

#1235 - A Randomised, Double-Blind, Placebo-Controlled Trial On The Efficacy Of Dexamethasone Combined With Neuraxial Anaesthesia In Reducing Pain And Opioid Consumption After Primary Cementless Total Hip Arthroplasty Using The Direct Anterior Approach.

Schroven, Wouter / Verrewaere, Dries / Deckmyn, Thomas / Vandekerckhove, Maxence / Vaneemeren, Anthony / Vanlommel, Jan

Background

There is increasing evidence that intra-operative intravenous high-dose glucocorticoids decreases postoperative pain and opioid consumption after total hip and knee replacement. Randomised studies comparing the effect of intra-operative dexamethasone with placebo in patients receiving neuraxial anaesthesia (NA) are lacking.

Objectives

To see whether the administration of high-dose glucocorticoids intra-operative leads to superior outcomes in patients undergoing total hip arthroplasty via direct anterior approach with neuraxial anaesthesia.

Study Design & Methods

Ninety patients undergoing THA via DAA with NA were randomised to two groups to either receive a single dose of 10-mg dexamethasone IV or a placebo (isotonic saline IV) intra-operative. Both groups received the same standard peri-operative anaesthesia protocol. All patients were operated by a single surgeon. Primary outcomes were pain level measured through visual analogue score (VAS) at 1-, 3-, 6-, 12- and 24-hours post-operative; opioid use measured as a sum of morphine equivalents (MME); and range of motion (ROM) 24 hours post-operative. Secondary outcomes were time-up-and-go (TUG) test and in hospital complications.

Results

There were no differences in age, gender, body mass index (BMI), or American Society of Anaesthesiologists (ASA) score between the groups. Patients receiving intra-operative dexamethasone reported statistically significantly lower MME compared to placebo (1.8 ± 6.0 vs. 19.4 ± 23.9 , $P < 0.01$). All VAS scores were lower in the dexamethasone group, however only 6- and 12 hours postoperative reached significance (respectively 1.8 ± 1.6 vs 3.2 ± 2.5 and 2.2 ± 1.7 vs 3.7 ± 2.5 ; $P = 0.02$ and $P = 0.01$). There were no differences in post-operative ROM and TUG test between groups. There were no complications due to the administration of dexamethasone.

Conclusions

This is the first randomised study evaluating the effect of intra-operative high-dose glucocorticoids in THA via DAA with NA. The administration of intra-operative dexamethasone effectively reduces opioid use and pain levels post-operative without any adverse effects. We are therefore advocates of the incorporation of dexamethasone into peri-operative anaesthesia protocols for patients undergoing THA with NA.