Nerve Blocks and Length of Stay?

To the Editor:

McIsaac *et al.*[1] recently published their population-based cohort study on outcomes after total knee arthroplasty in relation to the use of peripheral nerve blocks. The primary outcome was length of stay (LOS), and they concluded that nerve blocks reduced LOS (risk ratio = 0.98!).

Although such large cohort studies may be valuable, we find the discussion insufficient in relation to the primary outcome, where we get no information on why the patients were hospitalized or whether a type of fast-track care was implemented.[2] Furthermore, there is no information about discharge destination, which we know from several studies may hinder sufficient interpretation of LOS, because transfer of patients to rehabilitation or other institutions may depend on potential economic benefit[3] or on local traditions[4] and may misleadingly reduce the registered LOS after surgery.[3] Finally, their mean LOS was approximately 4.7 days, which is beyond what has been published before (but not referred to) from prospective multicenter studies with a mean LOS of 3.0 days[5] from well-defined fast-track programs without the use of peripheral blockades. Also, median values of LOS of approximately two days in subsequent large cohorts are available.[6]

In summary, when discussing LOS as a primary outcome, interventional studies in perioperative medicine need to include data on why the patient was hospitalized, as well as discharge destination.[4]

Competing Interests

The authors declare no competing interests.

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Effect of Peripheral Nerve Block on Length of Stay after Total Knee Arthroplasty

To the Editor:

We read the article by McIsaac *et al.*[1] with great interest. The authors should be commended for attempting to estimate the effects of peripheral nerve blocks (PNBs) on healthcare resource use. These efforts could decrease the cost of health care without compromising patient health. However, we have a few points that we wish to pose to the authors, which may confound interpretation of the results.

First, PNBs are widely used to reduce pain after total knee arthroplasty (TKA). However, these techniques have shortcomings, such as inadequate pain control due to technical difficulty and inexperience. Multimodal analgesia has been introduced to overcome these shortcomings.[2] The pain score is important to determine whether a nerve block is successful, but this retrospective design made it impossible to include pain scores.

Second, factors contributing to length of stay after TKA include preoperative, intraoperative, and postoperative variables. Elderly patients are more prone to postoperative complications. It is well documented that length of stay is associated with postoperative complications, such as cardiovascular complications, mechanical wounds, and infections.[3] These variables may affect the results. However, these variables are not included in the analysis.

Third, the use of propensity score methods has increased significantly in recent years to evaluate treatment effects using observational data. These methods allow observational studies to be designed similar to randomized experiments. Four methods of using the propensity score have been described in the statistical literature, including matching, stratification, covariate adjustment, and weighting (inverse probability of treatment weighting; IPTW). It has been suggested that the last two methods directly estimate the effect of treatment, whereas the first two methods only group subjects rather than estimate the effect of treatment. Therefore, the latter two methods may be more sensitive to misspecification of the propensity score model than

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