

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

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Postoperative Analgesic Efficiency of Transversus Abdominis Plane Block with and without Magnesium Sulphate after Surgical Repair of Moderate Sized Umbilical Hernia

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

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Abstract

Background:

The transversus abdominis plane (TAP) block is a known approach for blocking the abdominal wall neural afferents via the bilateral lumbar triangles of Petit. Different adjuvants have been used to intensify the quality and the duration of local anesthetics. We evaluate adding magnesium sulfate to Bupivacaine as a post operative analgesic after umbilical hernia operation

Aim of the Work:

The aim of this study is to detect the efficacy and safety of magnesium sulphate as an adjuvant to the analgesia offered by local anesthetic in ultrasound guided TAP block in patients undergoing surgical repair of moderate sized umbilical hernia. We designed this study to evaluate the effect of adding magnesium sulphate to bupivacaine 0.25 % in the ultrasound-guided TAP block anesthesia after open appendectomy operation, As regard postoperative pain block and opioid consumption using Visual Analogue scale VAS.

Patients and Methods:

Type of Study: Prospective double blinded randomized controlled trial. Study Setting: Ain Shams University Hospital, Cairo, Egypt. Study Period: 6 months. Study Population: the study was carried out on 40 patients who were to undergo surgical Eligibility Criteria: Age: 18-40 years. Physical status: ASA I,II. Both sexes. BMI<35

Results:

In our study we worked on 40 patients with moderate size umbilical hernia 20 patients received post operative analgesic TAP block with Bupivacaine 0.25% (20ml) and other 20 patients received post operative analgesic TAP block with Bupivacaine 0.25% 18ml and 200mg (2ml) MgSO₄.

Conclusion:

MgSO₄ as an adjuvant to Bupivacaine in Ultrasound-guided TAP block reduces post-operative pain scores, prolongs the duration of analgesia and decreases demand for rescue analgesics.

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List of Abbreviations

Abb.	Full term
5-HT	5-hydroxytryptamine
ACTH	Adrenocorticotrophic hormone
ASA.....	American Society of Anesthesiologists
CNS	central nervous system
COX2.....	Cyclooxygenase2
CVS.....	Cardiovascular system
DCIA	Deep circumflex iliac artery
EO.....	External oblique muscle
GABA	Gamma-amino butyric acid
IASP	International Association for the Study of Pain
IL-1	Interleukin 1
IO.....	Internal oblique muscle
L. alba	Linea alba
L. semilunaris	Linea semilunaris
NHS.....	National Health Service
NMDA	N-methyl-D-aspartate
NRS	Numeric rating scale
NSAIDs	Non-steroidal anti- Inflammatory drugs
PACU	Postoperative anesthesia care unit
PG.....	Prostaglandins
PGE2	Prostaglandins E2
POP	Postoperative pain
QL.....	Quadratus lumborum
RA.....	Rectus abdominis
SSR.....	Surgical Stress Response
TA.....	Transversus abdominis
TAP Block.....	Transversus Abdominis Plane Block
TENS.....	Transcutaneous Electrical Nerve Stimulation
VAS.....	Visual analogue scale
VRS.....	Verbal rating scale

INTRODUCTION

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 (*Schug, 2011*).

The most common modality for post- operative pain management has remained the parenteral use of non-steroidal anti- Inflammatory drugs (NSAIDs) and opioids.

The infiltration of surgical wound with long acting local anesthetic agents has also remained a popular method to take care of immediate post operative pain.

This technique is virtually cost free, rapid and hardly requires any special technical experience or equipment 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. Transversus abdominis plane (TAP) block is a novel approach in which local anesthetic