

**The analgesic efficacy and hemi-diaphragmatic paralysis
assessment of combined infraclavicular-suprascapular nerve
blocks versus standard interscalene brachial plexus block for
arthroscopic rotator cuff repair: *A prospective observer-blinded
randomized clinical trial***

By

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M.B.B.Ch., M.Sc.

Thesis

Submitted for partial fulfillment

Of

The requirements of the MD degree in
Anesthesia, Intensive Care & Pain Management

Department of Anesthesia, Intensive Care & Pain Management

Faculty of Medicine

Fayoum University

2020

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2020

Abstract

Introduction: Interscalene nerve blockade (ISB) main hindrance is the high risk of ipsilateral phrenic nerve block with sequential hemi-diaphragmatic paralysis. The employment of costoclavicular block as an alternative technique of infraclavicular block in combination with suprascapular block (SSB) may provide comparable analgesic potency to the sole use of standard ISB with negligible hemi-diaphragmatic affection

Aim of the study: This trial aims to compare the analgesic efficiency and hemi-diaphragmatic paralysis of the standard ultrasound-guided interscalene brachial plexus block with the combined use of costoclavicular approach of infraclavicular brachial plexus block and suprascapular nerve block for patients undergoing arthroscopic rotator cuff repair.

Method and Results: The study was a prospective, randomized, double-blinded, and controlled clinical trial.

The patients were allocated into two groups; each of 33 patients:

- (ISB) Group received ISB followed by general anesthesia
- (CSB) Group received ICB using costoclavicular approach and SSB followed by general anesthesia.

The Primary outcome was the cumulative morphine consumption at the first 24 hours postoperatively.

Conclusion: This prospective randomized study demonstrates that analgesia provided by combination of costoclavicular & suprascapular blocks is non-inferior to an interscalene nerve block and best preserves pulmonary function.

Keywords : arthroscopic shoulder surgery, interscalene brachial plexus block, costoclavicular&suprascapular blocks, diaphragmatic paralysis.