

## Comparison of Adductor Canal Block with Local Infiltration Analgesia in Primary Total Knee Arthroplasty: A Meta-Analysis of Randomized Controlled Trials

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### **COMMENTARY**

We took great interest in the article by Zhao et al. [1] entitled "Comparison of adductor canal block with local infiltration analgesia in primary total knee arthroplasty: A meta-analysis of randomized controlled trials" published online September 2019 in the International Journal of Surgery. Total knee arthroplasty (TKA) has become a well-established procedure for the treatment of end-stage knee conditions such as severe knee osteoarthritis, providing pain relief, deformity correction, and restoration of daily activities, thereby improving the patient's quality of life. It is estimated that more than 3 million patients will be treated with TKA each year by 2030 in the US. Pain after TKA remains one of the challenges that patients and physicians must face. Statistics show that 60% of postoperative pain after TKA is severe and 30% is moderate. If the pain is not effectively controlled, it will increase the patient's pain, affect the patient's early functional rehabilitation of the knee, and even lead to cardiopulmonary complications.

Although there are many methods of postoperative analgesia for TKA, such as periarticular infiltration analgesia, femoral nerve block, epidural anesthesia, and patient-controlled analgesia (PCA), each of these analgesic methods has its own shortcomings and side effects. Local peri-articular drug injection analgesia: Intraoperative injection of local anesthetics, opioids and steroids into the local knee joint cavity and surrounding tissues to provide analgesia has become one of the hot spots of postoperative analgesia research in recent years because it is simple, safe and noninvasive, but its analgesic effect has been controversial. 3 into the joint cavity and 2/3 into the dry joint Vcndittoli injected ropivacaine, ketorolac, and epinephrine into the joint cavity and 2/3 into the peripheral soft tissue. Vcndittoli's mixture of ropivacaine, ketorolac, and epinephrine injected by local infiltration around the arthrotomy significantly reduced the use of analgesics and pain scores at 48 hours of rest in the postoperative period. The internal collecting duct block (ACB) technique is a new technique that results in

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sensory blockade. It is an adequate analgesic with only a minimal effect on quadriceps strength and does not increase the risk of falls [2].

This meta-analysis showed no significant difference in pain scores between the two groups, and the length of stay was similar. The overall pain relief after TKA was similar for both treatments. Earlier ambulation was achieved with LIA compared to ACB. Although the conclusions are clear, it is debatable whether the homogeneity of the criteria for study inclusion, the concentration and timing of medication administration biased the results. Finally, it should be noted that pain has a large individual variation and is susceptible to emotional and psychological factors. Therefore, postoperative analgesia should emphasize

individualized treatment, and the safest, effective, and economical analgesic regimen should be selected by integrating the patient's overall condition. Postoperative analgesia after total knee arthroplasty is a complex issue, and the decision should be made jointly by the anesthesiologist and orthopedic surgeon, taking into account all the physical conditions of the patient.

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### **AUTHOR CONTRIBUTION**

The author read and approved the final version of the letter to the Editor.

### **REFERENCES**

1. Zhao YW, Huang ZH, Ma WM (2019) Comparison of adductor canal block with local infiltration analgesia in primary total knee arthroplasty: A meta-analysis of randomized controlled trials. *International Journal of Surgery* 69: 89-97.
2. Reddy AVG, Shafeekh M, Sankineani SR, et al. (2018) Comparison between multisite infiltration analgesia versus adductor canal block for pain management in total knee arthroplasty: A prospective study. *Anesthesia, Essays and Researches* 12(4): 774-777.