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## Clinical decision making

Physical symptoms for a patient suffering from cerebrovascular accident are important for a nurse or clinician during diagnosis, because they inform on which decision to make first in order to stabilize the patient. For instance checking the heart beat rate will inform the nurse of whether the patient needs to be subjected to some emergency treatment medicines such as beta-blockers that can help in reducing the patient's heart rate (Chintya, Pranata & Huang, 2019). From the potassium and sodium content measured, the nurse will be able to ascertain whether sodium and potassium channel blockers can be administered so as to control heart rhythm of the patient even as the patient relaxes. The irregular pulse rate noted in the patients may also signal that there is increased fibrillation in the heart and therefore the patient needs some anticoagulants that can preferably act as blood thinners. In future, diagnosis of patients with such history will focus on pulse rate, temperature and blood pressure so as to determine their stability and the first aid treatment that can be administered to stabilize them (Chintya et al. 2019). Cerebrovascular accident is a delicate disease that if not well handled during the first few hours of attack, it can lead to death or permanent disability. Therefore, any future case of CVA must be addressed with caution and speed by assessing physical symptoms.

Cerebrovascular accident usually happens when an individual experiences insufficient blood flow to the brain or internal bleeding in the brain. The first risk factor of stroke is high blood pressure also called hypertension. People with high blood pressure are likely to suffer from stroke due to constant exerting of high pressure by the blood on walls of blood vessels. Over time as more pressure is continuously exerted on blood vessel walls they get weak and damaged by rupturing causing internal bleeding that eventually cause cerebrovascular accident (stroke). Also the high blood pressure has a thickening effect on artery walls that eventually lead to

narrowing and blockage of the blood vessels. When the vessels are narrowed, the pressure that pumps the blood may carry the debris of damaged walls to the way of blood flow thus blocking the blood from reaching parts of the brain. Tobacco consumption is another risk factor for stroke because nicotine increases the blood pressure due to fatty buildup in the arteries. Once the arteries are thickened, it becomes difficult for the heart to pump enough blood to the brain thus causing stroke. Furthermore, cigarette smoke thickens the blood which might result into a clot that blocks blood flow. Heart disease and diabetes are two major other risk factors for stroke. Irregular heartbeat and defective heart valves cause stroke especially among the elderly due to fatty deposits that clog arteries. Diabetes on the other hand damages blood vessels thus increasing chances of developing cerebrovascular accident. Therefore, people should avoid some of the risk factors by exercising regularly to reduce chances of blood pressure and diabetes, avoid smoking and always consult a doctor when they sense some symptoms of stroke.

### **Technology and treatment**

Computer Tomography (CT) imaging is one of the most important technologies for diagnosis and evaluation of such emergency cases of stroke (Antipova et al. 2019). CT scan imaging enables the clinicians and nurses to evaluate the impact of the damage caused to the brain by stroke. It also enables clinicians to evaluate severe headaches by patients with the history of stroke brought under an emergency treatment so as to determine whether there is a life threatening pathology that needs to be done. Brain stem, cerebellum and cerebral hemispheres are the important parts of brain that need both contrast and non-contrast computed tomography scan.

The change in functioning of the body of patients suffering from cerebrovascular accident is manifested through numbness of some body parts, lack of coordination, loss of balance, dizziness and difficulty in walking. Furthermore, weakness in one body side, sudden confusion, increased temperatures, abnormally increased heart beat and difficult in speech.

The first physical symptom of stroke that manifests under clinical diagnosis is difficulty in speech by the patient that was speaking normally (Chintya et al. 2019). Stroke weakens the muscles that human beings use to speak causing a condition known as Dysarthria. When Dysarthria happens, the muscles that help an individual to move their lips, tongues or mouth so as to produce voice or speak. The physical symptom of lack of proper coordination of speech causes sensory impairment and right-sided paralysis or weakness. Research shows that patients who have suffered stroke have difficult in speech because of weak and poorly coordinated muscles.

Depending on the diagnosis and determination of the type of stroke suffered by an individual, treatment process is different. For Ischemic stroke, the arteries that flow blood are blocked which denies the brain enough air circulation. Treatment of Ischemic stroke starts with administration of drugs that can break down the blood clots while at the same time prevent other clots from forming. Injecting the patient with tissue plasminogen activator (TPA) or administration of aspirin within five hours or less will dissolve the blood clot hence improving the heartbeat of patients (Antipova et al. 2019). Another treatment will be removing the clot from the blood vessels using a catheter.

## References

1. Antipova, D., Eadie, L., Macaden, A., and Wilson, P. (2019). Diagnostic accuracy of clinical tools for assessment of acute stroke: a systematic review. *BMC emergency medicine*, 19(1), 49.
2. Chintya, V., Pranata, R., and Huang, I. (2019). Knowledge regarding the signs, symptoms, and risk factors associated with stroke in medical and nonmedical personnel. *International Journal of the Cardiovascular Academy*, 5(2), 42.