



**ANALGESIC EFFECT OF ADDING POPLITEAL PLEXUS
BLOCK TO STANDARD SAPHENOUS NERVE BLOCK IN
PATIENTS SCHEDULED FOR ELECTIVE ARTHROSCOPIC
ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION :
RANDOMIZED OBSERVER BLIND CLINICAL TRIAL**

BY

Mohammed Omar Mostafa

**Assistant lecturer of Anesthesiologist , Pain medicine and Surgical ICU
Faculty of medicine / Fayoum university**

A dissertation Submitted in Partial fulfillment

Of

The requirements for the degree of

Doctorate of Science

In

Anesthesiology , Pain medicine and Surgical ICU

Department Of Anesthesiology

Faculty of medicine

Fayoum University

2021



**ANALGESIC EFFECT OF ADDING POPLITEAL PLEXUS
BLOCK TO STANDARD SAPHENOUS NERVE BLOCK IN
PATIENTS SCHEDULED FOR ELECTIVE ARTHROSCOPIC
ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION :
RANDOMIZED OBSERVER BLIND CLINICAL TRIAL**

BY

Mohammed Omar Mostafa

(M.B.B. Ch , M.Sc. Anesthesiology)

Faculty of medicine / Fayoum university

Supervised by

Assistant Prof. Maged Labib Boulus

Ass. Prof of Anesthesiology , Pain management and Surgical ICU

Faculty of medicine ,Fayoum University

Dr. Mohammad Awad Elsaed

Lecturer of Anesthesiology , Pain management and Surgical ICU

Faculty of medicine, Fayoum University

Dr. Atef Mohammed Sayed

Lecturer of Anesthesiology, Pain management and Surgical ICU

Faculty of medicine, Fayoum university

Faculty of medicine

Fayoum university

2021

ABSTRACT

Background: ACL injury is traumatic and debilitating and is typically repaired using an arthroscopic technique performed as an outpatient surgical procedure. However, many patients complain that the postoperative pain is severe for the first 24 hours following the ACL reconstruction (ACLR). Adductor canal block (ACB) shows conflicting results for post-operative pain control after anterior cruciate ligament reconstruction. Popliteal plexus block (PPB) is a novel sensory block to posterior knee compartment.

Aim of the work: we investigated in our study the effect of supplemental PPB to ACB on post-operative pain outcomes in comparison with ACB alone in patients scheduled to ACLR with hamstring graft operation.

Methodology: Patients scheduled to knee arthroscopy with ACLR using a graft from the ipsilateral hamstring were randomised in two groups. Subjects in Group A received adductor canal block only while subjects in Group B received combined ACB and popliteal plexus block

Results: In 60 subjects scheduled to ACLR, there were significant differences between 2 groups. The time of the first hour analgesic request (TFR) was higher for the combined adductor and the Popliteal plexus block (median = 8 hours) compared to the adductor block only (median = 0.5 hour). Morphine consumption was lower for the combined adductor and the Popliteal plexus block (median = 12 mg) compared to the adductor canal block only (median = 30 mg). No of requested dose was lower for the combined adductor and Popliteal plexus block (median = 3 doses) compared to the adductor block only (median = 7 doses).

Conclusion: The addition of popliteal plexus block to ACB results in a significant reduction in pain or opioid consumption after ACLR with ipsilateral hamstring graft.

Keywords: Adductor canal block, Popliteal Plexus Block, Arthroscopic Anterior Cruciate Ligament Reconstruction, post-operative pain