

Chronic pain and functional disability after total knee arthroplasty: adductor canal block vs local anesthesia

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Abstract

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Abstract

Introduction Between 10% and 34% of patients undergoing total knee arthroplasty (TKA) report unfavorable pain outcomes up to five years after surgery (1). Considering that the need for TKA has been predicted to increase in the future, it is likely that also the number of patients affected will rise. Conflicting results exist concerning the impact of loco-regional anaesthesia on postoperative chronic pain and disability after TKA (2-3). The outcome of this prospective observational study was to compare the effect of adductor canal block and local infiltration analgesia on chronic pain and functional disability of patients underwent to TKA, as assessed by the Oxford Knee Score (OKS).

Methods We recruited patients aged between 18 and 90 years old operated from unilateral TKA, without tourniquet, from November 2022 to May 2024 in His-Izz Hospitals, Brussels, Belgium. We present the preliminary results of patients operated from November 2022 to November 2023. Patients were divided into two groups. ACB group received spinal anesthesia (hyperbaric bupivacaine±sufentanil) and adductor canal block (ropivacaine 50-75 mg). LA group received spinal anesthesia (hyperbaric bupivacaine±sufentanil) and local anesthesia (ropivacaine 100-200 mg).

The primary outcome was the evaluation of functional disability by the Oxford Knee Score (OKS) 6 months after surgery between the two groups.

The secondary outcome was pain, evaluated by the numeric rating scale. Impact of age, gender, and BMI were also evaluated.

Results Continuous variables were compared between groups with Wilcoxon test, discrete variables with Chi² Pearson test. P<0.05 was considered as significant. 383 patients were eligible, 64 were recruited: 23 in ACB group, 41 in LA group. There was no difference in terms of gender and age between the groups. There was no difference in terms of OKS (38.8±5.9 vs 38.3±7.4 p=0.77). There was no difference in terms of NRS reduction after the surgery (6.2±2.2 vs 5.7±2.4 p=0.45).

Conclusions: Local anesthesia seems to be as effective as adductor canal nerve block in the prevention of chronic functional disability and chronic knee pain. Further studies are needed.

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