

#1148 - Posters

Periarticular Multimodal Drug Injection Is Better Than Single Anaesthetic Drug In Controlling Pain After TKA: A Double Blinded RCT

Orthopaedics / Knee & Lower Leg / Joint Replacement - Primary

Nattapol Tammachote, Supakit Kanitnate, **Sudsayam Manuwong**, Phonthakorn Panichkul

Thammasat University, Pathum Thani, Thailand

Keywords: Total Knee Arthroplasty, Pain Control, Periarticular Injection

Introduction

Periarticular multimodal drug injection has been shown effectively reduced postoperative pain after total knee arthroplasty (TKA). But there was gap of knowledge about the efficacy of each drug and whether we need multiple drugs or only single anesthetic agent for the injection.

Objectives

The aim was to compare the efficacy between multimodal drug injection (group M) and single anesthetic drug injection (group S) in controlling pain after TKA.

Methods

In a double blinded, randomized controlled trial we randomized 64 osteoarthritic patients who underwent TKA into two groups. Spinal anesthesia was induced before surgery and periarticular injection was given to all patients. Group M received levobupivacaine 150 mg, ketorolac 30 mg, morphine 5 mg and epinephrine 0.6 mg while group S received only levobupivacaine and epinephrine. The primary outcomes were pain level (VAS), the amount of opioid consumption (mg) and time to acquire first dose of analgesic drug (min). All patients were followed up to three months.

Results

Patient received multimodal drug injection had less pain level at rest and motion in the first 4 hours after surgery (VAS rest; 30 vs 46, $p < 0.05$, VAS motion; 45 vs 66, $p < 0.05$). More over they consumed less morphine in first 8 hours after surgery (5.3 mg VS 11.6 mg, $p < 0.05$) and had approximately two hours longer time to acquire the first dose (254 min vs 148 min, $p < 0.05$). There were no difference in side effects, knee motion, length of stay and knee functional score between both groups.

Conclusions

Multimodal drug injection provides better pain control than single anesthetic drug injection in the early recovery period. It is worthwhile to add morphine and ketorolac in periarticular injection to decrease pain level, morphine consumption and prolong analgesic effect after TKA.