

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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لم ترد بالأصل



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EVALUATION OF THE EFFECT OF ADDING
CLONIDINE TO ROPIVACAINE FOR
AXILIARY BRACHIAL PLEXUS BLOCKADE

Thesis

*Submitted for Partial Fulfillment of Master
Degree in Anesthesiology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(فَأَمَّا الزُّبُرُ فَيَكْسُحُهُمْ جُفَاءً وَأَمَا هَا

يَنْفَعُ النَّاسَ فَيَمْكُثُ فِي الْأَرْضِ)

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List of abbreviations

<i>Intraop.</i>	<i>Intraoperative</i>
<i>L.A.</i>	<i>Local anesthetic</i>
<i>MAP</i>	<i>Mean Arterial Blood Pressure</i>
<i>mg.</i>	<i>Milligram</i>
<i>Min.</i>	<i>Minute</i>
<i>mmHg.</i>	<i>Millimeter Mercury</i>
<i>Postop</i>	<i>Postoperative</i>
<i>Preop.</i>	<i>Preoperative</i>
<i>S.D.</i>	<i>Standard Deviation</i>

Introduction

INTRODUCTION

Regional anesthesia provides a safe low cost technique with the advantage of prolonged postoperative pain relief. One of the most popular anesthetic techniques is the brachial plexus block. This technique is done by different approaches which includes either.

- 1- The interscalene approach
- 2- The supraclavicular approach.
- 3- The infraclavicular approach
- 4- The axillary approach

The axillary approach to the brachial plexus is a commonly used technique for hand and forearm surgery. The axillary approach is associated with a lower incidence of side effects than other approaches to the brachial plexus specially the incidence of pneumothorax (**Brockway and Wildsmith, 1990**).

The axillary approach can be done by one of three techniques

- 1- Parathesia technique.
- 2- Using a nerve stimulator
- 3- Trans arterial injection

Ropivacaine is an aminoamide local anesthetic prepared as pure "S" enantiomer. This single enantiomer composition and the lower lipid solubility have produced a drug with less cardiotoxicity than bupivacaine (**McClure, 1996**).

It is prepared as a plain solution without epinephrine due to its unique intrinsic vasoconstrictor activity. Unlike the other amide local anesthetics there appears to be no prolongation of action with the

addition of epinephrine (**Cederholm et al., 1994**).

Clonidine, an imidazoline, with selective partial agonist activity at α_2 adrenergic receptors, has been used for many years as a centrally acting anti-hypertensive agent. The ability of clonidine to reduce the requirements for traditional anesthetic and analgesic agents is increasingly being used in the perioperative period (**Maze and Tranquilli, 1991**).

The mechanism of antinociceptive action of clonidine is still obscure with a number of theories being postulated. Several clinical studies have shown that clonidine can prolong the duration of analgesia when used in combination with local anesthetic agents (**Racle et al., 1987**), including when injected into peripheral nerve sheaths (**Bernard and Macaire, 1997**).

Clonidine appears to be superior to epinephrine in enhancing the duration of plexus blockade with lidocaine and may offer other advantages while avoiding the potential risks of epinephrine (**Gaumann et al., 1992**).