

Assessing Level of Consciousness Virtual Simulation

Case Study: Head Injury

1. *What cranial nerves were assessed initially by the nurse and how were they assessed? Identify the nerve and how to complete the assessment.*

The 3rd, 4th, and 6th cranial nerves were assessed initially by the nurse. These cranial nerves are the oculomotor, trochlear, and abducens cranial nerves. The assessment of the cranial nerves includes observation of symmetry of movement, globe position, asymmetry/droop of eyelids (ptosis), and twitches/flutter of globes or lids (Newman, 2020). The nurse uses a pen light to determine the patient's pupillary response. This assessment can be referred to as PERLLA, which means "pupils are equal, round and reactive to light and accommodation" (Newman, 2020).

In addition to the Motor Function

2. *If Mrs. Patterson exhibits the following symptoms: hypoxia, hypotension, and tachycardia. Please explain why she is having these symptoms.*

Mrs. Patterson may have a compromised airway which can affect her oxygenation and lead to hypoxia. If hypoxia is not corrected, hypotension and tachycardia will develop (Doyle & McCutcheon, 2015). As well, stimulation of the posterior hypothalamus results in tachycardia and sympathetic overactivity.

3. *How could the injuries/symptoms (hypoxia, hypotension, tachycardia) affect the neurological condition?*

Aggressive early management of hypoxia, hypotension and tachycardia helps to avoid secondary complications. Hypoxia can cause vision problems, swallowing and speech difficulties, impaired thinking and judgement, personality changes, and memory loss (National Institute of Neurological Disorders and Stroke, 2023). Hypotension can trigger brain damage and cognitive impairment due to reduced blood flow causing ischemic neuronal damage in vulnerable areas of the brain (Reitz & Luchsinger, 2012). Prolonged tachycardia can cause stroke or sudden cardiac death. There is an increased risk of developing a blood clot that can lead to a stroke (Mayo Clinic, 2022).

4. *Priority decision: What are the **priority nursing interventions** should the nurse implement at the end of the simulation?*

The priority nursing interventions that the nurse should implement are maintaining the patients' ABC's (Schnur, 2022). Most importantly, ensuring the patient's airway is maintained. The nurse should also monitor the blood pressure and heart rate to ensure adequate perfusion to the brain (Schnur, 2022).

References

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