



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرو فيلم



MONA MAGHRABY



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

**Intraoperative direct vision of transversus abdominis plane (TAP) Block versus ultrasound guided transversus abdominis plane (TAP) Block for pain control after caesarean section (CS).
A randomized controlled Clinical Trial**

A Thesis

Submitted for partial fulfillment of Master degree
in Obstetrics & Gynecology

By

Dalia Ahmed Elsaid Khalil
M.B.B.Ch

Under Supervision of

Prof. Dr. Hossam Hemida

Assistant Professor of Obstetrics and Gynecology
Faculty of Medicine, Ain Shams University

Prof. Dr. Mohamed Abd El Fattah Elsenity

Assistant Professor of Obstetrics and Gynecology
Faculty of Medicine, Ain Shams University

Dr. Mohamed Mohamed Kamal Abdallah

Lecturer of Anesthesia, Intensive Care and Pain Management
Faculty of Medicine, Ain Shams University

**Faculty of Medicine
Ain Shams University
2021**



Acknowledgments

*First and foremost, I feel always indebted to **Allah**, the **Most Beneficent** and **Merciful**, Who gave me the strength to accomplish this work,*

*My deepest gratitude to **Prof. Dr. Hossam Hemida**, Assistant Professor of Obstetrics and Gynecology, Faculty of Medicine, Ain Shams University, for his valuable guidance and expert supervision, in addition to his great deal of support and encouragement. I really have the honor to complete this work under his supervision.*

*I would like to express my great and deep appreciation and thanks to **Prof. Dr. Mohamed Abd El Fattah Elsenity**, Assistant Professor of Obstetrics and Gynecology, Faculty of Medicine, Ain Shams University, for his meticulous supervision, and his patience in reviewing and correcting this work,*

*I must express my deepest thanks to **Dr. Mohamed Mohamed Kamal Abdallah**, Lecturer of Anesthesia, Intensive Care and Pain Management, Faculty of Medicine, Ain Shams University, for guiding me throughout this work and for granting me much of his time. I greatly appreciate his efforts.*

*Special thanks to my **Parents**, my **Husband** and all my **Family** members for their continuous encouragement, enduring me and standing by me.*

 *Dalia Ahmed Elsaid Khalil*

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List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>
ACOG	: American College of Obstetricians and Gynecologists
CS	: Caesarean Section
CT	: Computerized tomography
EO	: External oblique
IO	: Internal oblique
IV-PCA	: Intravenous patient-controlled analgesia
PCEA	: Patient Controlled Epidural Analgesia
SD	: Standard deviation
SPSS	: Statistical Package for Social Sciences
TA	: Transverse abdominis
TAP	: Transversus abdominis plane
USG	: Ultrasound-guided

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Introduction

Many caesarean sections are conducted each year. Postoperative pain from the site of abdominal incision can complicate birth by Caesarean Section (CS). Failure to achieve adequate pain control is one of the most common reasons for poor satisfaction among women who give birth by CS. CS is a very common surgical procedure (*Pan, 2006*).

Adequate postoperative analgesia following CS hastens post-operative mobilization, decreases maternal morbidity and facilitates bonding with the newborn. Neuraxial opioids can provide effective post-operative pain relief for many hours after surgery, although their administration has a well-defined risk of side effects including nausea, pruritis, urinary retention and the potential for delayed respiratory depression (*Gehling and Tryba, 2009*). So alternative modalities of pain relief offer the prospect of a beneficial reduction in side effect profile with no loss in analgesic effectiveness (*McDonnell et al., 2009*).

The last two decades has seen peripheral nerve blockade gain prominence in the prevention and treatment of acute post-operative pain. The success of ultrasound guided peripheral nerve localization with nerve stimulation has fuelled new innovation in block technique and indication. These novel blocks can be performed with minimal risk of complications to the patient (*Liu et al., 2009; Abrahams et al., 2009*).

Tranversus Abdominis Plane (TAP) block mechanism of action is to provide anaesthesia to the sensory nerve supply of the anterior abdominal wall (*Abrahams et al., 2009*).

Blockade of sensory nerves is achieved in the neurofascial plane between the internal oblique and transversus abdominis muscles through a well-defined entrance at the triangle of Petit (*Rafi, 2001; McDonnell et al., 2007*).

The use of TAP block to alleviate pain after non-obstetric abdominal surgery has become established 2010; when Cochrane collaboration reviewed 8 studies with 358 participants, five of which assessed TAP block and three looking at rectus sheath blocks. However ultrasound guided TAP block have a risk of Intraperitoneal injection and bowel perforation. Need availability of ultrasound in the operative room to keep the needle tip visualized always and to identify the correct plane; all of this is time consuming (*Charlton et al., 2010*).

Aim of the Work

To assess pain scores at (rest and movement), and need for opioids in the first 24 hours post Cesarean section.

Chapter (1)

Postoperative Pain

Acute Postoperative pain

Acute pain is an unpleasant sensory, emotional and mental sensation (experience) associated with vegetative signs, psychological response and changes in behavior. It usually lasts for several hours to days, rarely more than a month (***Chou et al., 2016***).

Acute pain makes the patient seek medical help within minutes, hours or a few days after the onset of pain. If this signal is ignored, pain may become chronic (***Chou et al., 2016***).

Acute pain is provoked by identifiable stimuli and disappears as soon as the tissue injury or damage that had caused it is healed. Postoperative pain is a typical example of acute pain (***Wu and Raja, 2011***).

All surgical procedures are associated with a certain level of postoperative pain. Fear of postoperative pain is one of the greatest concerns of patients undergoing surgery (***Chou et al., 2016***).

A number of studies conducted in countries with a highly-developed health care system demonstrated that even in the first decade of the 21st century, postoperative pain was not managed well in one third to one-half of patients (***Chou and Gordon, 2016***), (***Wu and Raja, 2011***).

Despite the recent progress, there is still potential for further improvement of analgesic therapy. We would like to emphasize that untreated postoperative pain is a highly preventable issue, which can easily be solved (**Chou et al., 2016**).

Nowadays, there is an abundance of medications, dosage forms, acute pain management techniques, and ample data on postoperative pain treatment. The main challenge is to translate this knowledge into everyday practice.

Possible reasons for the inadequate postoperative pain management include limited financial resources, lack of time and personnel, but also reluctance to address this issue, organizational aspects of the health care facility, and lack of simple and clear guidelines for the treatment of postoperative pain (**Wu and Raja, 2011**).

The availability of postoperative analgesia to anyone who needs it requires a high-quality postoperative pain management, as well as accepting and understanding the fact that good analgesia is not only necessary, but also a fundamental right of every patient suffering from pain and a basic duty of any health care facility that treats these patients.

In addition to this ethical point of view, there are other medical and economical aspects associated with a frequently