

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

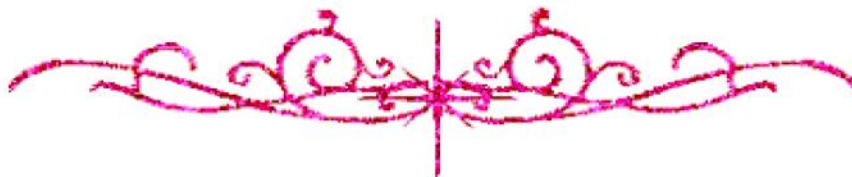
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**Effect of Body Position on Oxygenation and
Hemodynamic Status among Patients
with Traumatic Brain Injury**

Thesis

Submitted for Partial Fulfillment of the Master Degree in
Critical Care Nursing

By

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2021**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببناك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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*✍ **Abduallah Shokrey Ismail Ali***

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List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>
ABG	: Arterial Blood Gases.
ACBT	: Active Cycle of Breathing Technique
ANS	: Autonomic Nervous System.
ARDS	: Acute Respiratory Distress Syndrome.
BMI	: Body Mass Index.
BP	: Blood Pressure.
BSN	: Bachelor of Science in Nursing.
CBF	: Cerebral Blood Flow.
CNS	: Central Nervous System.
CO₂	: Carbon Dioxide.
COPD	: Chronic Obstructive Pulmonary Disease.
CPP	: Cerebral Perfusion Pressure.
CSF	: Cerebrospinal Fluids.
CT	: Computed Tomography.
CVP	: Central Venous Pressure.
DVT	: Deep Venous Thrombosis.
EDH	: Epidural Hematoma.
EEG	: Electroencephalography.
ETCO₂	: End Tidal Carbon Dioxide.
EVD	: External Ventricular Drain.
GCS	: Glasgow Coma Scale.
HBE	: Head of Bed Elevation.
HOB	: Head of Bed.

ICE	: Intracerebral Edema.
ICP	: Intracranial Pressure.
ICU	: Intensive Care Unit.
IPPB	: Intermittent Positive-Pressure Breathing
LOC	: Level of Consciousness
MAP	: Mean Arterial Pressure.
MRI	: Magnetic Resonance Imaging.
O₂ Sat	: Oxygen Saturation.
O₂	: Oxygen.
OR	: Operation Room.
Pao₂	: Partial Pressure of Arterial Oxygen.
Pco₂	: Partial Pressure of Arterial Carbon Dioxide.
PEEP	: Positive End Expiratory Pressure.
PET	: Positron Emission Tomography.
PTS	: Posttraumatic Seizures.
RBCs	: Red Blood Cells
SAH	: Subarachnoid Hemorrhage.
Sao₂	: Saturation of Arterial Oxygen.
SBP	: Systolic Blood Pressure.
SDH	: Subdural Hematoma.
Spo₂	: Oxygen Saturation by Pulse Oximeter.
TBI	: Traumatic Brain Injury.
Temp	: Body Temperature.
TQIP	: Trauma Quality Improvement Program.
VTE	: Venous Thromboembolism.

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Effect of Body Position on Oxygenation and Hemodynamic Status among Patients with Traumatic Brain Injury

Abstract

Background: Positioning is one of the most frequently performed nursing activities in the critical care, often providing a central pivotal focus for planning other nursing activities. Therapeutic positioning of the head different degrees of head of bed elevation has been proposed as a low cost and simple way of preventing secondary brain injury. **Aim:** determine the effect of body position on oxygenation and hemodynamic status among patients with traumatic brain injury. **Research design:** Quasi-experiments (single group pre/posttest design). **Setting:** Critical Care Units in El-Mansoura general hospital at El-Mansoura city. **Subject:** A purposive sample of (67) adult patients diagnosed with traumatic brain injuries. **Tools:** Structured socio-demographic interview questionnaire, Patients' medical records (Part (1): covers clinical variables, Part (2): covers cardiorespiratory assessment record), Glasgow Coma Scale and Richmond Agitation Sedation Scale. **Result:** there was significantly increasing in oxygen saturation in post semi fowler position from 95.37 ± 1.17 to 97.31 ± 11.13 and then right lateral position from 94.93 ± 1.25 to 95.37 ± 1.17 compared to pre. Also, regard hemodynamic parameters (Heart Rate, Respiratory Rate, Systolic Blood Pressure, Diastolic Blood Pressure and Mean Arterial Pressure) were significantly decreased in post semi fowler position and then right lateral position compared to pre. **Conclusion** oxygen saturation and all hemodynamic parameters were significantly improved regarding normal range in post semi fowler position and then right lateral position compared to pre. **Recommendations:** Develop nursing practice protocol for critical care nurses to position patients at semi fowler position after traumatic brain injury to improve oxygenation and hemodynamic parameters. And further studies should be carried out in order to assess the effect of other body positions on the other medical conditions.

Keywords: Body Position, Hemodynamic, Oxygenation, Traumatic Brain Injury Patient.
