ABDOMINAL COMPARTMENTAL SYNDROME

ESSAY

SUBMITED BY

Mohamoud Elsaudi Bayoumi Elghroby

M.B.B.ch

AIN SHAMS UNIVERSITY

In partial fulfillment Of Master Degree in general surgery

Supervised by

Dr. Hazem Abdel Salam Mohammed

Prof. of General Surgery

Faculty of Medicine

Ain Shams University

Dr. Tamer Mohammed Saeed

Lecturer of General Surgery

Faculty of Medicine

Ain Shams University

2014

ACKNOWLEDGEMENTS

Acknowledgements

*First and foremost, my deepest praises are due to Almighty "**ALLAH**" Who enabled me to finish this piece of work appropriately.*

*I would like to express my deepest gratitude and deep thanks to Prof. **Hazem Abdel Salam Mohammed** Professor of general surgery, Faculty of Medicine, Ain shams University to whom I had the privilege to work this work under his supervision.*

*I would like to express my deepest thanks to DR **Tamer Mohammed Saeed** lecturer of general surgery, Faculty of Medicine; Ain shams University for his close supervision and valuable advice. With his support, dedication and perseverance, this work was produced*

*Finally, I would like to express my infinite gratitude and my deepest appreciation to my family, my **Parents**, my **Wife** and my daughter **Judy.** None of this could have ever happened without them. And I'm forever grateful. This dissertation stands as a testament to your unconditional love and encouragement. And to all staff members and to my colleagues at general surgery department for their support.*

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List of abbreviations

ABDOPRE	Abdominal pressure
ABRA	Abdominal re approximation anchor system
ACS	Abdominal compartmental syndrome
APP	Abdominal perfusion pressure
ARDS	Acute respiratory distress syndrome
BMI	Body mass index
CO	Cardiac output
CPP	Cerebral perfusion pressure
CSF	Cerebrospinal fluid
CVP	Central venous pressure
CVP	Central venous pressure
DL	Decompressive laparotomy
FIO2	Fraction of inspired oxygen
GFR	Glomerular filtration rate
IAH	Intra-abdominal hypertension
IAP	Intra-abdominal pressure
ICP	Intra-cranial pressure
ICU	Intensive care unit
INR	International standardized ratio
ITP	Intra thoracic pressure
IV	Intra venous

IVC	Inferior vena cava
IVC	Inferior Vena Cava
IVC	Inferior vena cava
MAP	Mean Arterial Pressures
NEXAP	Negative extra abdominal pressure
NPWT	Negative pressure wound therapy
PaCO2	Carbon dioxide tension
PaO2	Oxygen tension
PAOP	Pulmonary arterial occlusion pressure
Paw	Mean airway pressure
PAWP	Pulmonary arterial wedge pressure
PCWP	Pulmonary capillary wedge pressure
PEEP	Peak End Expiratory Pressure
PHi	Gastric intramucosal PH
PIP	Peak Inspiratory Pressure
PT	Prothrombin time
PTFE	Polytetrafluoroethylene
PTT	Thrombopastin time
PVR	Pulmonary vascular resistance
Qs/Qt	Intrapulmonary shunt
RRT	Registered respiratory therapist
SAP	Severe acute pancreatitis
SICU	Surgical intensive care unit

SIRS	Systemic inflammatory response syndrome
SLAF	Subcutaneous anterior abdominal fasciotomy at the linea alba
SMA	Superior mesenteric artery
SOFA	Sequential organ failure assessment
SVC	Superior vena cava
SVR	Systemic vascular resistance
TAC	Temporary abdominal closure
TFL	Tensor fascia lata
VAC	Vacuum assisted closure
Vd/Vt	Pulmonary dead space
WSACS	World Society of Abdominal Compartment Syndrome

INTRODUCTION

Introduction

Compartment syndrome occurs when the pressure within a confined space increases to a point where the vascular inflow is compromised, and the function and viability of the tissues within the compartment are threatened **(Edwards, 2004).** Abdominal compartment syndrome (ACS) is defined as the adverse physiologic consequence occurring as a result of an acute increase in intra-abdominal pressure (IAP) due to a variety of insults to the body that cause tissue edema or a collection of free fluid in the abdominal cavity **(Fernandez , 2006).**

Various terms have been used throughout literature to describe the different pressures within the abdomen. The terms intra-abdominal hypertension (IAH) and ACS have been used interchangeably throughout literature; however, it is important to recognize the distinction between the two terms. IAH is defined as an elevated pressure within the abdomen when the IAP exceeds 12-15 mmHg with the presence of an organ ischemia **(Bailey and Shapiro, 2000), (Pleva and Mayzlik et al., 2004),** (**WSACS, 2007).** ACS is defined as an IAP >20 mmHg with at least one organ in failure **(Malbrain and Deeren et al., 2005), (WSACS, 2007).**

Abdominal compartment syndrome (ACS), occurring due to sustained increases in abdominal pressures from a variety of Insults, ultimately causes impaired tissue perfusion to the abdominal organs leading to