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The Effect of Verbal Stimulation Intervention and Al-Qur'an Murotal Therapy on Motor Response Changes in Patients with Decreased Consciousness

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ABSTRACT

Background & Objective: Decreased consciousness is one of the signs of cerebral perfusion disorders that we often find in patients with head injuries. Head injuries are traumatic disorders of brain function, accompanied by interstitial bleeding in the brain substance without disrupting brain continuity. According to the WHO, 69 million people worldwide experience head injuries each year. Africa and Southeast Asia have the highest number of cases at 56%, while North America has the lowest at 25%. In Indonesia, based on the Basic Health Research report, head injury ranks third among the most common injuries, with a percentage of 11.9%. The purpose of this study is to determine the motor response in patients with decreased consciousness following verbal stimulation and Quranic recitation interventions. **Method:** A case study of patients with severe head injuries and decreased consciousness involving non-pharmacological interventions with verbal stimulation and Al-Qur'an murotal therapy on motor response changes conducted daily for 7 days of treatment with each session lasting 30 minutes per day. **Result:** After verbal stimulation intervention by telling stories and listening to the recitation of Surah Al-Fatihah and Surah Yasin from the Qur'an for 30 minutes, there was a change in the motor response of patients with decreased consciousness, which was evaluated by assessing the GCS. **Conclusion:** Verbal stimulation intervention through storytelling and recitation of the Qur'an has an effect on changes in motor responses in patients with decreased consciousness.

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Introduction

Head injury is a traumatic disturbance of brain function, which may or may not be accompanied by interstitial hemorrhage in the brain tissue without disruption of brain continuity. Head injury can result in physical and psychological changes that may lead to fatal outcomes, including death (Utami, Rahayu, & Astuti, 2021).

Head injury is defined as a traumatic impairment of brain function with or without interstitial bleeding within the brain substance, without interruption of brain continuity. Head trauma, whether blunt or penetrating, is recognized as a disruption of normal brain function. Neurological deficits occur due to tearing of white matter, ischemia, mass effects from hemorrhage, and cerebral edema surrounding brain tissue (Zuriati & Suriya, 2019).

Patients with moderate to severe Traumatic Brain Injury (TBI) generally experience a wide range of chronic health problems. These conditions increase costs and burdens for individuals with TBI, their families, and society. Among individuals who survived five years after injury, 57% experienced moderate to severe disability, 55% were unemployed, 50% were rehospitalized at least once, 33% depended on others for assistance with daily activities, 29% were dissatisfied with life, 29% used illicit drugs or consumed alcohol, and 12% resided in nursing homes or other institutions (Centers for Disease Control and Prevention, 2021).

The World Health Organization (WHO) reports that approximately 69 million people worldwide experience head injuries each year. Africa and Southeast Asia account for the highest proportion of cases (56%), while North America has the lowest (25%) (Makmur et al., 2020). In Indonesia, based on the Basic Health Research (Riskesdas) report, head injury ranks as the third most common type of injury, with a prevalence of 11.9%. However, many cases remain unreported due to various factors, and related research is still very limited (Samsir et al., 2022).

Non-pharmacological interventions to improve the level of consciousness in patients with impaired awareness include adequate oxygen administration, verbal and non-verbal stimulation, spiritual therapy, and cognitive therapy. One form of cognitive therapy is murottal Al-Qur'an therapy. The function of murottal Al-Qur'an therapy in patients with decreased consciousness is as a neuroprotective intervention. The purpose of neuroprotection is to preserve ischemic tissue, limit infarct extension, prolong the therapeutic time window, and minimize reperfusion injury. The effects of Qur'anic recitation include changes in muscle electrical activity, blood circulation, and heart rate.

Qur'anic stimulation serves not only as psychological support and spiritual care, but also plays a neuroprotective role through auditory stimulation. Therefore, sensory stimulation in the form of Qur'anic recitation can be used as a nursing intervention to enhance the recovery process in patients with impaired consciousness, as indicated by improvements in Glasgow Coma Scale (GCS) scores. This relaxation-based therapy is simple, easy to administer, and cost-effective.

Ropi and Sitoru (2012) conducted a study entitled Qur'anic Stimulation on Glasgow Coma Scale (GCS) in Ischemic Stroke Patients. The study employed a pretest–posttest control group design, involving 38 ischemic stroke patients selected randomly. The intervention group received murottal Al-Qur'an stimulation of Surah Ar-Rahman for 30 minutes daily over three days. GCS assessments were conducted on the first and third days. The results demonstrated a significant difference in GCS scores before and after the intervention, as well as a significant difference in GCS improvement between the intervention and control groups (p = 0.013). Qur'anic murottal stimulation had a positive effect on increasing the level of consciousness in ischemic stroke patients.

Objective

Assessing motor responses in patients with decreased consciousness using verbal stimulation and recitation of the Qur'an in the ICU of Dr. R. Soedjono Selong Regional General Hospital

Method

The case study method involved non-pharmacological interventions with verbal stimulation and Al-Qur'an murotal therapy. Verbal stimulation was carried out by telling stories for 15 minutes, while Al-Qur'an therapy involved listening to Surah Al-Fatihah and Surah Yasin for 30 minutes every day for 7 days of treatment. Both interventions were performed in the morning before the shift change. Both interventions were performed after first assessing the patient's level of consciousness, followed by verbal stimulation through storytelling for 15 minutes and listening to the recitation of Surah Al-Fatihah and Surah Yasin from the Qur'an for 30 minutes. After the intervention, the patient's GCS was assessed.

Results

Changes in patients' motor resonance before and after being given verbal stimulation by telling stories for 15 minutes and listening to the recitation of Surah Al-Fatihah and Surah Yasin from the Qur'an for 30 minutes per day during 7 days of treatment can be seen in the following table.

Day of procedure	GCS before procedure	GCS after procedure
Day 1	E1V1M2	E1V1M2
Day 2	E1V1M2	E1V1M2
Day 3	E1V1M2	E1V1M2
Day 4	E1V1M2	E2V2M3
Day 5	E2V2M3	E2V2M4
Day 6	E2V2M4	E3V3M5
Day 7	E3V3M5	E4V4M6

Discussion

The results showed that Mr. I experienced a decrease in consciousness after a motorcycle accident. After verbal stimulation intervention with storytelling and recitation of the Qur'an, specifically Surah Al-Fatihah and Surah Yasin, for 30 minutes, the results on the first day of treatment showed that the patient's GCS before treatment was E1V1M2 and after treatment the patient's GCS remained the same, namely E1V1M2. On the second day of the intervention, the patient's GCS before and after the intervention remained the same, namely E1V1M2.

The intervention was then repeated on the third day, and the patient's GCS remained unchanged at E1V1M2. On the fourth day of the intervention, the patient's GCS before the intervention was E1V1M2, and after the intervention, the patient's motor response improved to a GCS of E2V2M3. On the fifth day, verbal stimulation was performed again by telling stories and reciting the Quran, specifically Surah Al-Fatihah and Surah Yasin. The patient's GCS, which was E2V2M3 before the procedure, changed to GCS E2V2M4 after the procedure. Then, the procedure was performed again on the fifth day, and the patient's GCS before the procedure was E2V2M3, which changed to GCS E2V2M4 after the procedure, indicating a change in the patient's motor response.

On the sixth day, the procedure was performed again, and the patient's GCS before the procedure was E2V2M4, which changed to E3V3M5 after the procedure, and the patient's motor response improved again. On the last day of the procedure, the patient's GCS improved again, from E3V3M5 before the procedure to E4V4M6 after the procedure, with an increase in the patient's motor response, and the patient was allowed to be transferred to another room.

Auditory stimulation is a process of providing stimuli in the form of sounds or noises to produce effects on the nervous system. Auditory stimulation is currently a special concern because in patients with decreased consciousness, the auditory system is the last sense to function (Septiany et al., 2019). Quran recitation therapy can affect changes in muscle electrical currents, blood circulation, and heart rate. These changes indicate relaxation or a decrease in reflexive nerve tension, resulting in the loosening of blood vessels, accompanied by a decrease in heart rate.

Murottal therapy works on the brain, where when stimulated by external stimuli (Quran therapy), the brain produces a chemical substance called neuropeptide. Murottal therapy is easy, fast, and practical to administer, with many advantages. Among them, the results of the first experiment by Dr. Ahmad Al-Qodi proved that 97% of respondents showed that the Quran has an effect of relaxing nerve tension and can lower blood pressure and brain wave activity. Nursing care with a diagnosis of acute confusion using auditory stimulation to change the Glasgow Coma Scale (GCS) score in patients with hemorrhagic stroke and decreased consciousness in the intensive care unit (ICU) of Abdoel Wahab Sjahranie Regional General Hospital, Samarinda, in 2023.

Conclusion

Based on the results of this study involving Mr. I with decreased level of consciousness, it can be concluded that the interventions of verbal stimulation through storytelling and murottal Al-Qur'an therapy using Surah Al-Fatihah and Surah Yasin for 30 minutes daily over seven days had a positive effect on changes in the patient's motor responses. These findings are consistent with Dr. Ahmad Al-Qodi's experimental study, which demonstrated that 97% of respondents showed relaxation of nervous tension, decreased blood pressure, and changes in brain wave activity after listening to Qur'anic recitation. This result is also in line with previous research on auditory stimulation in patients with acute confusion and decreased consciousness, which reported improvements in Glasgow Coma Scale (GCS) scores among hemorrhagic stroke patients treated in the intensive care unit.

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