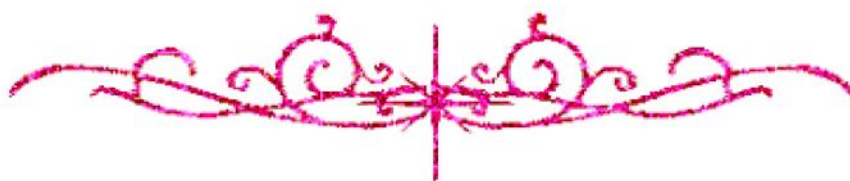


hossam maghraby



شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



hossam maghraby



شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



hossam maghraby



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



hossam maghraby



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



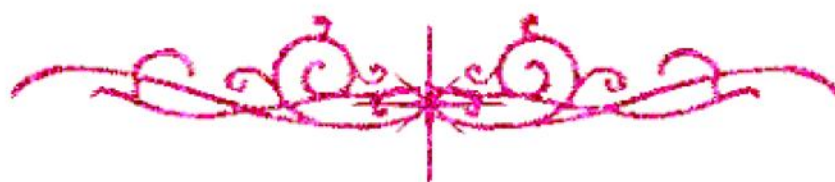
hossam maghraby



شبكة المعلومات الجامعية



**بالرسالة صفحات
لم ترد بالأصل**



B16641

**COMPARATIVE STUDY BETWEEN THE EFFECTS
OF SEVOFLURANE AND HALOTHANE ON THE
INTERCELLULAR ADHESION MOLECULE-1
(ICAM-1) IN THE PREVIOUSLY
ANAESTHETIZED PATIENTS**

**Thesis Submitted for Partial Fulfillment
for the Master Degree
In Anesthesia**

By

MAHMOUD ABDELKAFFY ABDELGHANY

M. B. , B. Ch

Supervisors

Prof. IBRAHIM ABBAS YOUSSEF

**Chairman of Anesthesiology and
Intensive Care Department**

Dr. AHMED KORANY MOHAMED

Ass. Prof. of Anesthesiology and Intensive Care

Dr. SALAH NAGIB AHMED EL TALLAWY

Ass. Prof. of Anesthesiology and Algesiology

**Faculty of Medicine
El Minia University**

2002

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"رب أوزعني أن أشكر نعمتك التي

أنعمت عليّ وعلى والديّ وأن أعمل صالحاً

ترضاه وأدخلني برحمتك في عبادك الصالحين

سورة النمل آية ١٩

صدق الله العظيم

CONTENTS

ACKNOWLEDGMENTS

iv	Intravenous
KD	Kilo Dalton
Kg	Kilogram (s)
MAC	Minimal alveolar concentration
mg	Milligram (s)
min	Minute
mm Hg	Millimeter (s) of mercury
N-CAM	Neural cell adhesion molecules
P.V.R	Pulmonary vascular resistance
PECAM-1	Platelet endothelial cell adhesion molecule-1
sICAM-1	Soluble form of ICAM-1
SV-CAM-1	Soluble form of V-CAM-1
TNF-α	Tumour necrosis factor alpha
V-CAM-1	Vascular cell adhesion molecule -1

List of Figures

Figure Title	Figure No.	Page
Demographic data of all studied groups.	Fig. (1)	65
Sex distribution in the studied groups.	Fig. (2)	65
Duration of the operations in the studied groups.	Fig. (3)	68
Type of operations in the studied groups.	Fig. (4)	68
Changes in the pulse rate /minute in the studied groups.	Fig. (5)	71
Changes in the mean arterial blood pressure (mm Hg) in the studied groups.	Fig. (6)	73
Changes in oxygen saturation in the studied groups.	Fig. (7)	75
Changes in end tidal CO ₂ (mmHg) in the studied groups.	Fig. (8)	78
Changes in the serum level of ICAM-1 in the studied groups.	Fig. (9)	81
Changes in the serum level of ICAM-1 in the control and studied group.	Fig. (10)	89

**INTRODUCTION
AND
AIM OF THE WORK**

In the normal liver, intercellular adhesion molecule-1 (ICAM-1) is absent from hepatocytes and intrahepatic biliary epithelial cells (Schoazec and Feldmann, 1994).

In vivo ICAM-1 may be induced in liver epithelial cells during acute and chronic inflammatory liver diseases of various etiologies (Mosnier et al., 1994).

The aim of this study is to evaluate the effect of sevoflurane versus halothane on the level of intercellular adhesion molecule-1 (ICAM-1) in previously anesthetized patients.

REVIEW OF LITERATURE

PHARMACOLOGY OF HALOGENATED INHALATIONAL ANESTHETICS

Mechanism of action of inhalation anesthetics:

• Brain:

Inhaled anesthetics may act by altering neuronal activity in selected regions of the central nervous system (CNS). It is often suggested that the reticular formation is an important site of anesthetic action. The effect of anesthesia on neuronal activity in the reticular formation is variable and can be increased, unchanged, or decreased depending on the agent and the neuronal unit examined (Ogawa et al., 1992).

General anesthetics interrupt transmission in the CNS at sites other than the reticular formation as the cerebral cortex and hippocampus (Berg and Langmoen, 1990). In addition, inhibitory transmission may be influenced by volatile agents. For example, halothane prolongs γ -amino-butyric acid (GABA)-induced inhibition in the hippocampus (Pearce, 1996), and volatile anesthetics may either enhance the amplitude and duration of inhibitory post-synaptic currents (Jones et al., 1992).

Neuronal pathways between various brain regions consisting of both excitatory and inhibitory components may also be influenced by inhaled agents. The transfer of sensory information from the thalamus to certain cortical regions is thought to be particularly sensitive to anesthetics (Angel, 1993).