



Lorestan University of Medical Sciences
Faculty of Khorramabad Nursing & Midwifery

A Thesis: Presented for the Degree of Master of Sciences In Critical care
Nursing

Title:
**Effect of Vitamin B₁ on the Level of Consciousness and Clinical
Conditions of Patients with Decreased Level of Consciousness
Hospitalized in Intensive Care Units**

By:
Vahid Sepahvandi

Supervisor:
Dr. Parastou Kordestani Moghadam

Advisor:
Dr. Fatemeh Mohamadipour
Dr. Farzad Ebrahimzadeh

May 2022

Abstract

Introduction: due to the occurrence of secondary lesions due to prolonging the coma period, creating exorbitant treatment costs on the one hand and affecting and reducing the quality of life of patients on the other hand, and the importance of the role of supplements and vitamins, especially group B vitamins and The mechanism of the effect of vitamin B1 in the brain and the lack of attention to the role of group B vitamins in brain function and improving the level of consciousness of patients with reduced level of consciousness, the main purpose of this study is to investigate the effect of vitamin B1 on the score of level of consciousness and the clinical condition of patients with reduced level of consciousness. He was hospitalized in special care units.

Methods: The present study is a three-blind randomized clinical trial. The research population of this study is the patients with reduced level of consciousness hospitalized in the special care department of Shahida Eshair and Shahid Rahimi Hospital in Khorramabad, including 5 departments (Trauma ICU, Surgical ICU, Neurosurgery ICU, General ICU) in the year 1400. A number of 80 patients were selected by sequential non-probability sampling method and were allocated to two intervention and control groups of 40 people by permutation blocks in such a way that a corner of the table of random numbers was selected and a one-digit number was read, if the desired number It was between zero and four, the sequence A and then B was written, but if a number between five and nine was read, the sequence B and then A was written. In this way, a random sequence of letters A (control group) and letters B (intervention group) was written. This table was prepared and compiled by the statistical consultant of the plan and was placed in the research environment, and based on the chronological order of hospitalization, the patient was randomly entered into group A or B. To select the next patients, we moved from top to bottom until the code corresponding to the desired patient (either A or B) was selected. GCS and FOUR criteria were used to evaluate the level of consciousness and SOFA criteria were used to evaluate the clinical status in the first seven days of the injury every morning. In the intervention group, 300 mg of oral vitamin B1 dissolved in 30 cc of normal saline serum was administered by gavage once a day (in the morning) in the first seven days, and in the control group, routine and standard care was performed according to the treatment guidelines. Is. The collected data were analyzed using SPSS version 26 software. To check the distribution of the samples, Fisher's exact tests and Chi-square independence with Monte Carlo simulation, to compare the average clinical and laboratory characteristics, from the independent t-test, to compare the dependent variables at the beginning and the end of the study, from the paired t-test and also for Covariance analysis is used to adjust the effect of confounding variables. It should be noted that $P < 0.05$ was considered as a significant level.

Conclusion: Therefore, it is recommended to health care providers to use vitamin B1 in the treatment process of patients referred to the hospital (both traumatic and non-traumatic patients), and to include this vitamin in the standard treatment protocol.

Keywords: Vitamin B₁, Level of Consciousness, Coma, Clinical Condition brain injury

