal ICP is always between 0-20mmHg) (Kamel, et al., 2011).

## Criteria C “Areas of Concern”

There are number of areas of concern for Mrs Cook as per her situation. The most important concern is her physical status, she has become right side hemiplegic and due to the stroke she has also developed aphasia, incontinence and agnosia. She is unable to recognise anyone and not able to respond. Because of these, it has become difficult for her to sit, stand and walk or do any routine work. RN Bronwyn also voiced some concerns about unilateral neglect. Pain, odd sensations and numbness would be making her feel uncomfortable. She has been facing trouble in swallowing (dysphagia) due to which she is not getting enough food and thereby losing weight. Also she has problems with bowel as well as less bladder control (Chung, et al., 2015).

The concerns with her mental problems include depression which could develop while undergoing treatment and rehabilitation. She might lose interest in the things she used to enjoy and feel sad and pessimistic about her future. Also she might see her life worthless and feel guilty for not living life in a proper way and also not able to care for children she used to earlier (Schmidt, et al., 2015).

She would face cognitive problems as well like problems with learning, memory, thinking and attention. There are some concerns regarding her emotional control also, as due to stroke, she might feel sudden bursts of emotions like anger, crying or laughing. An utmost important area of concern is her social well-being. She had been actively involved in her job as well as with family. She has two kids to take care of and she might be feeling helpless while even communicating with her children and husband (Schmidt, et al., 2015).

The biggest problem she would face is the disability after getting discharged from the hospital. She might face problems with her daily activities which were easy for her before. For example, walking, teaching, playing, taking care of children and performing “activities of daily living”. These activities include basic tasks like eating, batching, using toilet, dressing, and advanced tasks such as driving, housekeeping, writing etc. (Poletto, et al., 2015).

A nursing management plan is needed for taking care of all these concern. The nursing management team for Mrs Cook’s care would need to be diverse in expertise and care. Her care plan can be divided into two stages, immediate and rehabilitative (Eskes, et al., 2015). The immediate care would include the management of physical symptoms of stroke and reducing the risk of any further stroke. The first thing to do is the removal of blood clot from the ischemic area for which she was already given Clexane. These drugs help in controlling the damage to brain cells due to stroke. This medicine must be given shortly after the stroke for it to be most effective. To prevent further stroke and reduce pain and inflammation, she has been given Aspirin. As she has mild hypercholesterolemia, she was given Atorvastatin which would help reduce the bad cholesterol and keep her arteries free of any blockage. To prevent IICP, she has been given Ramipril to reduce the blood pressure. She has also been given medications for her symptoms of indigestion and proper bowel movements, along with treatment of pressure area developing at her right heel.

Once her condition is stable, rehabilitative care plan can be implemented. Rehabilitation would help the patient to be able to lead normal life again with highest level of independence. It covers all the aspects such as physical, social, emotional and spiritual. It might not reverse the damage due to stroke but would help in restoring optimum health, wellbeing and functioning of Mrs Cook (Safer & Koseoglu, 2015). The rehabilitation team consists of skilled healthcare professionals who work with patient and the family. The team consists of physicians (neurologist), psychiatrist, critical care and rehabilitation nurses, physical and occupational therapists, dieticians and speech therapists. Family members are an integral part of rehabilitation process and they must have knowledge about the disabilities and impairments caused by stroke and helping patient get back to her normal life again (Poletto, et al., 2015). The rehabilitative program can be divided in four stages: Treating the basic symptoms of stroke and preventing any further complications; treatment of disability and improving bodily functions; alteration of patient’s environment and providing tools for adoption and; teaching program for the patient and family in assisting them adapt to the changes with lifestyle (National Institute of Neurological Disorders and Stroke (NINDS)).

Mrs Cook would be provided skills related to self-care which would include activities of daily living such as eating, bathing, grooming, toileting, dressing etc. Physical therapists would assist her with learning mobility skills like walking, propelling wheel chair, transfer to bed etc. (Morreale, et al., 2015) Speech therapists would help her in getting her communication skills back to normal by assisting her speak, write and communicate with alternative modes of communication. She would also be assisted by neurologist and physiatrist in regaining her cognitive skills. They would help her regaining her memory, focus, judgement, organisation and problem solving skills. She would also be assisted with socializing with her family members, colleagues and friends to regain her confidence. Psychological testing would be done to identify if she is in depression or having any emotional or behavioural issues. Family members would be educated and assisted with adapting to changes in lifestyle, discharge planning and financial concerns related to patient’s condition (Chung, et al., 2015). They would also be educated about stroke, maintaining healthy lifestyle and medical care to prevent any risk of further stroke. Once Mrs Cook adapts to her new lifestyle and maintains her daily activities, she would be provided vocational training to regain work related skills and join her profession again.

## Criteria D “Discharge Planning”

Discharge planning for the patient starts during early phase of rehabilitation. It involves caregivers, patients and the family members. The main purpose of discharge planning is to ensure proper transition of patient from inpatient care to home care while maintaining the benefits of rehabilitation program (Tung, et al., 2015). The first thing in discharge planning is to ensure preparing a safe living place for the patient where all the assistance and facilities could be present. The rehabilitation team would decide on further care, special equipment and assistance for the patient after the discharge and convey the same to family members. The patient and family members would be educated about their role in further care and assistance to the patient. The caregivers will be determined who would monitor the patient’s health needs and also provide daily assistance and care at home. Mrs Cook would be assisted in regaining her normal lifestyle and provided consultation on any health or personal issues due to stroke. The patient and family members would also be educated on maintaining healthy lifestyle for her including dietary habits and physical activities (Poletto, et al., 2015).

## Criteria E “Health Promotion”

People who suffered a stroke are at increased risk of getting another stroke, particularly in the first year after the initial stroke. It’s important for Mrs Cook to maintain a healthy lifestyle to reduce this risk. She has hypercholesterolemia, Type II Diabetes and also had been putting on weight recently, all the factors which can increase the risk of another stroke (Oikarinen, et al., 2015). She must be provided education on dietary habits; eating healthy food and avoid drinking & smoking. The patient and family members should work together with the healthcare team to ensure healthy lifestyle for the patient. She should also be monitored for taking timely medicines and therapy as prescribed by the physicians. Also, the patient and her family members must be educated about warning signs of transient ischemic attack and contact the medical team immediately if any such thing happens.

# Conclusion

Mrs Cook suffered Ischemic Stroke and was provided immediate treatment and care by the medical staff. After the stroke, she has various important concerns ranging from physical disability, emotional and social well-being. A proper rehabilitative plan is important to manage her condition and preparing her family members to continue the care after the discharge. She must be monitored for any further signs of stroke and a healthy lifestyle should be ensured by her family members.

# References

Chesnut, R. M., Temkin, N., Carney, N., Dikmen, S., Rondina, C., Videtta, W., & Hendrix, T. (2012). A trial of intracranial-pressure monitoring in traumatic brain injury. *New England Journal of Medicine*, *367*(26), 2471-2481. Retrieved from <http://www.nejm.org/doi/full/10.1056/nejmoa1207363>

Chung, M. L., Bakas, T., Plue, L. D., & Williams, L. S. (2015). Effects of Self-esteem, Optimism, and Perceived Control on Depressive Symptoms in Stroke Survivor-Spouse Dyads. *The Journal of cardiovascular nursing*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25658182>

Eskes, G. A., Lanctôt, K. L., Herrmann, N., Lindsay, P., Bayley, M., Bouvier, L., & Swartz, R. H. (2015). Canadian stroke best practice recommendations: mood, cognition and fatigue following stroke practice guidelines, update 2015.*International Journal of Stroke*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26121596>

Fischer, U., Cooney, M. T., Bull, L. M., Silver, L. E., Chalmers, J., Anderson, C. S., & Rothwell, P. M. (2014). Acute post-stroke blood pressure relative to premorbid levels in intracerebral haemorrhage versus major ischaemic stroke: a population-based study. *The Lancet Neurology*, *13*(4), 374-384. Retrieved from <http://www.thelancet.com/journals/laneur/article/PIIS1474-4422(14)70031-6/abstract>

Kamel, H., Navi, B. B., Nakagawa, K., Hemphill III, J. C., & Ko, N. U. (2011). Hypertonic saline versus mannitol for the treatment of elevated intracranial pressure: A meta-analysis of randomized clinical trials\*. *Critical care medicine*, *39*(3), 554-559. Retrieved from <http://journals.lww.com/ccmjournal/Abstract/2011/03000/Hypertonic_saline_versus_mannitol_for_the.18.aspx>

Morreale, M., Marchione, P., Pili, A., Lauta, A., Castiglia, S. F., Spallone, A., & Giacomini, P. (2015). Early versus delayed rehabilitation treatment in hemiplegic patients with ischemic stroke: proprioceptive or cognitive approach?. *European journal of physical and rehabilitation medicine*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26220327>

Oikarinen, A., Engblom, J., Kääriäinen, M., & Kyngäs, H. (2015). Risk factor‐related lifestyle habits of hospital‐admitted stroke patients–an exploratory study. *Journal of clinical nursing*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25689107>

Poletto, S. R., Rebello, L. C., Valença, M. J. M., Rossato, D., Almeida, A. G., Brondani, R., & Martins, S. C. O. (2015). Early Mobilization in Ischemic Stroke: A Pilot Randomized Trial of Safety and Feasibility in a Public Hospital in Brazil. *Cerebrovascular Diseases Extra*, *5*(1), 31-40. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26034487>

Safer, V. B., & Koseoglu, B. F. (2015). Timing of inpatient rehabilitation initiation in stroke patients: factors influencing early admission. *Journal of physical therapy science*, *27*(6), 1913. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26180347>

Schmidt, A., Heroum, C., Caumette, D., Le Lay, K., & Bénard, S. (2015). Acute Ischemic Stroke (AIS) Patient Management in French Stroke Units and Impact Estimation of Thrombolysis on Care Pathways and Associated Costs.*Cerebrovascular Diseases*, *39*(2), 94-101. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25660476>

Tung, Y. C., Jeng, J. S., Chang, G. M., & Chung, K. P. (2015). Processes and outcomes of ischemic stroke care: the influence of hospital level of care.*International Journal for Quality in Health Care*, *27*(4), 260-266. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26060229>