



**Ultrasound Evaluation of the Respiratory Variations
of The Internal Jugular Vein Compared to the Respiratory
Variations of the Inferior Vena Cava as a Guidance of
Fluid Responsiveness in Septic Shock**

Thesis

*Submitted for Partial Fulfillment of Master Degree in
Intensive Care*

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2019**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْحَكِيمُ"



صَدَقَ اللَّهُ الْعَظِيمُ

(سورة البقرة: ٣٢)

Acknowledgments

*First, the great thanks for **ALLAH**, the most merciful, as without his guidance and blessing this work could never be accomplished.*

*I wish to pay my respect and appreciation for **Prof. Galal Adel Mohamed Elkadi**. Professor of Anesthesiology, intensive care and Pain management, Ain Shams University who gave access to the research facilities. Without his precious support it would not be possible to conduct this research. It was an honor and pleasure working under his supervision*

*My sincere thanks also goes to **Dr. Sherif George Anies Saeid**. Assistant Professor of Anesthesiology, intensive care and Pain management, Ain Shams University for his valuable additions, continuous guidance, encouragement, great support, and help during this work. He continuously advised me and spared no time or effort to offer his help and skill that made the completion of this work possible.*

*I would like to express my sincere gratitude to my advisor **Dr. Gamal Eldin Adel Abd Elhameed Saleh**, Lecturer of Anesthesiology, intensive care and Pain management, Ain Shams University for the continuous support of my research and his patience, motivation, and immense knowledge. His guidance helped me in all the time of research and writing of this thesis. I could not have imagined having such a better advisor and mentor for my research.*



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List of Abbreviations

Abbreviations	Full name
%	Percentage
*	Statistically significant difference.
/	Per
/UL	Per cubic millimeter
<	Less than
>	More than
≤	Equal or less than
≥	Equal or more than
μmol/l	Micromole per liter
ABG	Arterial blood gases
APACHE	Acute physiology and chronic health evaluation
ARDS	Acute respiratory distress syndrome
ATP	Adenosine triphosphate
AUC	Area Under Curve
BD	Base deficit
Bpm	Beat per minute

CDI	Clinically documented infection
Cm	Centimeter
CO₂	Carbon dioxide
COP	Cardiac output
Cr	Creatinine
CVP	Central venous pressure
DBP	Diastolic blood pressure
Do₂	Oxygen delivery
e.g	For example
FIO₂	Fraction of inspired oxygen
FR	Fluid responders
g/dl	Gram per deciliter
GCS	Glasgow Coma Scale
GDE	Goal directed echocardiography
GEDV	Global end diastolic volume
H	Hour
H₂O	Water
Hco₃	Bicarbonate
Hct	Hematocrit

HR	Heart rate
ICU	Intensive care unit
IJV	Internal jugular vein
IJV DI	Internal jugular vein distensibility index
IJV Dmax	Internal jugular vein maximum diameter
IJV Dmin	Internal jugular vein minimum diameter
IJVV	Internal jugular vein variations
IPPV	Intermittent positive pressure ventilation
IQR	Interquartile range
IV	Intravenous
IVC	Inferior vena cava
IVC DI	Inferior vena cava distensibility index
IVC Dmax	Inferior vena cava maximum diameter
IVC Dmin	Inferior vana cava minimum diameter
K	Potassium
LMWH	Low molecular weight heparin
LOVT	Left ventricular outflow tract
LVEDV	Left ventricular end diastolic volume
MAP	Mean arterial pressure
MDI	Microbiologically documented infection

mg/dl	Milligram per deciliter
Min	Minute
Mm	Millimeter
mm³	Cubic millimeter
MmHg	Millimeter of mercury
mmol/l	Mill mole per liter
MODS	Multiple organ dysfunction
MPM	Mortality probability models
Na	Sodium
NIRS	Near infrared spectroscopy
NPV	Negative predictive value
NR	Non responders
°C	Degree
°F	Fahrenheit
Pao₂	Partial pressure of oxygen
PAOP	Pulmonary artery occlusion pressure
Pco₂	Partial pressure of carbon dioxide
PEEP	Positive end expiratory pressure
PiCCO	Pulse contour cardiac output

POP	Pulse oximeter plethysmography
PP	Pulse pressure
PP max	Maximal pulse pressure
PP min	Minimal pulse pressure
PPV	Pulse pressure variation
PPV	Positive Predictive Value
qSOFA	Quick sequential Organ Failure Assessment
RACE	Rapid assessment by cardiac echo
RBCs	Red blood cells
ROC	Receiver Operating characteristic Curve
RR	Respiratory rate
RUSH	Rapid ultrasound in shock
SAPS	Simplified acute physiology score
Scvo2	Central venous oxygen saturation
SD	Standard deviation
SIRS	Systemic inflammatory response syndrome
SOFA	Sequential Organ Failure Assessment
SPV	Systolic pressure variation

Sto2	Tissue oxygen saturation
SV	Stroke volume
SVC	Superior vena cava
SVmax	Maximal stroke volume
SVmin	Minimal stroke volume
SVV	Stroke volume variation
Temp	Temperature
TLC	Total leucocyte count
TTE	Transthoracic echocardiography
U/min	Unit per minute
UFH	Unfractionated heparin
Ug/kg/min	Microgram per kilogram per minute
UTI	Urinary tract infection
Vo2	Oxygen consumption
VTI	Velocity time integral
WBCs	White blood cells

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