بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY

Faculty of Medicine
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Comparison of Ultrasound Guided Transversus Abdominis Plane Block versus Intravenous Patient Controlled Analgesia for Post Operative Analgesia in Parturients Undergoing Cesarean Delivery under General Anesthesia

Thesis

Submitted for partial fulfillment of the Master Degree in Anesthesia , Intensive Care & Pain Management

By

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- Mohamed Tarek Husesein

List of Abbreviations

Abb.	Stands for
%	Percent
γ	Gamma
δ	Delta
κ	Kappa
PGE2	prostaglandins E2
°	Degree
µ	Mue/Micron
µg	microgram
5-HT	Serotonin
ABP	Arterial Blood Pressure
ACTH	Adreno cortico-trophic hormone
ASA	American Society of Anesthesiologists
AVP	arginine vasopressin.
BA	Bronchial Asthma
bpm	Beats per minute
Ca^{++}	Calcium
CGRP	Calcitonin Gene-Related Peptide
cm	Centimeter
CM	Costal margin
CNS	Central Nervous System
COO	Ester linkage
COX2	Cyclooxygenase2
CrCl	Creatinine clearance
CRH	Corticotrophin-releasing hormone
DBP	Diastolic Blood Pressure
DM	Diabetes mellitus
DRG	Dorsal Root Ganglion
E	Enkephalinergic interneurons
ECG	Electrocardiogram
ed.	Edition
EOM	external oblique muscle

Abb.	Stands for
ESR	Erythrocyte sedimentation rate
et al.	And colleagues
FDA	Food and Drug Administration
FSH	follicle-stimulating hormone
G	Gauge
g	Gram
GABA	Gamma Amino Butyric Acid
hr	Hour
HR	Heart Rate
hrs	Hours
HS	Highly significant
HTN	Hypertension
I.M	Intramuscular
I.V	Intravenous
IASP	The International Association for the Study of Pain
IC	iliac crest
IOM	Internalobliq muscle
J.	Journal
Kg	Kilogram
LAs	Local Anesthetics
LH	Luteinizing hormone
mA	Milliamperes
mg	milligram
min	Minute
ml	Milliliter
mmHg	Millimeters of Mercury
-NHCO	Amide linkage
NHS	The National Health Service
NMDA	N-Methyl-D-Aspartate
NMDA	N-Methyl-D-Aspartate
NRS	Numeric rating scale
NS	Non-significant
NSAIDs	Non steroidal anti-inflammatory drugs

Abb.	Stands for
P	Probability value
P	Peritoneum
PABA	Para-AminoBenzoic Acid
pH	Measure acidity and basicity of solution
pKa	Acid dissociation constant
PONV	Postoperative nausea and vomiting
pp	Pages
S	Skin
SC	subcutaneous tissue
SD	Standard Deviation
Sig.	Significance
SpO_2	Peripheral Oxygen Saturation
SSR	Surgical Stress Response
TAM	Transversus abdominis muscle
TAP block	Transversus abdominis plane block
TENS	Transcutaneous Electrical Nerve Stimulation
TSH	Thyroid-stimulating hormone
VAS	Visual Analogue Scale
VRS	The four-point verbal rating scale
Vs.	Versus
α	Alpha
β	Beta
T_{1-12}	Thoracic spinal roots
IL-6	Interleukin-1
L_{1-5}	Lumbar spinal roots
IL-1β	Interleukin-1
1ry	primary
USG	Ultra Sound Guidance

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Introduction

Cesarean delivery rates are increasing worldwide, and effective postoperative pain management is a key priority of women undergoing cesarean delivery. Inadequate pain management in the acute postoperative period is associated with persistent pain, greater opioid use, delayed functional recovery, and increased postpartum depression. In addition to pain relief, optimal management of patients after cesarean delivery should address the goals of unrestricted maternal mobility, minimal maternal and neonatal side effects, rapid recovery to baseline functionality, and early discharge home. **(Sutton and Carvalho , 2016) .**

Since the concept of day case surgeries are getting more popular, surgeons and anesthesiologists are trying their best to provide adequate post operative analgesia. The proper management of post operative pain ensures early ambulation of patients and obviates many post operative Complications ***(Liu and Wu , 2007) .***

The most common modality for post- operative pain management has remained the parentral use of non-steroidal anti- inflammatory drugs (NSAIDs) and opioids. This technique is virtually cost free, rapid and hardly requires any special technical experience for its use. But as there are advances in anesthetic techniques, more and more regional blocks are being tried to take care of post operative pain. The choice of anesthetic block technique depends upon the site of surgical incision proposed ***(Aveline et al ., 2011) .***

Transverse abdominis plane (TAP) block was effective in providing analgesia with a substantial reduction in opioid use during 48 h after cesarean section when used as adjunctive to standard analgesia. **(Singh et al., 2015) .**

The technique of TAP block has been found to be a safe and effective tool in a variety of general, gynecological, and urological surgery , and it is suggested as part of the multimodal anesthetic approach to enhance recovery after lower abdominal surgeries **(Johns et al., 2012).**

Patient-controlled analgesia (PCA) is a delivery system that allows the patient to self-administer predetermined small doses of analgesic medication for pain relief .Intravenous (IV)-PCA using opioids has been widely adopted for postoperative pain management. Morphine is commonly used for IV-PCA due to its strong analgesic with low cost, and evidence of efficacy **(Niiyama & Matsuoka., 2016) .**

Aim of the Work

The aim of this study is to evaluate the pain-relieving effect of ultrasound guided Transverses abdomens plane block in comparison to Patient controlled analgesia with IV-morphine regarding visual analog scale in the first 24 hours and to identify the side effects of both techniques.